Safety Data Sheets

CD-HF

Roadyard Bisbee

03/08/2018

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J.B. Chemical Co., Inc.
MATERIAL SAFETY DATA SHEET (MSDS)
WAX-112
Rubbing And Polishing Compound

Section I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS FIRST PREPARATION DATE: January 1, 1993
REVISION DATE: September 12, 1997
SUPERSEDES: March 11, 1997
PREPARED AND REVISED BY: Robert Bock, Technical Services Manager

GENERIC/CHEMICAL NAME: Confidential Proprietary Mixture
PRODUCT TYPE/CHEMICAL FAMILY: WAX POLISH EMULSION
SYNONYMS: None
CONTAINS: Water (CAS# 7732-18-5), Polishing powders (CAS# Mixture, NA), Petroleum Distillate Solvents (CAS# 64742-48-9, 64742-88-7), Carnauba Wax (CAS# 8015-86-9), Emulsifiers (CAS# 68155-20-4), Microcrystalline Wax (CAS# 64742-43-4)

CONTACT ADDRESS: J. B. Chemical Co., Inc., 7316 Varna Ave., North Hollywood, CA 91605-4066, USA

EMERGENCY PHONE NUMBERS:
J.B. Chemical Co. Inc.: (818) 765-0143, (800) 522-2468 Monday - Friday, 7:30am - 5:00pm PST
Chemtrec: (800) 424-9300 - Outside the continental U.S.: (703) 527-3887 24 Hours

Section II - COMPOSITION/INFORMATION ON INGREDIENTS

The precise composition of this product mixture in confidential proprietary information. A more detailed disclosure will be provided by us to qualified medical or industrial hygiene personnel as privileged information upon request in case of emergency or need for specific treatment. This MSDS has been prepared in compliance with the Federal OSHA hazard communication standard 29CFR1910.1200. This product is considered nonhazardous under that standard.

WARNING: : Contains 23% - 28% Petroleum distillates (CAS# 64742-48-9, 64742-88-7)

Section III - HAZARDS INDENTIFICATION

POTENTIAL HEALTH EFFECTS
EYE CONTACT: May cause eye irritation. Direct contact with liquid may cause stinging, tearing, and redness.
SKIN CONTACT: May cause mild skin irritation. Prolonged or repeated contact may cause dermatitis, redness, burning, drying, defatting, and cracking of the skin.
INHALATION: This material is expected to have a low degree of toxicity by inhalation. Breathing high

concentrations of vapors or mists may cause irritation of the nose and throat and signs of nervous system depression (e.g. headache, nausea, drowsiness, dizziness, fatigue, visual impairment, difficulty breathing, and loss of coordination). Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal. Repeated and prolonged overexposure to oil mists may result in droplet deposition, oil granuloma formation, inflammation, and increased incidence of infection.
INGESTION: While this product has a low degree of toxicity, ingestion of excessive quantities may cause irritation of the digestive tract and signs of nervous system depression (e.g. headache, nausea, drowsiness, dizziness, fatigue, visual impairment, difficulty breathing, and loss of coordination).
ASPIRATION HAZARD: This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage.

Section IV - FIRST AID

EYE CONTACT: If irritation or redness due to vapors develops, move victim away from exposure and into fresh air. If splashed into the eyes, flush eyes immediately with clean water for at least 15 minutes. If available, use eye cups or eye wash fountain. If symptoms persist, get medical attention.

SKIN CONTACT: Clean affected areas with mild soap and water. Remove contaminated clothing, including shoes, and launder before reuse or discard.

INHALATION: If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, get medical attention. If victim is not breathing immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Get medical attention.

INGESTION: DO NOT induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious, place on the left side with head down. If possible, do not leave victim unattended. Get medical attention immediately.

Section V - FIRE FIGHTING MEASURES

FLASH POINT: PMCC 148F, 64C
FIRE POINT: ND
FLAMMABLE LIMITS IN AIR, % Volume, LOWER: ND, 0.9 estimated UPPER: ND, 7.0 estimated
AUTOIGNITION TEMPERATURE: ND, > 410F, 210C estimated
HANDLING PRECAUTIONS: This liquid is combustible, volatile, and gives off invisible vapors. Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode. Keep product away from ignition sources such as heat, sparks, pilot lights, static electricity, and open flames. Exposure to excessive heat, extreme temperatures and fire can build up pressure in closed containers and may cause bursting or exploding. "Empty" containers retain liquid and/or vapor residue and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to sources of ignition. They may explode causing injury or death.
EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES: Foam, water spray, dry chemical, carbon dioxide, and halon extinguishing agents may all be suitable for extinguishing fires involving this type of product, depending on size or potential size of fire and circumstances related to the situation. Stop spill/release and move undamaged containers from fire area if it can be done without risk. Water

spray may be useful in minimizing or dispersing vapors and cooling equipment exposed to heat and flame. Avoid spreading burning liquid with water used for cooling.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS: Fumes, smoke, carbon monoxide/dioxide, sulfur oxides, aldehydes, and nitrogen oxides. Wear appropriate protective equipment including self contained breathing apparatus.

Section VI - ACCIDENTIAL RELEASE MEASURES

SPILL ON LAND: Floor may be slippery; use caution to avoid falling. For small spills implement the following cleanup procedures: Eliminate sources of ignition. Prevent additional discharge of material, if possible to do so without risk. Minimize breathing of vapors. Minimize skin contact. Ventilate confined spaces. Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust. Recover by pumping (use an explosion proof pump or hand pump) or with a suitable absorbent. Observe precautions for volatile, combustible vapors from absorbed material. For large spills implement the preceding cleanup procedures and, if in public area, keep public away and advise authorities. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

SPILL ON WATER: Eliminate sources of ignition. Warn occupants and shipping in surrounding and downwind areas of fire and explosion hazard and request all to stay clear. Remove from surface by skimming or with suitable adsorbents. If spill happens in non-confined waters material may be permitted to dissipate if allowed by local authorities and environmental agencies. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

Section VII - STORAGE AND HANDLING

ELECTROSTATIC ACCUMULATION HAZARD: Possible; use proper grounding procedures.
STORAGE TEMPERATURE: Ambient
STORAGE/TRANSPORT PRESSURE: Atmospheric
LOADING/UNLOADING TEMPERATURE: Ambient
LOADING/UNLOADING VISCOSITY: 724 cP. typical

STORAGE AND HANDLING: Keep container closed. Handle and open containers with care. Store in a cool, well ventilated place away from incompatible materials. DO NOT handle or store near an open flame, heat, or other source of ignition. Protect material from direct sunlight. Material will accumulate static charges which may cause an electrical spark. Use proper grounding procedures. DO NOT pressurize, cut, heat, or weld containers. DO NOT reuse containers without commercial cleaning or reconditioning.

Section VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE CONTROLS: The use of local exhaust ventilation is recommended to control process emissions near the source. Laboratory samples should be stored and handled in a lab hood. Provide mechanical ventilation of confined spaces. Use explosion proof equipment.

PERSONAL PROTECTION: For open systems where contact is likely, wear long sleeves, chemical resistant gloves, and chemical goggles. Where contact may occur, wear safety glasses with side shields. Although normally not necessary, where concentrations in air may exceed TLV/PEL exposure limits, use appropriate respiratory protection. It is recommended that a source of clean water, eye wash cups or fountain be available in the work area for flushing eyes and skin.

OSHA/ACGIH EXPOSURE LIMITS: Where fumes or vapors may be generated control exposures to a TLV/PEL of 100 ppm for Petroleum Distillate Solvents (CAS# 64742-48-9, 64742-88-7).

Section IX - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Opaque white
STATE: Liquid
ODOR: Hydrocarbon solvent odor
PERCENT VOLATILE: 58 by weight typical
SPECIFIC GRAVITY: 1.179 typical @ 77F, 25C
DENSITY: 9.81 lbs/gal typical @ 77F, 25C
VISCOSITY: 724 cP. typical @ ambient
EVAPORATION RATE, (n-BuAc=1): ND, < 0.04 estimated
VAPOR PRESSURE: ND, <5mm Hg @ 77F, 25C estimated
BOILING POINT: ND, 212F, 100C min. estimated
VAPOR DENSITY (Air=1): ND, >4.6 estimated.
FREEZING/MELTING POINT: ND, < 32F, 0C
SOLUBILITY IN WATER: ND, water/solvent emulsion.

Section X - REACTIVITY

STABILITY: Stable under normal conditions of storage and handling.
CONDITIONS TO AVOID INSTABILITY: Avoid all possible sources of ignition

HAZARDOUS POLYMERIZATON: Will not occur
CONDITIONS TO AVOID HAZARDOUS POLYMERIZATION: None
MATERIALS AND CONDITIONS TO AVOID INCOMPATIBILITY:

HAZARDOUS DECOMPOSITION PRODUCTS: Combustion or thermal decomposition may yield irritating or toxic fumes, carbon monoxide/dioxide, aldehydes, nitrogen oxides, and minor amounts of incomplete combustion of various hydrocarbons.

Section XI - TOXICOLOGICAL INFORMATION

No specific toxicological data are available for this product. Please refer to Section III for available information on potential health effects.

Section XII - ECOLOGICAL INFORMATION

No specific ecological data are available for this product. Please refer to Section VI for information

regarding accidental releases and Section XV for regulatory reporting information

Section XIII - DISPOSAL CONSIDERATIONS

All recovered material should be packaged, labeled, transported, disposed and reclaimed in conformance with local, county, state, and federal regulations. May be disposed of by controlled incineration. Do not contaminate any lakes, streams, ponds, or underground water supplies.

Section XIV - TRANSPORT INFORMATION

U. S. DEPARTMENT OF TRANSPORTATION (DOT) PROPER SHIPPING NAME: Not regulated
IMDG PROPER SHIPPING NAME: Not regulated

Section XV - REGULATORY INFORMATION

TSCA: Components of this product are listed on the Toxic Substances Control Act (TSCA) Inventory

CLEAN WATER ACT/OIL POLLUTION ACT: This product is classified as an oil under Section 311 of the Clean Water Act (40CFR110) and the Oil Pollution Act of 1990. Discharge or spills which produce a visible sheen on either surface water or in waterways/sewers which lead to surface water must be reported to the National Response Center at (800) 424-8802.

SARA TITLE III, Section 311-312: None noted
SARA TITLE III, Section 313: None noted
CALIFORNIA PROPOSITION 65 This product contains < 30ppm Benzene as a solvent impurity. This chemical is listed on the California List of Known Carcinogens and Reproductive Toxins.

Section XVI - OTHER INFORMATION

HAZARD RATING SYSTEMS: This information is for people trained in: National Paint And Coatings Association's (NPCA) Hazardous Materials Identification System (HMIS) and/or National Fire Protection Association (NFPA 704) Identification of the Fire Hazards of Materials.

	NPCA-HMIS	NFPA 704	KEY:NPCA-HMIS/NFPA 704
HEALTH	1	1	4=Severe/Extreme
FLAMMABILITY	2	2	3=Serious/High
REACTIVITY	0	0	2=Moderate/Moderate
			1=Slight/Slight
			0=Minimal/Insignificant

NOTE: The information presented herein for this product or its components has been compiled from different supplier sources considered to be dependable and is accurate to the best of our knowledge as to the proper use and handling of this product under normal conditions. However, no representation, warranty, or guarantee is made as to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this

information. Any use of this product which is not in conformance with this MSDS or which involves using the product in combination with any other product or any process is the responsibility of the user.

EXPLANATION OF ABBREVIATIONS:
ACGIH - American Conference of Governmental Industrial Hygienists
CAS# - Chemical Abstract System No.
IMDG - International Maritime Dangerous Goods code
NA - Not Applicable
ND - Not Determined
NFPA - National Fire Protection Association
OSHA - Occupational Safety and Health Administration
PEL - Permissible Exposure Limits
ppm - Parts Per Million
PMCC - Pensky-Martin Closed Cup (flash point)
SARA - Superfund Amendments and Reauthorization Act Title I, II, III
TLV - Threshold Limit Value

This MSDS has been formatted to be consistent with ANSI Standard Z400.1-1993

Product Data Sheet | Typical Properties | KEM-O-PRO Line

J. B. Chemical Co. Inc.
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version 01117.1

SAFETY DATA SHEET

1. Identification

Product number	1000028763
Product identifier	**18 OZ NAPA MAC'S GLASS CLEANER 8100**
Company information	NAPA - ATLANTA 2999 CIRCLE 75 PKWY SE ATLANTA , GA 30339 United States
Company phone	General Assistance 800-538-6272
Emergency telephone US	1-866-836-8855
Emergency telephone outside US	1-952-852-4646
Version #	01
Recommended use	Cleaner
Recommended restrictions	None known.

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
Health hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements

Signal word	Danger
Hazard statement	Extremely flammable aerosol.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.
Response	Wash hands after handling.
Storage	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
2-Butoxyethanol		111-76-2	2.5 - 10
Isopropyl Alcohol		67-63-0	2.5 - 10
Butane		106-97-8	1 - 2.5
Propane		74-98-6	1 - 2.5
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	If symptoms develop move victim to fresh air. Get medical attention if symptoms persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Not available.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable aerosol.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Level 1 Aerosol. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	PEL	240 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
		50 ppm
Isopropyl Alcohol (CAS 67-63-0)	PEL	980 mg/m3
		400 ppm
Propane (CAS 74-98-6)	PEL	1800 mg/m3
		1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm
Butane (CAS 106-97-8)	STEL	1000 ppm
Isopropyl Alcohol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m3
		5 ppm
Butane (CAS 106-97-8)	TWA	1900 mg/m3
		800 ppm
Isopropyl Alcohol (CAS 67-63-0)	STEL	1225 mg/m3
		500 ppm
	TWA	980 mg/m3
		400 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
2-Butoxyethanol (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*
Isopropyl Alcohol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-Butoxyethanol (CAS 111-76-2) Skin designation applies.

US - Tennessee OELs: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear suitable protective clothing.
Respiratory protection	If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Gas.
Form	Aerosol.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	212 °F (100 °C) estimated
Flash point	-156.0 °F (-104.4 °C) propellant estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	23.01 psig @70F estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	0.977 estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.

Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
2-Butoxyethanol (CAS 111-76-2)		
Acute		
Dermal		
LD50	Guinea pig	7.3 ml/kg, 4 Days
		0.23 ml/kg, 24 Hours
	Rabbit	435 mg/kg, 24 Hours
		0.68 ml/kg, 24 Hours
		0.63 ml/kg
	Rat	> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Rabbit	400 ppm, 7 Hours
	Rat	450 ppm, 4 Hours
Oral		
LD100	Rabbit	695 mg/kg
LD50	Dog	> 695 mg/kg
	Guinea pig	1414 mg/kg
	Mouse	1519 mg/kg
	Rat	1746 mg/kg
Butane (CAS 106-97-8)		
Acute		
Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l
Isopropyl Alcohol (CAS 67-63-0)		
Acute		
Dermal		
LD50	Rabbit	16.4 ml/kg, 24 Hours
Inhalation		
LC50	Rat	> 10000 ppm, 6 Hours

Components	Species	Test Results
Oral		
LD50	Rat	5.84 g/kg
Propane (CAS 74-98-6)		
Acute		
Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l
		658 mg/l/4h

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Not applicable.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

2-Butoxyethanol (CAS 111-76-2) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not likely, due to the form of the product.

Chronic effects May be harmful if absorbed through skin. Prolonged inhalation may be harmful.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
2-Butoxyethanol (CAS 111-76-2)			
Aquatic			
Fish	LC50	Inland silverside (Menidia beryllina)	1250 mg/l, 96 hours
Isopropyl Alcohol (CAS 67-63-0)			
Aquatic			
Algae	IC50	Algae	1000.0001 mg/L, 72 Hours
Crustacea	EC50	Daphnia	13299 mg/L, 48 Hours
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-Butoxyethanol	0.83
Butane	2.89
Isopropyl Alcohol	0.05
Propane	2.36

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. Transport information

DOT

UN number UN1950
UN proper shipping name Aerosols, flammable, (each not exceeding 1 L capacity)
Transport hazard class(es)
Class 2.1
Subsidiary risk -
Label(s) 2.1
Packing group Not applicable.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Special provisions N82
Packaging exceptions 306
Packaging non bulk None
Packaging bulk None

This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity. Until 12/31/2020, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking and both may be displayed concurrently.

IATA

UN number UN1950
UN proper shipping name Aerosols, flammable
Transport hazard class(es)
Class 2.1
Subsidiary risk -
Label(s) 2.1
Packing group Not applicable.
Environmental hazards No.
ERG Code 10L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Other information
Passenger and cargo aircraft Allowed with restrictions.
Cargo aircraft only Allowed with restrictions.
Packaging Exceptions LTD QTY

IMDG

UN number UN1950
UN proper shipping name AEROSOLS

Transport hazard class(es)

Class	2.1
Subsidiary risk	-
Label(s)	2.1

Packing group Not applicable.

Environmental hazards

Marine pollutant No.

EmS F-D, S-U

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Packaging Exceptions LTD QTY

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

DOT

IATA; IMDG

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
2-Butoxyethanol	111-76-2	2.5 - 10

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Butane (CAS 106-97-8)
Propane (CAS 74-98-6)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

2-Butoxyethanol (CAS 111-76-2)
Butane (CAS 106-97-8)
Isopropyl Alcohol (CAS 67-63-0)

US. Massachusetts RTK - Substance List

2-Butoxyethanol (CAS 111-76-2)
Butane (CAS 106-97-8)
Isopropyl Alcohol (CAS 67-63-0)
Propane (CAS 74-98-6)

US. New Jersey Worker and Community Right-to-Know Act

2-Butoxyethanol (CAS 111-76-2)
Butane (CAS 106-97-8)
Isopropyl Alcohol (CAS 67-63-0)
Propane (CAS 74-98-6)

US. Pennsylvania Worker and Community Right-to-Know Law

2-Butoxyethanol (CAS 111-76-2)
Butane (CAS 106-97-8)
Isopropyl Alcohol (CAS 67-63-0)
Propane (CAS 74-98-6)

US. Rhode Island RTK

Butane (CAS 106-97-8)
Isopropyl Alcohol (CAS 67-63-0)
Propane (CAS 74-98-6)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 04-27-2016

Version # 01

Disclaimer We cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information Product and Company Identification: Alternate Trade Names
Hazard(s) identification: Hazard statement
Hazard(s) identification: Disposal
Hazard(s) identification: Prevention

Safety Data Sheet

Document Group:	35-2668-8	**Version Number:**	2.02
Issue Date:	11/08/16	**Supercedes Date:**	04/05/16

SECTION 1: Identification

1.1. Product identifier
3M Accessory Products, Air Tool Lubricant

Product Identification Numbers
60-4402-4213-3, 60-4402-4214-1, 60-4402-4215-8, 60-4402-4216-6

1.2. Recommended use and restrictions on use

Recommended use
Tool Lubricant

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Abrasive Systems Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Specific Target Organ Toxicity (single exposure): Category 3.

2.2. Label elements
Signal word
Warning

Symbols
Exclamation mark |

Pictograms

Hazard Statements
May cause drowsiness or dizziness.

Precautionary Statements

Prevention:
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified
None.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Petroleum Distillates	64742-54-7	50 - 65 Trade Secret *
Chlorinated Paraffin Wax	63449-39-8	10 - 20
Mineral Oil	64742-58-1	5 - 15
Lubricant	64742-53-6	1 - 10 Trade Secret *
Sulphide Additive	68425-15-0	1 - 10 Trade Secret *
Petroleum Distillates	64742-65-0	0.5 - 5 Trade Secret *
Additive	68584-23-6	0.1 - 0.5 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a carbon dioxide or dry chemical extinguisher to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
For industrial or professional use only. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
PETROLEUM DISTILLATES	64742-53-6	OSHA	TWA:2000 mg/m3(500 ppm)	
Paraffin oil	64742-53-6	OSHA	TWA(as mist):5 mg/m3	
MINERAL OILS, HIGHLY-REFINED OILS	64742-54-7	ACGIH	TWA(inhalable fraction):5 mg/m3	A4: Not class. as human carcin
MINERAL OILS, HIGHLY-REFINED OILS	64742-58-1	ACGIH	TWA(inhalable fraction):5 mg/m3	A4: Not class. as human carcin
Paraffin oil	64742-65-0	OSHA	TWA(as mist):5 mg/m3	
PETROLEUM DISTILLATES	64742-65-0	OSHA	TWA:2000 mg/m3(500 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Odor, Color, Grade:	Mild pretroleum odor, clear light amber liquid
Odor threshold	*No Data Available*
pH	*No Data Available*
Melting point	*Not Applicable*
Boiling Point	230 ºC
Flash Point	138 ºC [*Test Method:* Pensky-Martens Closed Cup]
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	*No Data Available*
Vapor Density	*No Data Available*
Density	*No Data Available*
Specific Gravity	.88 [@ 20 ºC] [*Ref Std:* WATER=1]
Solubility in Water	Nil
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Viscosity	35.4 centistoke [@ 40 ºC] [*Test Method:* Tested per ASTM protocol] [*Details:* 10 wt. D-445]
Viscosity	6.1 centistoke [@ 100 ºC] [*Test Method:* Tested per ASTM protocol] [*Details:* 10 wt. D-445]
Volatile Organic Compounds	0.18 lb/gal
Percent volatile	2.20 %
VOC Less H2O & Exempt Solvents	21.98 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Sparks and/or flames

10.5. Incompatible materials
Strong oxidizing agents
Reducing agents
Strong acids

10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
May cause additional health effects (see below).

Skin Contact:
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Carcinogenicity:

Ingredient	CAS No.	Class Description	Regulation
Generic: Alkanes, C10-12, chloro	63449-39-8	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Generic: Alkanes, C10-12, chloro	63449-39-8	Anticipated human carcinogen	National Toxicology Program Carcinogens
Generic: Mineral oils (untreated and mildly treated)	64742-53-6	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Generic: Mineral oils (untreated and mildly treated)	64742-53-6	Known human carcinogen	National Toxicology Program Carcinogens
Generic: Mineral oils (untreated and mildly	64742-58-1	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer

treated)			
Generic: Mineral oils (untreated and mildly treated)	64742-58-1	Known human carcinogen	National Toxicology Program Carcinogens

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
Petroleum Distillates	Dermal	Rabbit	LD50 > 5,000 mg/kg
Petroleum Distillates	Ingestion	Rat	LD50 > 5,000 mg/kg
Chlorinated Paraffin Wax	Dermal	Rabbit	LD50 > 13,000 mg/kg
Chlorinated Paraffin Wax	Ingestion	Rat	LD50 > 11,700 mg/kg
Lubricant	Dermal	Rabbit	LD50 > 2,000 mg/kg
Lubricant	Inhalation-Dust/Mist (4 hours)	Rat	LC50 2.2 mg/l
Lubricant	Ingestion	Rat	LD50 > 5,000 mg/kg
Petroleum Distillates	Dermal	Rabbit	LD50 > 5,000 mg/kg
Petroleum Distillates	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 4 mg/l
Petroleum Distillates	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Petroleum Distillates	Rabbit	Minimal irritation
Chlorinated Paraffin Wax	Rabbit	No significant irritation
Lubricant	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Petroleum Distillates	Rabbit	Mild irritant
Chlorinated Paraffin Wax	Rabbit	No significant irritation
Lubricant	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
Petroleum Distillates	Guinea pig	Not sensitizing
Lubricant	Guinea pig	Not sensitizing

Respiratory Sensitization
For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Petroleum Distillates	In Vitro	Some positive data exist, but the data are not sufficient for classification
Lubricant	In Vitro	Some positive data exist, but the data are not sufficient for classification
Lubricant	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Petroleum Distillates	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Lubricant	Dermal	Mouse	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Lubricant	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
Lubricant	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
Lubricant	Dermal	Not toxic to development	Rat	NOAEL 2,000 mg/kg/day	during gestation
Lubricant	Ingestion	Not toxic to development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
Lubricant	Dermal	Some positive male reproductive data exist, but the data are not sufficient for classification	Rabbit	NOAEL 1,000 mg/kg/day	28 days

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Petroleum Distillates	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Petroleum Distillates	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Petroleum Distillates	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.21 mg/l	28 days

Aspiration Hazard

Name	Value
Lubricant	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Not determined.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M transportation classifications are based on product formulation, packaging, 3M policies and 3M understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient	C.A.S. No	% by Wt
Chlorinated Paraffin Wax (POLYCHLORINATED ALKANES, C10-13)	63449-39-8	10 - 20

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 2 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	35-2668-8	**Version Number:**	2.02
Issue Date:	11/08/16	**Supercedes Date:**	04/05/16

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3M USA SDSs are available at www.3M.com

SAFETY DATA SHEET

850A

Section 1. Identification

Product name : 850A Acrylic Latex Caulk
White

Product code : 850A

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 W. Prospect Avenue
Cleveland, OH 44115

Supplier : Compania Sherwin-Williams S.A. de C.V.
Poniente 140 No.595
Col. Industrial Vallejo, Del. Azcapotzalco
C.P. 02300, Ciudad de México, México

Emergency telephone number of the company : US / Canada: (216) 566-2917
Mexico: SETIQ 01-800-00-214-00 / (52) 55-5559-1588 24 hours / 365 days a year

Product Information Telephone Number : US / Canada: Not Available
Mexico: Not Available

Regulatory Information Telephone Number : US / Canada: (216) 566-2902
Mexico: Not Available

Transportation Emergency Telephone Number : US / Canada: (800) 424-9300
Mexico: SETIQ 01-800-00-214-00 / (52) 55-5559-1588 24 hours / 365 days a year

Section 2. Hazards identification

Classification of the substance or mixture : SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 59.3%
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 60.5%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 60.5%

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : H319 - Causes serious eye irritation.
H315 - Causes skin irritation.
H350 - May cause cancer.
H335 - May cause respiratory irritation.

Precautionary statements

General : P103 - Read label before use.
P102 - Keep out of reach of children.
P101 - If medical advice is needed, have product container or label at hand.

Prevention : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
P271 - Use only outdoors or in a well-ventilated area.
P261 - Avoid breathing vapor.
P264 - Wash hands thoroughly after handling.

Response : P308 + P313 - IF exposed or concerned: Get medical attention.
P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
P332 + P313 - If skin irritation occurs: Get medical attention.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical attention.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release Crystalline Silica which has been shown to cause lung damage and cancer under long term exposure.

Please refer to the SDS for additional information. Keep out of reach of children. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Calcium Carbonate	59.3	1317-65-3
Titanium Dioxide	0.8	13463-67-7
Crystalline Silica, respirable powder	0.61	14808-60-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 7. Handling and storage

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Ingredient name	Exposure limits
Calcium Carbonate	**NIOSH REL (United States, 10/2016).** TWA: 5 mg/m³ 10 hours. Form: Respirable fraction TWA: 10 mg/m³ 10 hours. Form: Total **OSHA PEL (United States, 6/2016).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Titanium Dioxide	**ACGIH TLV (United States, 3/2016).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 6/2016).** TWA: 15 mg/m³ 8 hours. Form: Total dust
Crystalline Silica, respirable powder	**OSHA PEL Z3 (United States, 6/2016).** TWA: 250 mppcf / (%SiO2+5) 8 hours. Form: Respirable TWA: 10 mg/m³ / (%SiO2+2) 8 hours. Form: Respirable **OSHA PEL (United States, 6/2016).** TWA: 50 µg/m³ 8 hours. Form: Respirable dust **ACGIH TLV (United States, 3/2016).** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 10/2016).** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust

Occupational exposure limits (Canada)

Ingredient name	Exposure limits
None.	

Occupational exposure limits (Mexico)

Ingredient name	Exposure limits
None.	

Section 8. Exposure controls/personal protection

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 8

Melting point : Not available.

Boiling point : 100°C (212°F)

Flash point : Closed cup: >93.3°C (>199.9°F)

Evaporation rate : 0.09 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : 2.3 kPa (17.5 mm Hg) [at 20°C]

Vapor density : 1 [Air = 1]

Relative density : 1.69

Section 9. Physical and chemical properties

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 2.812 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide Crystalline Silica, respirable powder	- -	2B 1	- Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Section 11. Toxicological information

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Calcium Carbonate	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Crystalline Silica, respirable powder	Category 1	Inhalation	Not determined

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	26346.3 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-

Section 14. Transport information

Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-		-	-	-

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

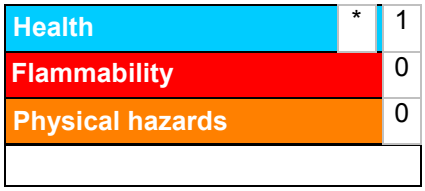
SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

Classification	Justification
SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method Calculation method Calculation method Calculation method

History

Date of printing : 1/17/2018

Date of issue/Date of revision : 1/17/2018

Section 16. Other information

Date of previous issue : 11/16/2017

Version : 3.03

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

This Safety Data Sheet (SDS) complies with the requirements of the U.S. Federal Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200, as updated in 2012) and equivalent state Standards. It has also been developed in accordance with the United Nations Globally Harmonized System of Classification of Chemicals (GHS) and the Canadian Workplace Hazardous Materials Information System (WHMIS). Refer to Section 16 of this document for the definition of terms and abbreviations

WAXIE Sparkle Glass Cleaner **950151** A00124

Version 1.0 Revision Date 04/24/2015 Print Date 05/18/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : WAXIE Sparkle Glass Cleaner

Material number : 950151

Manufacturer or supplier's details

Company : WAXIE Sanitary Supply

Address : 9353 Waxie Way, San Diego CA. 92123-1036

Telephone : 1-800-995-4466

Emergency telephone numbers		
For SDS Information	:	1-800-255-3924 (CHEMTEL; 24 hours)
For a Medical Emergency	:	1-800-255-3924 (CHEMTEL; 24 hours)
For a Transportation Emergency	:	

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Aerosol containing a liquefied gas
Color	white
Odor	characteristic

GHS Classification

Gases under pressure : Liquefied gas

GHS Label element

Hazard pictograms :

Signal word : Warning

Hazard statements : H280 Contains gas under pressure; may explode if heated.

Precautionary statements : **Storage:**
P410 + P403 Protect from sunlight. Store in a well-ventilated place.

Potential Health Effects

Carcinogenicity:

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	Confirmed animal carcinogen with unknown relevance to humans ethanol 64-17-5
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration [%]
butane	106-97-8	>= 1 - < 5
1-propoxypropan-2-ol	1569-01-3	>= 1 - < 5
ethanol	64-17-5	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

General advice : Do not leave the victim unattended.

If inhaled : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician.
Wash off immediately with plenty of water for at least 15 minutes.
If on clothes, remove clothes.

In case of eye contact : Remove contact lenses.
Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.

If swallowed : Keep respiratory tract clear.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Dry chemical Carbon dioxide (CO2) Foam
Unsuitable extinguishing media	:	High volume water jet
Hazardous combustion products	:	Carbon dioxide (CO2) Carbon monoxide Smoke
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information	:	Standard procedure for chemical fires.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so.
Methods and materials for containment and cleaning up	:	Sweep up or vacuum up spillage and collect in suitable container for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations. Do not breathe vapors or spray mist. Always replace cap after use.
Conditions for safe storage	:	BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force

or throw into fire even after use. Do not spray on flames or red-hot objects.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.
Keep in a dry, cool and well-ventilated place.

Materials to avoid : Oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
butane	106-97-8	TWA	800 ppm 1,900 mg/m3	NIOSH REL
		TWA	800 ppm 1,900 mg/m3	OSHA P0
ethanol	64-17-5	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m3	OSHA P0

Personal protective equipment

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Face-shield
Safety glasses

Skin and body protection : impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Aerosol containing a liquefied gas
Color	:	white
Odor	:	characteristic
Odor Threshold	:	no data available
pH	:	no data available
Melting point/freezing point	:	no data available
Boiling point	:	no data available
Flash point	:	not applicable
Evaporation rate	:	< 1
Flammability (solid, gas)	:	The product is not flammable.
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapor pressure	:	no data available
Relative vapor density	:	no data available
Density	:	0.99 g/cm3
Solubility(ies)		
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	not determined
Thermal decomposition	:	no data available
Viscosity		
Viscosity, kinematic	:	no data available
Heat of combustion	:	3.07 kJ/g

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	Carbon dioxide (CO2) Carbon monoxide Nitrogen oxides (NOx)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:

butane:

Acute inhalation toxicity	:	LC50 mouse: 1,237 mg/l Exposure time: 2 h
		LC50 rat: 1,355 mg/l

ethanol:

Acute oral toxicity	:	LD50 Oral rat: 7,060 mg/kg
Acute inhalation toxicity	:	LC50 rat: 124.7 mg/l Exposure time: 4 h

Skin corrosion/irritation

Product:

Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Product:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

butane:
1-propoxypropan-2-ol:
ethanol:

STOT - single exposure

no data available

STOT - repeated exposure

no data available

Aspiration toxicity

no data available

Further information

Product:

Remarks: no data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

Product:

Partition coefficient: n-octanol/water	:	Remarks: no data available

Components:

butane:

Partition coefficient: n-octanol/water	:	Pow: 2.89

Mobility in soil

no data available

Other adverse effects

no data available

Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):
ORM-D, CONSUMER COMMODITY

Transportation Regulation: IMDG (Vessel):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: IATA (Cargo Air):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: IATA (Passenger Air):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: TDG (Canada):
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
2,2'-iminodiethanol	111-42-2	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Sudden Release of Pressure Hazard

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65 WARNING! This product contains a chemical known to the State of California to cause cancer.

2,2'-iminodiethanol 111-42-2

The components of this product are reported in the following inventories:

TSCA	On TSCA Inventory
DSL	This product contains one or several components that are not on the Canadian DSL nor NDSL.
AICS	Not in compliance with the inventory
NZIoC	Not in compliance with the inventory
PICCS	Not in compliance with the inventory
IECSC	Not in compliance with the inventory

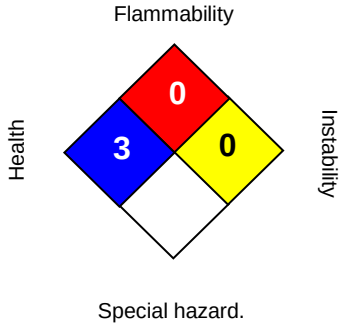
Inventory Acronym and Validity Area Legend:

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	2

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

OSHA GHS Label Information:

Hazard pictograms :

Signal word : **Warning:**
Hazard statements : Contains gas under pressure; may explode if heated.
Precautionary statements :

Storage: Protect from sunlight. Store in a well-ventilated place.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. Users should make their own investigations to determine the suitability and applicability of the information for their particular purposes. This SDS has been prepared by the Compliance Services organization supporting this manufacturer, supplier or distributor.

SAFETY DATA SHEET

Section 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	ABC Dry Chemical Fire Extinguishant
Other Identifiers:	Multi-purpose Dry Chemical
Product Code(s):	CH550, F15, F18
Model Code(s) for Extinguishers:	411, 417, 419, 423, 424, 425, 441, 443, 450, 456, 461, 464, 467, 470, 473, 476, 481, 487, 488, 491, 495, 500, 564, 567, 573, 581, 589, 592, 594, 668, 692, 720, 760, 763, 781.
Recommended Use:	Fire suppression, not for human or animal drug use.
Manufacturer:	AMEREX CORPORATION
Internet Address:	www.amerex-fire.com
Address:	7595 Gadsden Highway, P.O. Box 81 Trussville, AL 35173-0081
Company Telephone:	(205) 655-3271
E-mail Address:	info@amerex-fire.com
Emergency Contacts:	Chemtrec 1(800) 424-9300 or (703) 527–3887
Revised:	May, 2016

Section 2. HAZARDS IDENTIFICATION

GHS – Classification

Health	Environmental	Physical
Acute Toxicity: Category 5	None	None
Skin Corrosion/Irritation: Category 3	None	None
Skin Sensitization: NO	None	None
Eye: Category 2B	None	Warning
STOT –Category 3	None	Warning
Carcinogen: Category None	None	None

GHS – Label Symbol(s): **Exclamation Mark**

GHS – Signal Word(s): **Warning**

Other Hazards Not Resulting in Classification: None

GHS – Hazard Phrases

GHS Hazard	GHS Codes(s)	Code Phrase(s)
Physical	None	
Health	H303 316 320 333	May be harmful if swallowed Causes mild skin irritation Causes eye irritation May be harmful if inhaled
Environmental	None	
Precautionary:		
General	P101	If medical advice is needed, have product container or label at hand
Prevention	P261 264	Avoid breathing dust. Wash hands and face thoroughly after handling.
Response	P304+340 305+351+313 337+338 P312	If inhaled, remove person to fresh air and keep comfortable for breathing. If in eyes, rinse cautiously with water for several minutes. Get immediate medical advice/attention (as appropriate). If eye irritation persists: remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor if you feel unwell (as appropriate).
Storage	None	

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No.	Weight %
Mono-ammonium phosphate	NA	NA	7722-76-1	55-75
Ammonium sulfate	231-984-1	NA	7783-20-2	20-40
Fullers earth magnesium aluminum silicate	NA	Not Available	8031-18-3	<3
Mica- potassium aluminum silicate	NA	Not Available	12001-26-2	1-2
Silicone oil methyl hydrogen polysiloxane	NA	Not Available	63148-57-2	<1
Calcium carbonate	215-279-6	Not Available	1317-65-3	<1
Amorphous silica precipitated synthetic zeolite	262-373-8	Not Available	112926-00-8	<1
Yellow 14 pigment – diazo dye	228-767-9	Not Available	5468-75-7	<1

Emergency overview: Light yellow, fine solid powder, odorless.

Adverse health effects and symptoms: Irritant to the respiratory system; Irritating to eyes and skin. Symptoms may include coughing, shortness of breath, and irritation of the lungs, eyes, and skin. Ingestion, although unlikely, may cause cramps, nausea and diarrhea.

Cut-off Levels

Chemical Name	Reproductive Toxicity	Carcinogenicity	Mutagenicity	Other Hazard Classes
Mono-ammonium Phosphate	NA	NA	NA	NA
Ammonium Sulfate	NA	NA	NA	NA

Fullers earth magnesium aluminum silicate	NA	NA	NA	NA
Mica- potassium aluminum silicate	NA	NA	NA	NA
Silicone oil methyl hydrogen polysiloxane	NA	NA	NA	NA
Calcium carbonate	NA	NA	NA	NA
Amorphous silica precipitated synthetic zeolite	NA	NA	NA	NA
Yellow 14 pigment – di-azo dye	NA	NA	NA	NA

Section 4. FIRST AID MEASURES

Eye Exposure:	May cause irritation. Irrigate eyes with water and repeat until pain free. Seek medical attention if irritation develops, or if vision changes occur.
Skin Exposure:	May cause skin irritation. In case of contact, wash with plenty of soap and water. Seek medical attention if irritation persists.
Inhalation:	May cause irritation, along with coughing. If respiratory irritation or distress occurs, remove victim to fresh air. Seek medical attention if irritation persists.
Ingestion:	Overdose symptoms may include numbness or tingling in hands or feet, uneven heart rate, paralysis, feeling faint, chest pain or heavy feeling, pain spreading to the arm or shoulder, nausea, diarrhea, sweating, general ill feeling, or seizure (convulsions). If victim is conscious and alert, give 2-3 glasses of water to drink. If conscious, do not induce vomiting. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist.
Medical conditions possibly aggravated by exposure:	Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema, or bronchitis. Skin contact may aggravate existing skin disease. Chronic overexposure may cause pneumoconiosis (“dusty lung” disease).

Section 5. FIRE-FIGHTING MEASURES

Flammable Properties:	Not flammable
Flash Point:	Not determined
Suitable Extinguishing Media:	Non-combustible. Use extinguishing media suitable for surrounding conditions.
Hazardous Combustion Products:	Carbon and sulfur oxides
Explosion Data:	
Sensitivity to Mechanical Impact:	Not sensitive
Sensitivity to Static Discharge:	Not sensitive
Unusual fire/explosion hazards:	In a fire this material may decompose, releasing oxides of carbon, sulfur, potassium and nitrogen (see Section 10).
Protective Equipment and Precautions for Firefighters:	As in any fire, wear self-contained breathing apparatus in pressure-demand, NIOSH approved or equivalent and full protective gear.

Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid contact with skin, eyes, and clothing.
Personal Protective Equipment:	Minimum - safety glasses, gloves, and a dust respirator.
Emergency Procedures:	NA
Methods for Containment:	Prevent further leakage or spillage if safe to do so.
Methods for Clean Up:	Avoid dust formation. Clean up released material using vacuum or wet sweep and shovel to minimize generation of dust. Bag and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.
Environmental Precautions:	Prevent material from entering waterways.
Other:	If product is contaminated, use PPE and containment appropriate to the nature of the most toxic chemical/material in the mixture.

Section 7. HANDLING AND STORAGE

Personal Precautions:	Use appropriate PPE when handling or maintaining equipment, and wash thoroughly after handling (see Section 8).
Conditions for Safe Storage/Handling:	Keep product in original container or extinguisher. Contents may be under pressure – inspect extinguisher consistent with product labeling to ensure container integrity.
Incompatible Products:	Do not mix with other extinguishing agents, particularly potassium bicarbonate and sodium bicarbonate. Incompatible with strong oxidizing agents and strong acids. Do not store in high humidity. Do not combine with chlorine compounds.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	OSHA PEL	ACGIH TLV	DFG MAK *	EU BLV
Mono-ammonium phosphate	PNOC** Total dust, 15 mg/m^3 Respirable fraction, 5 mg/m^3	PNOC Total dust, 10 mg/m^3 Respirable fraction, 3 mg/m^3	PNOC Total dust, 4 mg/m^3 Respirable fraction, 1.5 mg/m^3	NA
Ammonium Sulfate	PNOC** Total dust, 15 mg/m^3 Respirable fraction, 5 mg/m^3	PNOC Total dust, 10 mg/m^3 Respirable fraction, 3 mg/m^3	PNOC Total dust, 4 mg/m^3 Respirable fraction, 1.5 mg/m^3	NA
Mica	6 mg/m^3	3 mg/m3	NR	NA
Fullers Earth	PNOC** Total dust, 15 mg/m^3 Respirable fraction, 5 mg/m^3	PNOC Total dust, 10 mg/m^3 Respirable fraction, 3 mg/m^3	PNOC Total dust, 4 mg/m^3 Respirable fraction, 1.5 mg/m^3	
Silicone oil	NR**	NR	NR	NA
Calcium carbonate	PNOC Total dust, 15 mg/m^3 Respirable fraction, 5 mg/m^3	PNOC Total dust, 10 mg/m^3 Respirable fraction, 3 mg/m^3	-------	NA
Amorphous silica	80 mg/m^3 % silica	10 mg/m^3	4 mg/m^3	NA
Yellow 14 pigment	NR	NR	NR	NA

*German regulatory limits **PNOC = Particulates not otherwise classified (ACGIH) also known as Particulates not otherwise regulated (OSHA) *** NR = Not Regulated. All values are 8 hour time weighted average concentrations.

Engineering Controls:	Showers Eyewash stations Ventilation systems

Personal Protective Equipment – PPE Code E:

The need for respiratory protection is not probable during short-term exposure. PPE use during production process must be independently evaluated.




Eye/Face Protection:	Tightly fitting safety goggles
Skin and Body Protection:	Wear protective gloves/coveralls
Respiratory Protection:	If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn. Use P100 respirators for limited exposure, use air-purifying respirator (APR) with high efficiency particulate air (HEPA) filters for prolonged exposure. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current safety and health requirements. The need for respiratory protection is not likely for short-term use in well ventilated areas.
Hygiene Measures:	Good personal hygiene practice is essential, such as avoiding food, tobacco products, or other hand-to-mouth contact when handling. Wash thoroughly after handling.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light yellow powder, finely divided odorless solid
Molecular Weight:	$NH_4H_2PO_4$: 115.03; $(NH_4)_2SO_4$: 132.14

Odor:	Odorless
Odor Threshold:	No information available
Decomposition Temperature ^{o}C:	100 - 120
Freezing Point ^{o}C:	No information available
Initial Boiling Point ^{o}C:	No information available
Physical State:	Crystalline Powder
pH:	Mixture approximately 4 to 5; NH4H2PO4: 4.2 in 0.2 molar solution; (NH4)2SO4: 5.5 in 0.1 molar solution
Flash Point ^{o}C:	None
Auto-ignition Temperature ^{o}C:	None
Boiling Point/Range ^{o}C:	Not Applicable
Melting Point/Range ^{o}C:	NH4H2PO4: 190; (NH4)2SO4: 280
Flammability:	Not Flammable
Flammability Limits in Air ^{o}C:	Upper – Not Flammable; Lower-Not Flammable
Explosive Properties:	None
Oxidizing Properties:	None
Volatile Component (%vol)	Not Applicable
Evaporation Rate:	Not Applicable
Vapor Density:	Not Applicable
Vapor Pressure:	Not Applicable
Specific gravity at 25 C:	NH4H2PO4: 1.80; (NH4)2SO4:: 1.77
Solubility:	Coated-Not Immediately Soluble in Water
Partition Coefficient:	NH4H2PO4 Est: -4.11; (NH4)2SO4: Est: -0.48
Viscosity:	Not Applicable

NOTE: NH4H2PO4 – Monoammonium Phosphate; (NH4)2SO4: – Ammonium Sulfate

Section 10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage and handling conditions.
Reactivity:	
Incompatibles:	Strong alkalis (bases), magnesium, strong oxidizers, isocyanuric acids and chlorine compounds.
Conditions to Avoid:	Storage or handling near incompatibles.
Hazardous Decomposition Products:	Heat of fire may release carbon monoxide, carbon dioxide, and sulfur dioxide. Also ammonia, oxides of phosphorous and nitrogen oxides may be released during decomposition.
Possibility of Hazardous Reactions:	Slight
Hazardous Polymerization	Does not occur

Section 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, skin, and eye contact.
Symptoms:
Immediate:
Inhalation: Irritation, coughing.
Eyes: Irritation.
Skin: Irritation.
Delayed: Symptoms appear to be relatively immediate
Acute Toxicity: Relatively non-toxic.
Chronic Toxicity:
Short-term Exposure: None known.
Long-term Exposure: As with all dusts, pneumoconiosis, or "dusty lung" disease, may result from chronic exposure.

Acute Toxicity Values - Health

Chemical Name	LD50		LC50 (Inhalation)
	Oral	Dermal	
Mono-ammonium phosphate	5750 mg/kg (rat)	>7940 mg/kg (rabbit)	Not available
Ammonium Sulfate	2840 mg/kg (rat)	Not available	Not available
Mica	None	None	None
Fullers Earth	None	None	None
Silicone oil	None	None	None
Calcium carbonate	6450 mg/kg (rat)	500 mg/24 hr (rabbit)	Not available
Amorphous silica	>5000 mg/kg (rat)	>2000 mg/kg (rabbit)	>2.2 mg/L (rat)
Yellow 14 pigment	>17000 mg/kg (rat)	>3000 mg/kg (rat)	>4448 mg/m3 (rat)

Reproductive Toxicity: This product's ingredients are not known to have reproductive or teratogenic effects.

Target Organs and Effects (TOST): Respiratory system irritant).
This product is a mild irritant to epithelial tissue, (eyes, mucous membranes, skin) and may aggravate dermatitis. No information was found indicating the product causes sensitization.

Other Toxicity Categories

Chemical Name	Germ Cell Mutagenicity	Carcino-genicity	Repro-ductive	TOST Single Exp	TOST Repeated Exp	Aspiration
Mono-ammonium phosphate	None	None	None	Cat 3	None	None
Ammonium Sulfate	None	None	None	Cat 3	None	None
Fullers earth	None	None	None	None	None	None
Mica	None	None	None	None	None	None
Silicone oil	None	None	None	None	None	None

Calcium carbonate	None	None	None	None	None	None
Amorphous silica	None	None	None	None	None	None
Yellow 14 pigment	None	None	None	None	None	None

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity:	Negative effects unknown. Provides nutrient nitrogen and phosphorus to plant life.
Persistence/Degradability:	Degrades rapidly in humid/wet environment.
Probability of rapid biodegradation:	NH4H2PO4 Est: 0.693 (Rapid); (NH4)2SO4: Est: 0.684 (Rapid)
Anaerobic biodegradation probability:	NH4H2PO4 Est: 0.398 (Slow); (NH4)2SO4: Est: 0.398 (Slow)
Bioaccummulation potential:	Low.
Bioconcentration factor:	NH4H2PO4: 3.16 L/kg; (NH4)2SO4: 3.16 L/kg (wet weight)
Bioaccummulation:	Extent unknown.
Mobility in soil:	Slow evaporation rate; water soluble, may leach to groundwater
Log Koc:	NH4H2PO4 Est: -1.25: (NH4)2SO4: Est: 1.35
Log Koa:	NH4H2PO4 Est: 16.72; (NH4)2SO4: Est: 20.10
Log Kaw:	NH4H2PO4 Est: -20.86; (NH4)2SO4: Est: -19.62

NOTE: NH4H2PO4 – Mono-ammonium Phosphate; (NH4)2SO4: – Ammonium Sulfate

Other Adverse Ecological Effects: No other known effects at this time

Aquatic Toxicity Values – Environment – Research

Chemical Name	Acute (LC50)	Chronic (LC50)
Mono-ammonium phosphate	N/A	N/A
Ammonium Sulfate	N/A	N/A
Mica	N/A	N/A
Fullers Earth	N/A	N/A
Silicone oil	N/A	N/A
Calcium carbonate	N/A	N/A
Amorphous silica	N/A	N/A
Yellow 14 pigment	N/A	N/A

Aquatic Toxicity Values – Environment – Estimates

Chemical Name	Acute (LC50)	EC50
Mono-ammonium phosphate	2,91e+07 mg/L Fish 96 hr; 9.4e+06 mg/l Daphnid 48 hr;	6.70e+05 mg/L Gr. Algae 96 hr
Ammonium Sulfate	2521 mg/L Fish 96 hr; 1244 mg/l Daphnid 48 hr;	518 mg/L Gr. Algae 96 hr
Mica	N/A	N/A
Fullers Earth	N/A	N/A
Silicone oil	N/A	N/A
Calcium carbonate	N/A	N/A
Amorphous silica	N/A	N/A
Yellow 14 pigment	N/A	N/A

Section 13. DISPOSAL CONSIDERATIONS

Safe Handling	Use appropriate PPE when handling, and wash thoroughly after handling (see Section 8).
Waste Disposal Considerations	Dispose in accordance with federal, state, and local regulations.
Contaminated Packaging	Dispose in accordance with federal, state, and local regulations.

NOTES:
This product is not a RCRA characteristically hazardous or listed hazardous waste. Dispose of according to state or local laws, which may be more restrictive than federal laws or regulations. Used product may be altered or contaminated, creating different disposal considerations.

Section 14. TRANSPORT INFORMATION

UN Number:	NA
UN Proper Shipping Name:	NA
Transport Hazard Class:	NA
Packing Group:	NA
Marine Pollutant?:	NO
IATA	Not regulated
DOT	Not regulated

NOTES:
This product is not defined as a hazardous material under U.S. Department of Transportation (DOT) 49 CFR 172, or by Transport Canada “Transportation of Dangerous Goods” regulations.

Special Precautions for Shipping:
If shipped in a stored pressure-type fire extinguisher, and pressurized with a non-flammable, non-toxic inert expellant gas, the fire extinguisher is considered a hazardous material by the US Department of Transportation and Transport Canada. The proper shipping name shall be FIRE EXTINGUISHER and the UN designation is UN 1044. The DOT hazard class is 2.2, non-flammable, when shipped via highway or rail.

Section 15. REGULATORY INFORMATION

International Inventory Status: All ingredients are on the following inventories

Country(ies)	Agency	Status
United States of America	TSCA	Yes
Canada	DSL	Yes
Europe	EINECS/ELINCS	Yes
Australia	AICS	Yes
Japan	MITI	Yes
South Korea	KECL	Yes

REACH Title VII Restrictions: No information available

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on Label	Pollution Release and Transfer Registry (Class II)	Pollution Release and Transfer Registry (Class I)	Poison and Deleterious Substances Control Law
Mono-ammonium Phosphate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Ammonium Sulfate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Component	ISHA – Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA – Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) – Toxic Chemicals	Toxic Release Inventory (TRI) – Group I	Toxic Release Inventory (TRI) – Group II
Mono-ammonium Phosphate 7722-76-1	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Ammonium Sulphate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Fullers earth magnesium aluminum silicate 8031-18-3 (>4)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Mica-potassium aluminum silicate 120001-26-2 (>2)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Calcium carbonate 471-34-1	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Amorphous silica 69012-64-2	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Yellow 14 pigment 5468-75-7	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

European Risk and Safety phrases:

EU Classification:	XN	Irritant
R Phrases:	20	Harmful by inhalation.
	36/37	Irritating to eyes, respiratory system.
S Phrases:	22	Do not breath dust.
	24/25	Avoid contact with skin and eyes
	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.

U.S. Federal Regulatory Information:

SARA 313:
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) - This product does not contain and chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.
None of the chemicals in this product are under SARA reporting requirements or have SARA threshold planning quantities (TPQs) or CERCLA reportable quantities (RQs), or are regulated under TSCA 8(d).

SARA 311/312 Hazard Categories:

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard-*	Yes
Reactive Hazard	No

* - Only applicable if material is in a pressurized extinguisher.

Clean Water/Clean Air Acts:
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42) or Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61) and Section 112 of the Clean Air Act Amendments of 1990.

U.S. State Regulatory Information:

Chemicals in this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: None
California – Permissible Exposure Limits for Chemical Contaminants: None
Florida – Substance List: Mica Dust
Illinois – Toxic Substance List: None
Kansas – Section 302/303 List: None
Massachusetts – Substance List: Mica Dust
Minnesota – List of Hazardous Substances: None
Missouri – Employer Information/Toxic Substance List: None
New Jersey – Right to Know Hazardous Substance List: None
North Dakota – List of Hazardous Chemicals, Reportable Quantities: None
Pennsylvania – Hazardous Substance List: None
Rhode Island – Hazardous Substance List: Mica Dust
Texas – Hazardous Substance List: No
West Virginia – Hazardous Substance List: None
Wisconsin – Toxic and Hazardous Substances: None

California Proposition 65: No component is listed on the California Proposition 65 list.

Other:

Mexico – Grade	No component listed
Canada – WHMIS Hazard Class	No component listed

Section 16. OTHER INFORMATION

This SDS conforms to requirements under U.S., U.K., Canadian, Australian, and EU regulations or standards, and conforms to the proposed 2003 ANSI Z400.1 format.

Issuing Date	17-June-2012
Revision Date	4-May-2016
Revision Notes	None

The information herein is given in good faith but no warranty, expressed or implied, is made.
Updated by William F. Garvin, CIH.

Material Safety Data Sheet

Essence Exterior Flat Latex Acrylic House Paint

1. Product and company identification

Product name : Essence Exterior Flat Latex Acrylic House Paint

Material uses : Coatings: Waterborne paint. (100% Acrylic.)

Code : 150A100, 310, 320, 330

Manufacturer : Ace Hardware Paint Division
21901 South Central Avenue,
Matteson, IL 60443-2800
Phone #: (800) 311-8324

Supplier : Ace Hardware Corporation
2200 Kensington Court,
Oak Brook, IL 60523-2100
(800) 311-8324

Validation date : 10/18/2011.

Prepared by : Atrion Regulatory Services, Inc.

In case of emergency : Infotrac (800) 535-5053
Outside USA (352) 323-3500

2. Hazards identification

Physical state : Liquid.

Color : Various

Odor : Characteristic.

Emergency overview

Hazard statements : MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CAN CAUSE CANCER. BIRTH DEFECT HAZARD - CAN CAUSE BIRTH DEFECTS. DEVELOPMENTAL HAZARD - CAN CAUSE ADVERSE DEVELOPMENTAL EFFECTS.

Precautions : Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not get on skin or clothing. Avoid contact with eyes. Avoid exposure during pregnancy. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation : Slightly irritating to the respiratory system.

Ingestion : No known significant effects or critical hazards.

Skin : Slightly irritating to the skin.

Eyes : Slightly irritating to the eyes.

Potential chronic health effects

Chronic effects : Contains material that can cause target organ damage.

Carcinogenicity : Can cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Can cause birth defects.

Developmental effects : Can cause developmental abnormalities.

Fertility effects : No known significant effects or critical hazards.

2. Hazards identification

Target organs : Contains material which may cause damage to the following organs: lungs, upper respiratory tract, skin, stomach.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : No specific data.

Skin : Adverse symptoms may include the following:
irritation
redness

Eyes : Adverse symptoms may include the following:
irritation
watering
redness

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

United States

Name	CAS number	%
Nepheline syenite	37244-96-5	10-30
Titanium dioxide	13463-67-7	10-30
Kaolin	1332-58-7	5-10
Palygorskite	12174-11-7	0.1-1

Canada

Name	CAS number	%
Nepheline syenite	37244-96-5	10-30
Titanium dioxide	13463-67-7	10-30
Kaolin	1332-58-7	5-10
Ethylene glycol	107-21-1	0.1-1
Palygorskite	12174-11-7	0.1-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

4. First aid measures

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

7. Handling and storage

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
Nepheline syenite	**ACGIH TLV (United States).** TWA: 10 mg/m³ Form: Inhalable
Titanium dioxide	**ACGIH TLV (United States, 2/2010).** TWA: 10 mg/m³ 8 hour(s). **OSHA PEL 1989 (United States, 3/1989).** TWA: 10 mg/m³ 8 hour(s). Form: Total dust **OSHA PEL (United States, 6/2010).** TWA: 15 mg/m³ 8 hour(s). Form: Total dust
Kaolin	**ACGIH TLV (United States, 2/2010).** TWA: 2 mg/m³ 8 hour(s). Form: Respirable fraction **OSHA PEL 1989 (United States, 3/1989).** TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction TWA: 10 mg/m³ 8 hour(s). Form: Total dust **NIOSH REL (United States, 6/2009).** TWA: 5 mg/m³ 10 hour(s). Form: Respirable fraction TWA: 10 mg/m³ 10 hour(s). Form: Total **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hour(s). Form: Respirable fraction TWA: 15 mg/m³ 8 hour(s). Form: Total dust

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m³	Other	ppm	mg/m³	Other	ppm	mg/m³	Other	Notations
Titanium dioxide	US ACGIH 2/2010	-	10	-	-	-	-	-	-	-	
	AB 4/2009	-	10	-	-	-	-	-	-	-	[3]
	BC 9/2010	-	3	-	-	-	-	-	-	-	[a]
		-	10	-	-	-	-	-	-	-	[b]
	ON 7/2010	-	10	-	-	-	-	-	-	-	[c]
	QC 6/2008	-	10	-	-	-	-	-	-	-	[d]
Kaolin	US ACGIH 2/2010	-	2	-	-	-	-	-	-	-	[e]
	AB 4/2009	-	2	-	-	-	-	-	-	-	[f]
	BC 9/2010	-	2	-	-	-	-	-	-	-	[f]
	ON 7/2010	-	2	-	-	-	-	-	-	-	[e]
	QC 6/2008	-	5	-	-	-	-	-	-	-	[g]
Ethylene glycol	US ACGIH 2/2010	-	-	-	-	-	-	-	100	-	[h][A]
	AB 4/2009	-	-	-	-	-	-	-	100	-	[3] [i]
	BC 9/2010	-	-	-	-	-	-	-	100	-	[h]
		-	10	-	-	20	-	-	-	-	[j]
		-	-	-	-	-	-	50	-	-	[k]
	ON 7/2010	-	-	-	-	-	-	-	100	-	[i]
	QC 6/2008	-	-	-	50	127	-	-	-	-	[l]
Palygorskite		-	-	1 f/cc	-	-	-	-	-	-	[m]
Nepheline syenite	US ACGIH	-	10	-	-	-	-	-	-	-	[n]
	ON 7/2010	-	10	-	-	-	-	-	-	-	

[3]Skin sensitization

Form: [a]Respirable dust [b]Total dust [c]total dust [d]Total dust. [e]Respirable fraction [f]Respirable [g]Respirable dust. [h]Aerosol [i]aerosol [j]Particulate [k]Vapour [l]vapour and mist [m]RESPIRABLE FIBRES (other than respirable asbestos fibres) : Objects, other than respirable asbestos fibres, longer than 5 µm, having a diameter of less than 3 µm and a ratio of length to diameter of more than 3 :1. [n]Inhalable

Notes: [A]Refers to Appendix A -- Carcinogens. See Notice of Intended changes.

Consult local authorities for acceptable exposure limits.

8. Exposure controls/personal protection

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical state : Liquid.

Flash point : Not available.

Auto-ignition temperature : Not available.

Flammable limits : Not available.

Color : Various

Odor : Characteristic.

pH : 8.5 to 9.5

Boiling/condensation point : Not available.

Melting/freezing point : Not available.

Relative density : 1.217 to 1.322

Density : 1.215 to 1.319 g/cm^3

Vapor pressure : Not available.

Vapor density : Not available.

VOC content : 0.376 to 0.409 lbs/gal (45 to 49 g/l)

Odor threshold : Not available.

Evaporation rate : Not available.

Viscosity : Not available.

Solubility : Easily soluble in the following materials: cold water and hot water.

9. Physical and chemical properties

$LogK_{ow}$: Not available.

10. Stability and reactivity

Chemical stability : The product is stable.

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials, reducing materials and metals.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Titanium dioxide	TDLo Oral	Rat	60 g/kg	-
Ethylene glycol	LD50 Oral	Rat	4700 mg/kg	-

Chronic toxicity

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Ethylene glycol	Eyes - Mild irritant	Rabbit	-	-	-
	Eyes - Moderate irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rabbit	-	-	-

Sensitizer

Not available.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Titanium dioxide	A4	2B	-	+	-	-
Kaolin	A4	-	-	-	-	-
Palygorskite	-	2B	-	-	-	-

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Titanium dioxide	Acute EC50 5.83 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute EC50 >1000000 ug/L Fresh water	Daphnia - Daphnia magna - <24 hours	48 hours
	Acute LC50 >10 mg/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate - <24 hours	48 hours
	Acute LC50 5.5 ppm Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
	Acute LC50 >1000000 ug/L Marine water	Fish - Fundulus heteroclitus	96 hours
Ethylene glycol	Acute LC50 >100000 ug/L Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 6900000 ug/L Fresh water	Daphnia - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 8050000 ug/L Fresh water	Fish - Pimephales promelas - <=7 days	96 hours
	Chronic NOEC 11610000 ug/L Fresh water	Daphnia - Ceriodaphnia dubia - <=24 hours	48 hours
	Chronic NOEC 6090000 ug/L Fresh water	Fish - Pimephales promelas - <=7 days	96 hours
Essence Exterior Flat Latex Acrylic House Paint	Acute LC50 164.94 ppm	Fish	96 hours

Conclusion/Summary : Data from an analogous product.

Persistence/degradability

Not available.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Carcinogen
Target organ effects

U.S. Federal regulations : **TSCA 8(a) PAIR**: Glycols, polyethylene, mono(nonylphenyl) ether
TSCA 8(a) IUR: Not determined
United States inventory (TSCA 8b): Not determined.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Kaolin; Titanium dioxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Kaolin: Delayed (chronic) health hazard; Titanium dioxide: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 311: ammonia, anhydrous

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 313

Form R - Reporting requirements Not applicable.

Supplier notification Not applicable.

State regulations

Massachusetts : The following components are listed: TITANIUM DIOXIDE

New York : None of the components are listed.

15. Regulatory information

New Jersey : The following components are listed: TITANIUM DIOXIDE; TITANIUM OXIDE (TiO2); KAOLIN

Pennsylvania : The following components are listed: TITANIUM OXIDE (TIO2); KAOLIN

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Palygorskite	Yes.	No.	No.	No.
Quartz (SiO2)	Yes.	No.	No.	No.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists : **Australia inventory (AICS)**: Not determined.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

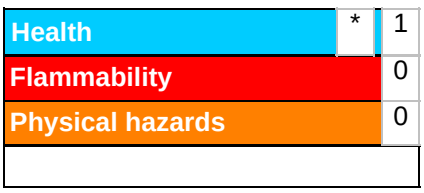
Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CAN CAUSE CANCER. BIRTH DEFECT HAZARD - CAN CAUSE BIRTH DEFECTS. DEVELOPMENTAL HAZARD - CAN CAUSE ADVERSE DEVELOPMENTAL EFFECTS.

Hazardous Material Information System (U.S.A.) :

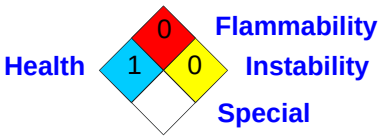


16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of issue : 10/18/2011.

Date of previous issue : No previous validation.

Version : 1

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Acetylene, dissolved

Safety Data Sheet P-4559

This SDS conforms to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

Date of issue: 01/01/1979 Revision date: 10/13/2016 Supersedes: 02/03/2016

SECTION: 1. Product and company identification

1.1. Product identifier

Product form	:	Substance
Name	:	Acetylene, dissolved
CAS No	:	74-86-2
Formula	:	C2H2
Other means of identification	:	Acetylen, ethine, ethyne, narcylene

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	:	Industrial use. Use as directed.

1.3. Details of the supplier of the safety data sheet

Praxair, Inc.
10 Riverview Drive
Danbury, CT 06810-6268 - USA
T 1-800-772-9247 (1-800-PRAXAIR) - F 1-716-879-2146
www.praxair.com

1.4. Emergency telephone number

Emergency number : Onsite Emergency: 1-800-645-4633

CHEMTREC, 24hr/day 7days/week
— Within USA: 1-800-424-9300, Outside USA: 001-703-527-3887
(collect calls accepted, Contract 17729)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

GHS-US classification

Flam. Gas 1 H220
Dissolved gas H280

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS02 GHS04

Signal word (GHS-US) : DANGER

Hazard statements (GHS-US) : H220 - **EXTREMELY FLAMMABLE GAS**
H231 - MAY REACT EXPLOSIVELY EVEN IN THE ABSENCE OF AIR AT ELEVATED PRESSURE AND/OR TEMPERATURE
H280 - CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED
OSHA-H01 - MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION
CGA-HG04 - MAY FORM EXPLOSIVE MIXTURES WITH AIR

Precautionary statements (GHS-US) : P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from Heat, Open flames, Sparks, Hot surfaces. - No smoking
P271+P403 - Use and store only outdoors or in a well-ventilated place
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely
P381 - Eliminate all ignition sources if safe to do so
P501 - Dispose of contents/container in accordance with container Supplier/owner instructions
CGA-PG05 - Use a back flow preventive device in the piping
CGA-PG13 - Fusible plugs in the top, bottom, or valve melt at 98 °C to 107 °C (208 °F to 224 °F). Do not discharge at pressures above 15 psig (103 kPa)

CGA-PG06 - Close valve after each use and when empty
CGA-PG11 - Never put cylinders into unventilated areas of passenger vehicles
CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F)

2.3. Other hazards

Other hazards not contributing to the classification : For safety reasons, the acetylene is dissolved in acetone (CAS # 67-64-1; Flam. Liq. 2, Eye Irrit. 2, STOT SE 3) in the gas container. Vapor of the solvent is carried away as impurity when the acetylene is extracted from the gas container. The concentration of the solvent vapor in the gas is lower than the concentration limits to change the classification of the acetylene.

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/Information on ingredients

3.1. Substance

Name	Product identifier	%
Acetylene, dissolved (Main constituent)	(CAS No) 74-86-2	100

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

First-aid measures after skin contact : The liquid may cause frostbite. For exposure to liquid, immediately warm frostbite area with warm water not to exceed 105°F (41°C). Water temperature should be tolerable to normal skin. Maintain skin warming for at least 15 minutes or until normal coloring and sensation have returned to the affected area. In case of massive exposure, remove clothing while showering with warm water. Seek medical evaluation and treatment as soon as possible.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Contact an ophthalmologist immediately.. Get immediate medical attention.

First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : See below. See CGA Pamphlet SB-4, *Handling Acetylene Cylinders in Fire Situations,* for further information.

5.2. Special hazards arising from the substance or mixture

Fire hazard : **EXTREMELY FLAMMABLE GAS**. If venting or leaking gas catches fire, do not extinguish flames. Flammable vapors may spread from leak, creating an explosive reignition hazard. Vapors can be ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharge, or other ignition sources at locations distant from product handling point. Explosive atmospheres may linger. Before entering an area, especially a confined area, check the atmosphere with an appropriate device.

Explosion hazard : **EXTREMELY FLAMMABLE GAS**. Forms explosive mixtures with air and oxidizing agents.

Reactivity : No reactivity hazard other than the effects described in sub-sections below.

5.3. Advice for firefighters

Firefighting instructions	:	Evacuate all personnel from the danger area. Use self-contained breathing apparatus (SCBA) and protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas if safe to do so, while continuing cooling water spray. Remove ignition sources if safe to do so. Remove containers from area of fire if safe to do so. On-site fire brigades must comply with OSHA 29 CFR 1910.156 and applicable standards under 29 CFR 1910 Subpart L—Fire Protection.
Protection during firefighting	:	Compressed gas: asphyxiant. Suffocation hazard by lack of oxygen.
Special protective equipment for fire fighters	:	Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.
Specific methods	:	Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas containers to rupture. Cool endangered containers with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems Stop flow of product if safe to do so Use water spray or fog to knock down fire fumes if possible Continue water spray from protected position until container stays cool.
Other information	:	Acetylene containers are provided with pressure relief devices designed to vent contents when exposed to elevated temperature.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Wear self-contained breathing apparatus when entering area unless atmosphere is proven to be safe. Evacuate area. Ensure adequate ventilation. Stop leak if safe to do so.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent waste from contaminating the surrounding environment. Prevent soil and water pollution. Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

6.3. Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

See also sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools. Use only explosion-proof equipment

Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g, wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store only where temperature will not exceed 125°F (52°C). Post “No Smoking/No Open Flames” signs in storage and use areas. There must be no sources of ignition. Separate packages and protect against potential fire and/or explosion damage following appropriate codes and requirements (e.g, NFPA 30, NFPA 55, NFPA 70, and/or NFPA 221 in the U.S.) or according to requirements determined by the Authority Having Jurisdiction (AHJ). Always secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand when the container is not in use. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods. For other precautions in using this product, see section 16

OTHER PRECAUTIONS FOR HANDLING, STORAGE, AND USE: When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

Storage area : Acetylene trailers are designed and intended for outdoor use. Acetylene storage in excess of 2.500 cu ft (70.79 cubic meters) is prohibited in buildings and other occupancies.

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Acetylene, dissolved (74-86-2)	
ACGIH	Not established
USA OSHA	Not established

8.2. Exposure controls

Appropriate engineering controls : An explosion-proof local exhaust system or a mechanical system is acceptable if it can prevent oxygen deficiency and keep hazardous fumes and gases below all applicable exposure limits in the worker's breathing area. During welding, ensure that there is adequate ventilation to keep worker exposure below applicable limits for fumes, gases, and other by-products of welding. Do not breathe fumes or gases. Short-term overexposure to fumes may cause dizziness, nausea, and dryness or irritation of the nose, throat, and eyes, or may cause other similar discomfort.

Eye protection : Wear safety glasses with side shields.

Skin and body protection : As needed for welding, wear hand, head, and body protection to help prevent injury from radiation and sparks. (See ANSI Z49.1.) At a minimum, this includes welder’s gloves and protective goggles, and may include arm protectors, aprons, hats, and shoulder protection as well as substantial clothing.

Respiratory protection : When workplace conditions warrant respirator use, follow a respiratory protection program that meets OSHA 29 CFR 1910.134, ANSI Z88.2, or MSHA 30 CFR 72.710 (where applicable). Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge type respirators are used, the cartridge must be appropriate for the chemical exposure. For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus (SCBA).

Thermal hazard protection : Wear cold insulating gloves when transfilling or breaking transfer connections.

Environmental exposure controls : Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment.

Other information : Consider the use of flame resistant anti-static safety clothing. Wear leather safety gloves and safety shoes when handling cylinders.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Gas

Appearance	:	Colorless, odorless gas.
Molecular mass	:	26 g/mol
Color	:	Colorless.
Odor	:	Garlic like. Poor warning properties at low concentrations.
Odor threshold	:	No data available
pH	:	Not applicable.
Relative evaporation rate (butyl acetate=1)	:	No data available
Relative evaporation rate (ether=1)	:	Not applicable.
Melting point	:	-80.8 °C (-113.4°F)
Freezing point	:	No data available
Boiling point	:	-84 °C (-119.2°F)
Flash point	:	-17 °C (1.4°F)
Critical temperature	:	36 °C (97°F)
Auto-ignition temperature	:	305 °C (581°F)
Decomposition temperature	:	635 °C (1175°F)
Flammability (solid, gas)	:	2.5 - 100 vol %
Vapor pressure	:	44 bar (623 psig)
Critical pressure	:	61.38 bar (875 psig)
Relative vapor density at 20 °C	:	No data available
Relative density	:	Not applicable.
Density	:	0.0012 g/cm³ (at 0 °C)
Relative gas density	:	0.9
Solubility	:	Water: 1185 mg/l
Log Pow	:	0.37
Log Kow	:	Not applicable.
Viscosity, kinematic	:	Not applicable.
Viscosity, dynamic	:	Not applicable.
Explosive properties	:	Not applicable.
Oxidizing properties	:	None.
Explosion limits	:	No data available

9.2. Other information

Sublimation point	:	-83.3 °C
Gas group	:	Dissolved gas

SECTION 10: Stability and reactivity

10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

10.2. Chemical stability

Dissolved in a solvent supported in a porous mass. Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

May react explosively even in the absence of air. May decompose violently at high temperature and/or pressure or in the presence of a catalyst. Can form explosive mixture with air. May react violently with oxidants.

10.4. Conditions to avoid

High temperature. High pressure. Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

10.5. Incompatible materials

Forms explosive acetylides with copper, silver and mercury. Do not use alloys containing more than 65% copper. Air, Oxidizer. Do not use alloys containing more than 43% silver.

10.6. Hazardous decomposition products

Thermal decomposition or burning may produce carbon monoxide, carbon dioxide, and hydrogen. The welding and cutting process may form reaction products such as carbon monoxide and carbon dioxide. Other decomposition products of normal operation originate from the volatilization, reaction, or oxidation of the material being worked.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Skin corrosion/irritation : Not classified

pH: Not applicable.

Serious eye damage/irritation : Not classified

pH: Not applicable.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No known ecological damage caused by this product.

12.2. Persistence and degradability

Acetylene, dissolved (74-86-2)	
Persistence and degradability	Will rapidly degrade by indirect photolysis in air. Will not undergo hydrolysis.

12.3. Bioaccumulative potential

Acetylene, dissolved (74-86-2)	
Log Pow	0.37
Log Kow	Not applicable.
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.

12.4. Mobility in soil

Acetylene, dissolved (74-86-2)	
Mobility in soil	No data available.
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.

12.5. Other adverse effects

Effect on ozone layer : No known effects from this product

Effect on the global warming : No known effects from this product

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

SECTION 14: Transport information

In accordance with DOT

Transport document description : UN1001 Acetylene, dissolved, 2.1

UN-No.(DOT) : UN1001

Proper Shipping Name (DOT) : Acetylene, dissolved

Hazard labels (DOT) : 2.1 - Flammable gas

DOT Special Provisions (49 CFR 172.102) : N86 - UN pressure receptacles made of aluminum alloy are not authorized
N88 - Any metal part of a UN pressure receptacle in contact with the contents may not contain more than 65% copper, with a tolerance of 1%

Additional information

Emergency Response Guide (ERG) Number : 116 (UN1001)

Other information : No supplementary information available.

Special transport precautions : Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: - Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure cylinder valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.

Transport by sea

UN-No. (IMDG) : 1001

Proper Shipping Name (IMDG) : Acetylene, dissolved

Class (IMDG) : 2 - Gases

MFAG-No : 116

Air transport

UN-No. (IATA) : 1001

Proper Shipping Name (IATA) : Acetylene, dissolved

Class (IATA) : 2

Civil Aeronautics Law : Gases under pressure/Gases flammable under pressure

SECTION 15: Regulatory information

15.1. US Federal regulations

Acetylene, dissolved (74-86-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Sudden release of pressure hazard Reactive hazard Fire hazard

All components of this product are listed on the Toxic Substances Control Act (TSCA) inventory.

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Acetylene, dissolved (74-86-2)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Acetylene, dissolved (74-86-2)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

15.2.2. National regulations

Acetylene, dissolved (74-86-2)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on CICR (Turkish Inventory and Control of Chemicals)

15.3. US State regulations

Acetylene, dissolved(74-86-2)	
U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Other information : When using this product in welding and cutting, read and understand the manufacturer's instructions and the precautionary label on the product. Ask your welding products supplier for a copy of Praxair's free safety booklet, P-2035, Precautions and Safe Practices for Gas Welding, Cutting, and Heating, and for other manufacturers' safety publications. For a detailed treatment, get ANSI Z49.1, Safety in Welding, Cutting, and Allied Processes, published by the American Welding Society (AWS), www.aws.org. Order AWS documents from Global Engineering Documents, global.ihs.com. Arcs and sparks can ignite combustible materials. Prevent fires. Refer to NFPA 51B, Standard for Fire Prevention During Welding, Cutting, and Other Hotwork. Do not strike an arc on the container. The defect produced by an arc burn may lead to container rupture

Fumes and gases produced during welding and cutting processes can be dangerous to your health and may cause serious lung disease. KEEP YOUR HEAD OUT OF FUMES. DO NOT BREATHE FUMES AND GASES. Use enough ventilation, local exhaust, or both to keep fumes and gases from your breathing zone and the general area. Short-term overexposure to fumes may cause dizziness, nausea, and dryness or irritation of the nose, throat, and eyes; or may cause other similar discomfort. Contaminants in the air may add to the hazard of fumes and gases

When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with this product

Praxair asks users of this product to study this SDS and become aware of the product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this SDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information

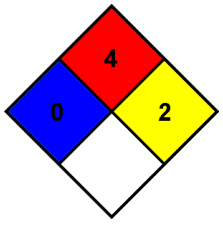
The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use are not within the control of Praxair, Inc, it is the user's obligation to determine the conditions of safe use of the product

Praxair SDSs are furnished on sale or delivery by Praxair or the independent distributors and suppliers who package and sell our products. To obtain current SDSs for these products, contact your Praxair sales representative, local distributor, or supplier, or download from www.praxair.com. If you have questions regarding Praxair SDSs, would like the document number and date of the latest SDS, or would like the names of the Praxair suppliers in your area, phone or write the Praxair Call Center (Phone: 1-800-PRAXAIR/1-800-772-9247; Address: Praxair Call Center, Praxair, Inc, P.O. Box 44, Tonawanda, NY 14151-0044)

NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 4 - Will rapidly or completely vaporize at normal pressure and temperature, or is readily dispersed in air and will burn readily.

NFPA reactivity : 2 - Normally unstable and readily undergo violent decomposition but do not detonate. Also: may react violently with water or may form potentially explosive mixtures with water.



HMIS III Rating

Health	: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability	: 4 Severe Hazard
Physical	: 2 Moderate Hazard

SDS US (GHS HazCom 2012) - Praxair

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

MSDS - Material Safety Data Sheet

Product Name: All purpose lubricant

MSDS No.: 0000719

I. Basic Information:

Manufacturer: Philips ECG

Address:

City, ST Zip:

Emergency Contact:

Emergency Telephone Number:

Contact:

Information Telephone Number:

Last Update: **Expiration Date:**

Chemical State: [X] Liquid [ ] Gas [ ] Solid

Chemical Type: [ ] Pure [X] Mixture

1	Health
4	Flammability
0	Reactivity
	Pers. Protection

II. Ingredients:

[ ] **Trade Secret**

CAS No.	Chemical Name	% Range	EHS	NTP	IARC	SUB Z	SARA 313	OSHA PEL	ACGIH TLV	Other Limits
64742-63-8	Aliphatic Hydrocarbon Mixture									
64742-88-7	Aliphatic Petroleum Distillate									
8032-32-4	Mineral Spirits									
74-98-6	Propane/Isobutante/n-Butane									

III. Hazardous Identification:

Hazard Category:

[ ] Acute [ ] Chronic [ ] Fire [ ] Pressure [ ] Reactive

Hazardous Identification Information:

IV. First Aid Measures:

Route(s) of Entry:

Health Hazards (Acute and Chronic):

Signs and Symptoms:

Inhalation- Difficulty in breathing
Skin-redness
ingestion-vomiting

Medical Conditions Generally Aggravated by Exposure:

MSDS - Material Safety Data Sheet

Product Name: All purpose lubricant

MSDS No.: 0000719

Emergency and First Aid Procedures:

Give oxygen-Do not induce vomiting-Gastric lavage-Wash eyes and skin with water.

Other Health Warnings:

V. Fire Fighting Measures:

Flash Point: -40F **Lower Explosive Limit:** 1.8 **Upper Explosive Limit:** 12

F.P. Method:

Fire Extinguishing Media: Use water fog, dry chemical or carbon dioxide

Special Fire Fighting Procedures:

Aerosol cans may rupture when heated

Unusual Fire and Explosion:

Heated cans may burst

VI. Accidental Release Measures:

Steps to be Taken in Case Material is Released or Spilled:

Use absorbent sweeping compund to soak up material. Put into container Dispose as hazardous waste.

VII. Handling and Storage:

Precautions to be Taken:

Keep away from heat, sparks, or open flame. Store at temperatures below 120F.

Other Precautions:

VIII. Exposure Controls/Personal Protection:

Ventilation Requirements:

local exhaust

Personal Protective Equipment:

Safety glasses, long sleeves and long pants.

MSDS - Material Safety Data Sheet

Product Name: All purpose lubricant

MSDS No.: 0000719

IX. Physical and Chemical Properties:

Boiling Point:

Melting Point: NAP

Evaporation Rate (Butyl Acetate = 1): >1

Vapor Pressure (mm Hg.): ND

Specific Gravity (H20 = 1): 0.70000

Vapor Density (AIR = 1): 4

Solubility In Water: Nil

Appearance and Odor: Clear/Solvent

Other Information:

X. Stability and Reactivity:

Stability:

stable

Incompatibility (Materials to Avoid):

Incompatible with strong oxidizers, hypochlorites, and chlorine.

Decomposition/By Products:

In fire, will decompose to aldehydes, sulfur compunds, carbon dioxide, water, and calcium oxides.

Hazardous Polymerization:

XI. Toxicological Information:

XII. Ecological Information:

XIII. Disposal Considerations:

XIV. Transport Information:

XV. Regulatory Information:

XVI. Other Information:

AMX Series 400, 500, 600, 700

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Date of issue: 01/14/2016 Supersedes: 12/01/2014 Version: 2.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name / Product code : Amerimix Mortar Type M, S & N Portland Cement Lime Sand (AMX 400)
Amerimix Mortar Type S Fast Set Portland Cement Cement Lime Sand (AMX 400-S FS)
Amerimix Water Repellent Mortar Type N & S Portland Cement Lime Sand (AMX 410)
Amerimix Pointing Mortar (AMX 420)
Amerimix Stone Veneer Mortar - Buff (AMX 470)
Amerimix Polymer Modified Stone Veneer Mortar (AMX 475)
Amerimix Mortar Type M, S & N Masonry Cement & Sand (AMX 500)
Amerimix Water Repellent Mortar Type M, N & S Masonry Cement & Sand (AMX 510)
Amerimix Coarse Grout - Core Fill (AMX 600 CG)
Amerimix Fine Grout - Core Fill (AMX 600 FG)
Amerimix Self Consolidating Coarse Grout (AMX 610 CG)
Amerimix Scratch Brown & Finish Stucco (AMX 700 SBF)
Amerimix Water Mold Mildew Resistant Stucco (AMX 710 WMMR)
Amerimix Premium Plus Stucco (AMX 715 Prem+ Stuc With & Without Fiber)
Amerimix 2:1 Scratch Brown & Finish Stucco (AMX 760 2:1 SBF)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Various.

1.3. Details of the supplier of the safety data sheet

Oldcastle Architectural Inc.
900 Ashwood Parkway Suite 600
30338 Atlanta, GA - USA
T 800-334-0784 Tech Service: Monday - Friday; 8:00am - 5:00pm EST

1.4. Emergency telephone number

Emergency number : CHEMTREC (800) 424-9300
CHEMTREC International +1 (703) 527-3887 24 hr

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute toxicity 4 (Oral)
Skin Irritation 2
Serious Eye Damage 1
Skin Sensitization 1
Carcinogenicity 1A
Specific Target Organ Toxicity After Single Exposure 3
Specific Target Organ Toxicity After Repeated Exposure 1

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS05 GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer. May cause respiratory irritation. Causes damage to lungs through prolonged or repeated exposure.

Precautionary statements (GHS-US) : Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust. If exposed or concerned: Get medical advice/attention. If swallowed: Immediately call a poison center/doctor. Rinse mouth. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center/doctor if you feel unwell. Store locked up. Store in a well ventilated place. Keep container tightly closed. Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3. Other hazards

Other hazards not contributing to the classification : Not applicable.

2.4. Unknown acute toxicity (GHS-US)

Amerimix 2:1 Scratch Brown & Finish Stucco (AMX 760 2:1 SBF): 20% of the mixture consists of ingredient(s) of unknown acute toxicity.
Amerimix Polymer Modified Stone Veneer Mortar (AMX 475): 19% of the mixture consists of ingredient(s) of unknown acute toxicity.
Amerimix Stone Veneer Mortar - Buff (AMX 470): 18% of the mixture consists of ingredient(s) of unknown acute toxicity.
Amerimix Scratch Brown & Finish Stucco (AMX 700 SBF): 17% of the mixture consists of ingredient(s) of unknown acute toxicity.
Amerimix Water Mold Mildew Resistant Stucco (AMX 710 WMMR); Amerimix Premium Plus Stucco (AMX 715 Prem+Stuc W & WO Fiber); Amerimix Fine Grout - Core Fill (AMX 600 FG); Amerimix Water Repellent Mortar Type M, N & S Masonry Cement & Sand (AMX 510); Amerimix Mortar Type M, S & N Masonry Cement & Sand (AMX 500): 16% of the mixture consists of ingredient(s) of unknown acute toxicity.
Amerimix Water Repellent Mortar Type N & S Portland Cement Lime Sand (AMX 410): 14% of the mixture consists of ingredient(s) of unknown acute toxicity.
Amerimix Mortar Type M, S & N Portland Cement Lime Sand (AMX 400): 13% of the mixture consists of ingredient(s) of unknown acute toxicity.
Amerimix Coarse Grout - Core Fill (AMX 600 CG); Amerimix Self Consolidating Coarse Grout (AMX 610 CG); Amerimix Mortar Type S Fast Set Portland Cement Cement Lime Sand (AMX 400-S FS): 12% of the mixture consists of ingredient(s) of unknown acute toxicity.
Amerimix Pointing Mortar (AMX 420): 10% of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Quartz	(CAS No) 14808-60-7	60 - 100	Acute Tox. 4 (Oral), H302 Carc. 1A, H350 STOT RE 1, H372
Cement, portland, chemicals	(CAS No) 65997-15-1	10 - 35	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335
Calcium magnesium hydroxide (CaMg(OH)4)	(CAS No) 39445-23-3	2.5 - 7	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
Calcium magnesium hydroxide oxide (CaMg(OH)2O)	(CAS No) 58398-71-3	2.5 - 7	Not classified
Calcium hydroxide	(CAS No) 1305-62-0	1 - 5	Skin Corr. 1B, H314 Eye Dam. 1, H318
Limestone	(CAS No) 1317-65-3	0.5 - 2	Not classified
Calcium oxide	(CAS No) 1305-78-8	0.5 - 2	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
Calcium sulfate	(CAS No) 7778-18-9	0.5 - 2	Not classified
Gypsum (Ca(SO4).2H2O)	(CAS No) 13397-24-5	0.5 - 2	Not classified
The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.			

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May cause respiratory tract irritation.

Symptoms/injuries after skin contact : Causes skin irritation. May cause burns in the presence of moisture. Skin contact during hydration may slowly develop sufficient heat that may cause severe burns possibly resulting in permanent injury. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. Handling can cause dry skin. May cause sensitisation by skin contact.

Symptoms/injuries after eye contact : Causes serious eye damage. May cause burns in the presence of moisture. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/injuries after ingestion : Harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Treat for surrounding material.

Unsuitable extinguishing media : Not available.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon.

5.3. Advice for firefighters

Firefighting instructions : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment : Contain spill, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Vacuum or sweep material and place in a disposal container.

6.3. Reference to other sections

No additional information available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid generating and breathing dust. Do not swallow. Good housekeeping is important to prevent accumulation of dust. The use of compressed air for cleaning clothing, equipment, etc, is not recommended. Handle and open container with care. When using do not eat, drink or smoke.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Store in dust-tight, dry, labelled containers. Keep container tightly closed when not in use. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area. Do not store in an area equipped with emergency water sprinklers.

7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Quartz (14808-60-7)		
USA ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m^3)	(30)/(%SiO2 + 2) mg/m^3 TWA, total dust (250)/(%SiO2 + 5) mppcf TWA, respirable fraction (10)/(%SiO2 + 2) mg/m^3 TWA, respirable fraction

Cement, portland, chemicals (65997-15-1)		
USA ACGIH	ACGIH TWA (mg/m³)	1 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³

Calcium oxide (1305-78-8)		
USA ACGIH	ACGIH TWA (mg/m³)	2 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³

Calcium hydroxide (1305-62-0)		
USA ACGIH	ACGIH TWA (mg/m³)	5 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³

Calcium sulfate (7778-18-9)		
USA ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³

Limestone (1317-65-3)		
USA ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³

Gypsum (Ca(SO4).2H2O) (13397-24-5)		
USA ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection : Wear suitable waterproof gloves.

Eye protection : Wear approved eye protection (properly fitted dust- or splash-proof chemical safety goggles) and face protection (face shield).

Skin and body protection : Wear suitable waterproof protective clothing.

Respiratory protection : A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

Other information : Handle according to established industrial hygiene and safety practices. Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid.

Appearance : Powder.

Colour : Various.

Odour : Characteristic.

Odour threshold : No data available.

pH : 12 - 13

Relative evaporation rate (butylacetate=1) : No data available.

Melting point : No data available.

Freezing point : No data available.

Boiling point : No data available.

Flash point : No data available.

Self ignition temperature : No data available.

Decomposition temperature : No data available.

Flammability (solid, gas) : Not Flammable.

Vapour pressure : No data available.

Relative vapour density at 20 °C : No data available.

Relative density : No data available.

Solubility : No data available.

Log Pow : No data available.

Log Kow : No data available.

Viscosity, kinematic : No data available.

Viscosity, dynamic : No data available.

Explosive properties : No data available.

Oxidising properties : No data available.

Explosive limits : No data available.

9.2. Other information

VOC content : 0%, Not applicable; 0 wt, Not applicable.

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. Keep dry in storage.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Incompatible materials. Moisture.

10.5. Incompatible materials

Wet cement is alkaline and incompatible with acid, ammonium salts and aluminum metal.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

Quartz (14808-60-7)	
LD50 oral rat	500 mg/kg

Calcium oxide (1305-78-8)	
LD50 oral rat	500 mg/kg

Calcium hydroxide (1305-62-0)	
LD50 oral rat	7340 mg/kg

Calcium sulfate (7778-18-9)	
LD50 oral rat	> 3000 mg/kg

AMX Series 400, 500, 600, 700	
ATE (oral)	530.2 mg/kg - 653.8 mg/kg, rat
ATE (dermal)	No data available.
ATE (inhalation)	No data available.

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : May cause cancer.

Quartz (14808-60-7)	
IARC group	1
National Toxicity Program (NTP) Status	2

Reproductive toxicity : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) : Causes damage to organs through prolonged or repeated exposure. (Respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by the International Agency for Research on Cancer (IARC) and National Toxicology Program (NTP) as a lung carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of dust exposure and the length of time (usually years) of exposure.)

Aspiration hazard : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : May cause respiratory tract irritation.

Symptoms/injuries after skin contact : Causes skin irritation. May cause burns in the presence of moisture. Skin contact during hydration may slowly develop sufficient heat that may cause severe burns possibly resulting in permanent injury. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. Handling can cause dry skin. May cause sensitisation by skin contact.

Symptoms/injuries after eye contact : Causes serious eye damage. May cause burns in the presence of moisture. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/injuries after ingestion : Harmful if swallowed. May cause stomach distress, nausea or vomiting.

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No ecological consideration when used according to directions. Normal dilution of this product to drains, sewers, septic systems and treatment plants is not considered environmentally harmful.

12.2. Persistence and degradability

AMX Series 400, 500, 600, 700	
Persistence and degradability	No data available.

12.3. Bioaccumulative potential

AMX Series 400, 500, 600, 700	
Bioaccumulative potential	No data available.

12.4. Mobility in soil

AMX Series 400, 500, 600, 700	
Ecology - soil	No data available.

12.5. Other adverse effects

Other adverse effects : No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

SECTION 14: Transport information

In accordance with DOT:

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Additional information

Other information : No supplementary information available.

SECTION 15: Regulatory information

15.1. US Federal regulations

Quartz (14808-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Cement, portland, chemicals (65997-15-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Calcium oxide (1305-78-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Calcium magnesium hydroxide (CaMg(OH)4) (39445-23-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Calcium magnesium hydroxide oxide (CaMg(OH)2O) (58398-71-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Calcium hydroxide (1305-62-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Calcium sulfate (7778-18-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

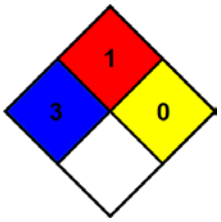
Limestone (1317-65-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State regulations

AMX Series 400, 500, 600, 700	
State or local regulations	This product contains Crystalline Silica, Quartz and may also contain other chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

SECTION 16: Other information

Data sources	:	SDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.
NFPA health hazard	:	3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
NFPA fire hazard	:	1 - Must be preheated before ignition can occur.
NFPA reactivity	:	0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

SAFETY DATA SHEET

State Chemical Division – State Industrial Products
5915 Landerbrook Drive, Mayfield Heights
Ohio 44124-4034 -- 866-747-2229

State Chemical Ltd.
1745 Meyerside Dr., Unit #1, Mississauga, Ontario L5T 1C6 (905) 670-4669

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **ASPHALT RELEASE AGENT (F.494)**
Product Description: A formulated compound for use on asphalt trucks.

24 Hour Emergency CHEMTREC Number: 800-424-9300
MSDS Number: M01284

2. HAZARDS IDENTIFICATION

*****EMERGENCY OVERVIEW*****

No Category
WARNING

Hazard Statements:
H316 Causes mild skin irritation.
H319 Causes serious eye irritation

Precautionary Statements:
P264 Wash hands thoroughly after handling.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients		CAS Number	Weight	ACGIH		OSHA
Sodium Dodecylbenzene Sulfonate		25515-30-0	< 5.0%	NE		NE
Potassium Tallate		61790-44-1	< 10%	NE		NE
Secondary Alcohol Ethoxylate	68131-40-8	< 2.0%	NE		NE	

4. FIRST AID MEASURES

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 IF eye irritation persists: Get medical advice/attention.
P332+P313 IF SKIN irritation occurs: Get medical attention.

5. FIRE FIGHTING MEASURES

Flashpoint: > 212ºF [100ºC].
Lower Explosive Limit(LEL): NA Upper Explosive Limit(UEL): NA Autoignition Temperature: NA
Flammable Properties: None expected.
Extinguishing Media: Carbon Dioxide, water, dry chemical and foam.
Fire Fighting Instructions: Wear self-contained breathing apparatus and full protective clothing. Water may be used to cool closed containers to prevent possible explosion when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area. Halt spill at source, dike and contain spill. Use absorbent to pick up residue and transfer to a proper container. Dispose of in accordance with all Federal, State and Local Regulations.

7. HANDLING AND STORAGE

This product is for industrial use only. Use with adequate ventilation. Wash thoroughly after handling. Do not take internally. Empty product containers may contain product residue. Avoid contact with skin, eyes and clothing. Store at 40ºF (4ºC) to 90ºF (32ºC). Keep out of reach of children. Keep containers closed when not in use.
P405 Store locked up.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use of general or local ventilation is recommended whenever this product is used in confined spaces or above ambient temperatures.
Personal Protective Equipment:
Respiratory: An approved NIOSH/MSHA respirator may be necessary to prevent overexposure when ventilation is not adequate.
Eye: Wear approved safety glasses or goggles with unperforated sideshields.
Skin: Wear chemically impervious gloves. Wear long sleeves and long pants.
Other: An emergency eyewash station or source of clean potable water should be available in case of accidental eye contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear amber.	Odor:	Mild.
Physical State:	Liquid.	pH:	11.8
Solubility in Water:	Complete.	Specific Gravity:	1.018
Boiling Point:	NA	VOC Content:	0%

10. STABILITY AND REACTIVITY

Stability:	Stable.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	None expected.
Incompatibility:	Oxidizing agents, acids, bases.
Hazardous Decomposition Products:	Carbon Dioxide, Carbon Monoxide.

11. TOXICOLOGICAL INFORMATION

IARC / NTP / OSHA: This product contains no ingredients at 0.1% or greater that is listed as a human carcinogen.

Hazardous Ingredients	CAS Number	LD50	LC50
Sodium Dodecylbenzene Sulfonate	25515-30-0	NE	6 mg/l/96 hr (flathead minnow)
Potassium Tallate	61790-44-1	NE	NE
Secondary Alcohol Ethoxylate	68131-40-8	1.62 ml/kg (oral rat)	1010 mg/l (rat)

12. ECOLOGICAL INFORMATION

NA

13. DISPOSAL CONSIDERATIONS

Do not reuse empty containers. Dispose of in accordance with the Federal, State and Local Regulations regarding pollution and waste disposal.
P501 Dispose of container to in accordance with all Federal, State and Local Regulations regarding waste disposal.

14. TRANSPORT INFORMATION

DOT Shipping Data:	Not regulated.
Canadian TDG:	Not regulated.

15. REGULATORY INFORMATION

TSCA:	All ingredients in this product are listed or exempt from listing on the TSCA Chemical Inventory.
CEPA:	All ingredients in this product are listed or exempt from listing on the Canadian DSL/NDSL.
Proposition 65:	Raw materials used in this product have identified the opportunity for the presence of very low levels of the following Proposition 65 chemicals: Ethylene Oxide (75-21-8), 1,4 Dioxane (123-91-1), Acetaldehyde (75-07-0), Formaldehyde (50-00-0). We have tested a representative sample of this product for the presence of these chemicals and have found none to be present at above analytical detection limits.
SARA 313:	This product contains no toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).

HMIS RATING: HEALTH = 1 FLAMMABILITY = 0 REACTIVITY = 0 PPE = B

WHMIS RATING: Class D, Division 2B

16. OTHER INFORMATION

NA = Not Available or Not Applicable
NE = Not Established

Read and follow all label directions and precautions before using the product. This product is intended for industrial and institutional use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF THE REACH OF CHILDREN. While we believe that the data contained herein is factual and the opinions expressed are those of qualified experts, the data are not to be taken as a warranty or representation for which the company assumes legal responsibility. They are offered solely for your consideration, investigation, and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, and Local Laws and regulations.

HEALTH AND SAFETY INFORMATION: (216) 861-7114

Prepared On: July 2014 Replaces: July 2011 Completed By: Regulatory Affairs

SAFETY DATA SHEET

This Safety Data Sheet complies with Regulation (EC) No 1907/2006, 1272/2008, ISO 11014-1 and ANSI Z400.1

Atom Arc 7018-AC

Replaces SDS: 2014-05-01

Issued: 2017-06-05

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name	Atom Arc 7018-AC

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use	Arc Welding

1.3. Details of the supplier of the safety data sheet

Supplier	ESAB Welding & Cutting Products
Street address	801 Wilson Ave. Hanover, PA 17331
Telephone	1-717-637-8911
Fax	1-717-630-3458
Email	us.technical.fillermetals@esab.com
Web site	www.esabna.com

1.4. Emergency telephone number

Emergency phone number	1-800-424-9300 (Chemtrec)
Available outside office hours	Yes

Other

Classification: AWS A5.1; E7018

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Description	This product is not classified as hazardous according to applicable GHS hazard classification criteria as required and defined in OSHA Hazard Communication Standard (29CFR Part1910.1200).

2.2. Label elements

More information	This product does not require labeling.

2.3. Other hazards

This product contains titanium dioxide which is possibly carcinogenic. This product contains quartz, but normally not in an inhalable fraction. Quartz can cause silicosis and may cause cancer. Avoid eye contact or inhalation of dust from this product. Skin contact is

normally no hazard but should be avoided to prevent possible allergic reactions.
Persons with a pacemaker should not go near welding or cutting operations until they have consulted their doctor and obtained information from the manufacturer of the device.
When this product is used in a welding process, the most important hazards are welding fumes, heat, radiation and electric shock.
Fumes: Overexposure to welding fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat or eyes. Chronic overexposure to welding fumes may affect pulmonary function. Overexposure to manganese and manganese compounds above safe exposure limits can cause irreversible damage to the central nervous system, including the brain, symptoms of which may include slurred speech, lethargy, tremor, muscular weakness, psychological disturbances and spastic gait.
Heat: Spatter and melting metal can cause burn injuries and start fires.
Radiation: Arc rays can severely damage eyes or skin.
Electricity: Electric shock can kill.

Other

Emergency Overview: Coated metal rods in varying colors.This product is normally not considered hazardous as shipped. Gloves should be worn when handling to prevent contaminating hands with product dust.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical name	***CAS No.*** ***EC No.*** ***REACH No.***	***Concentration***	***Classification***	***R-phrase*** ***H-phrase***
Iron	7439-89-6 231-096-4 01-2119462838 - 24	>60%	- -	- -
Titanium oxide	13463-67-7 236-675-5 -	7 - 13%	- -	- -
Limestone	1317-65-3 215-279-6 -	5 - 10%	- -	- -
Fluorides	7789-75-5 232-188-7 -	1 - 5%	- -	- -
Manganese powder	7439-96-5 231-105-1 -	1 - 5%	- Eye Irrit. 2	- H320
Silicate Binder (Potassium silicate)	1312-76-1 215-199-1 -	1 - 5%	- -	- -
Mica	12001-26-2 215-479-3 -	0,1 - 1%	- -	- -

Quartz	14808-60-7 238-878-4 -	0,1 - 1%	- STOT RE 1	- H372
Silicon	7440-21-3 231-130-8 -	0,1 - 1%	- -	- -

Product based on This product is a preparation of core wire with extruded coating.

SECTION 4: First aid measures

4.1. Description of first aid measures

Electric shock: Disconnect and turn off the power. Use a nonconductive material to pull victim away from contact with live parts or wires. If not breathing, begin artificial respiration, preferably mouth-to-mouth. If no detectable pulse, begin Cardio Pulmonary Resuscitation (CPR). Call a physician immediately.

Inhalation If breathing has stopped, perform artificial respiration and obtain medical assistance immediately! If breathing is difficult, provide fresh air and call physician.

Skin contact For skin burns from arc radiation, promptly flush with cold water. Get medical attention for burns or irritations that persist. To remove dust or particles wash with mild soap and water.

Eye contact For radiation burns due to arc flash, see physician. To remove dusts or fumes flush with water for at least fifteen minutes. If irritation persists, obtain medical assistance.

4.2. Most important symptoms and effects, both acute and delayed

Not applicable

4.3. Indication of any immediate medical attention and special treatment needed

Not applicable

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media No specific recommendations for welding consumables. Welding arcs and sparks can ignite combustible and flammable materials. Use the extinguishing media recommended for the burning materials and fire situation.

5.2. Special hazards arising from the substance or mixture

Not applicable

5.3. Advice for firefighters

Special protective equipment for fire-fighters Wear self-contained breathing apparatus as fumes or vapors may be harmful.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Refer to Section 8.

6.2. Environmental precautions

Refer to Section 13.

6.3. Methods and material for containment and cleaning up

Solid objects may be picked up and placed into a container. Liquids or pastes should be scooped up and placed into a container. Wear proper protective equipment while handling these materials. Do not discard as refuse.

6.4. Reference to other sections

Refer to Section 8 and Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Preventive handling precautions	Handle with care to avoid stings and cuts. Wear gloves when handling welding consumables. Avoid exposure to dust. Do not ingest. Some individuals can develop an allergic reaction to certain materials. Retain all warning and identity labels.

7.2. Conditions for safe storage, including any incompatibilities

Keep separate from chemical substances like acids and strong bases, which could cause chemical reactions.

7.3. Specific end use(s)

Arc Welding

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits	Use industrial hygiene monitoring equipment to ensure that exposure does not exceed applicable national exposure limits. The following limits can be used as guidance. Unless noted, all values are for 8 hour time weighted averages (TWA). For information about welding fume analysis, refer to Section 10. **ACGIH TLV, mg/m3** Calcium carbonate Withdrawn Calcium fluoride (as F) 2.5 Iron (as iron oxide) 5 Respirable fraction Manganese, fume, as Mn 0.02 Respirable fraction 0.1 Inhalable fraction Manganese and inorganic compounds, as Mn 0.02 Respirable fraction 0.1 Inhalable fraction Mica 3 Respirable fraction Silicon Withdrawn Silicon Dioxide (quartz) 0.025 Respirable fraction Titanium Oxide 10 **USA, OSHA PEL, mg/m3**

National occupational exposure limits

Ingredient	*CAS no.*	*EC No.*	*Exposure limit mg/m3-ppm*		*Short-term exposure limit mg/m3-ppm*		*Ceiling exposure limit mg/m3-ppm*		*Remark*	*Source*	*Year*
Calcium carbonate	1317-65-3	-	15	-	-	-	-	-	Total dust	-	2016
Calcium carbonate	1317-65-3	-	5	-	-	-	-	-	Respirable fraction	-	2016
Calcium fluoride	7789-75-5	-	2,5	-	-	-	-	-	as F	-	2016
Iron	7439-89-6	-	10	-	-	-	-	-	Fume, as iron oxide	-	2016
Manganese, fume	7439-96-5	-	-	-	-	-	5	-	as Mn	-	2016
Manganese and inorganic compounds	7439-96-5	-	-	-	-	-	5	-	as Mn	-	2016
Mica	12001-26-2	-	-	-	-	-	-	-	20 mppcf, < 1% crystalline silica	-	2016
Quartz	14808-60-7	-	-	-	-	-	-	-	(10 mg/m3)/(%SiO2+2)	-	2016
Silicon	7440-21-3	-	5	-	-	-	-	-	Respirable fraction	-	2016
Silicon	7440-21-3	-	15	-	-	-	-	-	Total dust	-	2016
Titanium oxide	13463-67-7	-	15	-	-	-	-	-	Total dust	-	2016
Potassium silicate	1312-76-1	-	-	-	-	-	-	-	No PEL	-	2016

8.2. Exposure controls

Not applicable

Other

Avoid exposure to welding fumes, radiation, spatter, electric shock, heated materials and dust. Train welders to avoid contact with live electrical parts and insulate conductive parts.

Ventilation	Use respirator or air supplied respirator when welding or brazing in a confined space, or where local exhaust or ventilation is not sufficient to keep exposure values within safe limits. Use special care when welding painted or coated steels since hazardous substances from the coating may be emitted. Ensure sufficient ventilation, local exhaust, or both, to keep welding fumes and gases from breathing zone and general area.
Personal protective equipment	Wear hand, head, eyes, ear and body protection like welders gloves, helmet or face shield with filter lens, safety boots, apron, arm and shoulder protection. Keep protective clothing clean and dry.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Steel rod with extruded flux coating
Appearance, colour	Varying color
Appearance, physical state	Solid
Auto-ignition temperature	Not applicable
Decomposition temperature	No data available
Evaporation rate	Not applicable
Explosive properties	Not applicable
Flammability (solid, gas)	Not applicable
Flash point	Not applicable
Initial boiling point and boiling range	No data available
Melting point	>1300°C/>2300°F
Melting point / freezing point	Not applicable
Odour	Not applicable
Odour treshold	Not applicable
Oxidising properties	Not applicable
Partition coefficient: n-octanol / water	Not applicable
pH value	Not applicable
Relative density	No data available
Solubility	No data available

Upper / lower flammability or explosive limits	No data available
Vapour density	Not applicable
Vapour pressure	Not applicable
Viscosity	Not applicable
Volatility	Not applicable

9.2. Other information

Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Contact with chemical substances like acids or strong bases could cause generation of gas.

10.2. Chemical stability

Chemical stability	Stable at normal conditions

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not applicable

10.4. Conditions to avoid

Conditions to avoid	This product is only intended for normal welding purposes.

10.5. Incompatible materials

Incompatible materials	Not applicable

10.6. Hazardous decomposition products

Hazardous decomposition products	When this product is used in a welding process, hazardous decomposition products would include those from the volatilization, reaction or oxidation of the materials listed in Section 3 and those from the base metal and coating. The amount of fumes generated from manual metal arc welding varies with welding parameters and dimensions, but is generally no more than 7 to 20 g/kg consumable. Fumes from this product may contain compounds of the following chemical elements: Fe, O, Mn, F, Na, Si, K, Ca, and Ti. The rest is not analyzed, according to available standards.

Other

Refer to applicable national exposure limits for fume compounds, including those exposure limits for fume compounds found in Section 8.

Manganese has a low exposure limit, in some countries, that may be easily exceeded.
Reasonably expected gaseous products would include carbon oxides, nitrogen oxides and ozone. Air contaminants around the welding area can be affected by the welding process and influence the composition and quantity of fumes and gases produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on toxicological effects	Inhalation of welding fumes and gases can be dangerous to your health. Classification of welding fumes is difficult because of varying base materials, coatings, air contamination and processes. The International Agency for research on Cancer has classified welding fumes as possibly carcinogenic to humans (Group 2B).
acute toxicity	Overexposure to welding fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat or eyes.
skin corrosion/irritation	Not applicable
serious eye damage/irritation	Not applicable
Respiratory/skin sensitization	Not applicable
germ cell mutagenicity	Not applicable
Genotoxicity	Not applicable
carcinogenicity	Not applicable
Repeated dose toxicity	Not applicable
reproductive toxicity	Not applicable
STOT-single exposure	Not applicable
STOT-repeated exposure	Not applicable
Harmful if inhaled	Not applicable

Other

Long term effect	Chronic toxicity: Overexposure to welding fumes may affect pulmonary function. Overexposure to manganese and manganese compounds above safe exposure limits can cause irreversible damage to the central nervous system, including the brain, symptoms of which may include slurred speech, lethargy, tremor, muscular weakness, psychological disturbances and spastic gait. Prolonged inhalation of titanium dioxide above safe exposure limits can cause cancer. Inhalable quartz is a respiratory carcinogen; however, the process of welding converts crystalline quartz to the amorphous form which is not considered to be a carcinogen.

SECTION 12: Ecological information

12.1. Toxicity

Not applicable

12.2. Persistence and degradability

Not applicable

12.3. Bioaccumulative potential

Not applicable

12.4. Mobility in soil

Not applicable

12.5. Results of PBT and vPvB assessment

Not applicable

12.6. Other adverse effects

Not applicable

Other

Welding consumables and materials could degrade/weather into components originating from the consumables or from the materials used in the welding process. Avoid exposure to conditions that could lead to accumulation in soils or groundwater.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal considerations	Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with federal and local regulations. Use recycling procedures if available. USA RCRA: This product is not considered hazardous waste if discarded. Residues from welding consumables and processes could degrade and accumulate in soils and groundwater. Welding slag from this product typically contains mainly the following components originating from the coating of the electrode: Fe, O, Mn, F, Na, Si, K, Ca, and Ti.

SECTION 14: Transport information

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Other regulations, limitations and legal regulations	Canada: WHMIS classification: Class D; Division 2, Subdivision A Canadian Environmental Protection Act (CEPA): All constituents of these products are on the Domestic Substance List (DSL). USA: This product contains or produces a chemical known to the State of California to cause cancer and birth defects (or other reproductive harm). (California Health & Safety Code § 25249.5 et. seq.) United States EPA Toxic Substance Control Act: All constituents of this product are on the TSCA inventory list or are excluded from listing. CERCLA/SARA Title III Reportable Quantities (RQs) and/or Threshold Planning Quantities (TPQs): Product is a solid solution in the form of a solid article. - Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center and to your Local Emergency Planning Committee. Section 311 Hazard Class As shipped: Immediate; In use: Immediate delayed EPCRA/SARA Title III 313 Toxic Chemicals: The following metallic components are listed as SARA 313 "Toxic Chemicals" and potential subject to annual SARA 313 reporting. See Section 3 for weight percent. Manganese 1.0% de minimis concentration

15.2. Chemical safety assessment

Chemical safety assessment	No

Other

Read and understand the manufacturer's instructions, your employer's safety practices and the health and safety instructions on the label. Observe any federal and local regulations. Take precautions when welding and protect yourself and others.

WARNING: Welding fumes and gases are hazardous to your health and may damage lungs and other organs. Use adequate ventilation.
ELECTRIC SHOCK can kill.
ARC RAYS and SPARKS can injure eyes and burn skin.
Wear correct hand, head, eye and body protection.

SECTION 16: Other information

Changes to previous revision	This Safety Data Sheet has been revised due to modifications to Sections 1-16.
References to key literature and data sources	Refer to ESAB "Welding and Cutting - Risks and Measures", F52-529 "Precautions and Safe Practices for Electric Welding and Cutting" and F2035 "Precautions and Safe Practices for Gas Welding, Cutting and Heating" available from ESAB, and to: USA: Contact ESAB at www.esabna.com or 1-800 ESAB-123 if you have any questions about this SDS. American National Standard Z49.1 "Safety in Welding and Cutting", ANSI/AWS F1.5 "Methods for Sampling and Analyzing Gases from Welding and Allied Processes", ANSI/AWS F1.1 "Method for Sampling Airborne Particles Generated by Welding and Allied Processes", AWSF3.2M/F3.2 "Ventilation Guide for Weld Fume", American Welding Society, 550 North Le Jeune Road, Miami, Florida, 33135. Safety and Health Fact Sheets available from AWS at www.aws.org. OSHA Publication 2206 (29 C.F.R. 1910), U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 American Conference of Governmental Hygienists (ACGIH), Threshold Limit Values and Biological Exposure Indices, 6500 Glenway Ave., Cincinnati, Ohio 45211, USA. NFPA 51B “Standard for Fire Prevention During Welding, Cutting and Other Hot Work” published by the National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169 UK: WMA Publication 236 and 237, "Hazards from Welding fume”, ”The arc welder at work, some general aspects of health and safety". Germany: Unfallverhütungsvorschrift BGV D1, "Schweißen, Schneiden und verwandte Verfahren". Canada: CSA Standard CAN/CSA-W117.2-01 "Safety in Welding, Cutting and Allied Processes" This product has been classified according to the hazard criteria of the CPR and the SDS contains all the information required by the CPR.
Phrase meaning	H320 - Causes eye irritation. H372 - Causes damage to the lungs through prolonged or repeated exposure by inhalation.

Other

Additional information	ESAB requests the users of this product to study this Safety Data Sheet (SDS) and become aware of product hazards and safety information. To promote safe use of this product a user should: -notify its employees, agents and contractors of the information on this SDS and any product hazards/safety information. - furnish this same information to each of its customers for the product. - request such customers to notify employees and customers for the same product hazards and safety information. The information herein is given in good faith and based on technical data that ESAB believes to be reliable. Since the conditions of use is outside our control, we assume no liability in connection with any use of this information and no warranty, expressed or implied is given. Contact ESAB for more information.

United Resin Corporation

Safety Data Sheet

Issue on: 8/18/2015

1. Identification of Product & Company

Product Name: Autobond Resin

Product type: Epoxy Mixture

Manufacturer/Supplier: United Resin Corporation
4359 Normandy Court
Royal Oak, MI 48073

Information Department: urcepoxy@unitedresin.com
www.unitedresin.com

Emergency Information: (248) 549 – 8200 **Medical Emergency Phone:** Poison Control Ctr.
(248) 549 – 9587 fax

2. Hazard Identification

Classification of the mixture:
Skin Irritation – Category 2
Eye Irritation – Category 2A
Skin Sensitization – Category 1
Acute Toxicity Oral – Category 4

Hazard Pictograms:

Signal Word: Warning

Hazard Statement:
H315-Skin Irritation
H317-Skin Sensitization
H320-Eye Irritation
H302-Harmful if swallowed

Precautionary Statement:
P270 – Do not eat, drink or smoke when using this product.
P271 – Use only in well ventilated area.
P280 – Wear eye protection and protective gloves.
P302+P352 – IF ON SKIN: Wash with plenty of soap and water.
P501 – Dispose of contents/container according to local, regional , national, and international regulations.

Other Hazards: No additional information available.

NFPA ratings (scale 0 – 4):

Health = 2, Fire = 1, Reactivity = 0

HMIS ratings (scale 0 – 4):

Health = 2, Fire = 1, Reactivity = 0

3. Composition/Information on Ingredients

Chemical Name:	Epoxy Resin	**CAS No. Description:**	25068-38-6
Chemical Name:	Talc	**CAS No. Description:**	14807-96-6
Chemical Name:	Calcium Carbonate	**CAS No. Description:**	1317-65-3

4. First Aid Measures

After inhalation: Supply fresh air and be sure to call for a doctor.
After skin contact: Immediately wash with water and soap and rinse thoroughly. Remove contaminated clothing. Launder contaminated clothing before re-use.
After eye contact: Rinse opened eye for several minutes under running water. Seek medical attention if irritation develops.
After swallowing: Do not induce vomiting; immediately call for medical help.

5. Fire Fighting Measures

Suitable extinguishing agents: Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Cartridge respirators do not provide adequate protection for fire fighters or exotherm mitigation. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
Unusual fire or explosion hazards: May liberate large quantities of dense, foul-smelling smoke which may contain unidentified toxic gasses.
Hazardous combustion products: Oxides of carbon and nitrogen, and undetermined organics.

6. Accidental Release Measures

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental protection: Do not allow product to enter sewers/surface or ground water. Wear appropriate protective equipment and clothing during clean-up. Prevent further leakage or spillage if safe to do so.
Clean-up methods: For large spills absorb onto inert absorbent material and place in sealed container for disposal. Dispose of according to Federal, State and local governmental regulations.

7. Handling and Storage

Handling: Ensure good ventilation/exhaustion at the workplace. Protect from heat. Empty containers retain product residue, so obey hazard warnings and handle empty containers as if they were full.

Storage: For safe storage, store at or below 72°F (22°C). Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials.

For information on product shelf life, please review Technical Data Sheet.

8. Exposure Controls and Personal Protection

Engineering Controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
Respiratory protection: If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.
Protection of hands: The glove material has to be impermeable and resistant to the product/substance/preparation.


Protective Gloves

Eye protection: Wear safety glasses; chemical goggles (if splashing is possible).

Safety Glasses

Body protection: Protective work clothing and boots.

9. Physical and Chemical Properties

General information:

Form: Paste
Color: White
Odor: Slight

Change in condition:

Melting point/Melting range: Undetermined
Boiling point/boiling range: >400°F

Flash point: >300°F
Ignition temperature: Undetermined
Danger of explosion: Not applicable
Vapor pressure at 72°F: Not determined
Density at 72°F: 12.32 lbs/gal - **Specific Gravity**: 1.47
Solubility in/miscibility with Water: Slight
Percent Solids: 100% - **Percent Volatiles:** 0%

10. Stability and Reactivity

Stability: Stable at normal conditions.

Hazardous reactions: Under normal conditions of storage and use, hazardous reactions should not occur.

Hazardous decomposition products: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons and undetermined organics.

Dangerous reactions: In normal storage hazardous reaction will not occur, reacts with amines.

Incompatible materials: Keep away from strong oxidizing agents, strong Lewis or mineral acids.

Reactivity: Not available.

Conditions to avoid: Avoid mixing resin (Part A) and curing agent (Part B) unless you plan to use immediately. Failure to observe this precaution may result in excessive heat build-up causing exotherm.

11. Toxicological Information

Relevant routes of exposure: Skin, Inhalation, Eyes and Ingestion

Potential Health Effects/Symptoms:

Inhalation: May cause respiratory tract irritation.
Skin contact: This product may cause irritation to the skin. This product may cause an allergic skin reaction.
Eye contact: This product may cause irritation to the eyes.
Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

12. Ecological Information

Aquatic or Other Organisms Toxicity: No Data Available.
Information about elimination (Persistence and Degradability): No Data Available.

13. Disposal Considerations

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazard waste number: Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA.

14. Transport Information

Land Transport (DOT): Non- Regulated

Marine Transport (IMDG): Non-Regulated

Air Transport (IATA): Non-Regulated

15. Regulations .

United States Regulatory Information

TSCA 8 (B) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: No reportable components

CERCLA/SARA Sec. 302 EHS: No reportable components

CERCLA/SARA Sec. 311/312: Immediate Health, Delayed Health

CERCLA/SAFA Sec. 313: No reportable components

California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information:

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Information source and references: No Data

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: B22 epoxy catalyst

PRODUCT CODE: B22 CAT

HMIS CODES: H F R P
2* 0 1 H

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: INDUSTRIAL COATINGS
ADDRESS: 5521 Mitchelldale, Houston, Texas 77092
EMERGENCY PHONE: 1-800-424-9300

INFORMATION PHONE: 713-686-3411
DATE REVISED : 03-01-14 NAME OF PREPARER : Larry Hannusch
REASON REVISED : Update

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS OSHA PEL	ACGIH TLV	OTHER	VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
amine curing agent	140-31-8	na	na	na	0.1 68F	< 5.0%

*** No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present. ***
Although various components of this product may not be classified by OSHA or ACGIH as hazardous, some users may develop skin or eye sensitivities to continued exposure to this product.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: 432 Deg F SPECIFIC GRAVITY (H2O=1): 2.
2
VAPOR DENSITY: HEAVIER THAN AIR EVAPORATION RATE:
SLOWER THAN ETHER
MATERIAL V.O.C.: N/A
SOLUBILITY IN WATER:
Negligible
APPEARANCE AND ODOR:
Thick black paste with pungent odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 212 Deg F METHOD USED: pmcc
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.0% UPPER:
N/A

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL

SPECIAL FIREFIGHTING PROCEDURES
Water spray may be ineffective on fire but can protect firefighters and help cool closed containers.Use full bunker gear when entering confined fire space. Use NIOSH approved positive pressure self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may burst in the presence of extreme heat. Isolate containers from open flame, heat, sparks,electrical equipment, and oxidizers. Applying to hot surfaces requires special precautions. Empty containers are considered very hazardous due to the residual fumes present.

SECTION V - REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID
Isolate from extreme heat, open flame, sparks, electrical equipment, and strong oxidizers.

INCOMPATIBILITY (MATERIALS TO AVOID)
Isolate from strong oxidizers such as permanganates and peroxides.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS
CO from burning.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI - HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
Dizziness, loss of equilibrium, nausea.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
SKIN: Possible rash, defatting, dermatitis.
EYES: Redness, tearing, blurred vision.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
Dermatitis, irritation; absorption through the skin increases exposure and may be harmful.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
Nausea, dizziness, abdominal irritation, vomiting, diarrhea.

HEALTH HAZARDS (ACUTE AND CHRONIC)
ACUTE: Respiratory irritation, headaches, dermal irritation; may be fatal if swallowed.
CHRONIC: Vapor harmful, absorption through the skin may be harmful. Vapor and liquid can cause eye irritation.

CARCINOGENICITY: NTP? NO **IARC MONOGRAPHS?** NO **OSHA REGULATED?** NO
Not established. Overexposure may increase cancer risk.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
Persons with severe skin, liver, or kidney problems should avoid use.

EMERGENCY AND FIRST AID PROCEDURES
In case of contact with skin, wash thoroughly with soap and water. For eyes, immediately flush with plenty of water for 15 minutes and CALL A PHYSICIAN. Remove and wash contaminated clothing before reuse. After high vapor exposure, remove to fresh air.If breathing is difficult, give oxygen.If breathing has stopped, give artificial respiration.If swallowed, do not induce vomiting and call a physician immediately.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Stop spill at source. Dike area and contain. Pump spilled material into approved DOT containers. Remove remainder with absorbent material and also place in approved DOT containers.

WASTE DISPOSAL METHOD
Dispose of waste by legal means complying with local, state, and federal regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Avoid free fall of material as this can lead to static discharge. Keep containers a safe distance from fire and heat. Empty containers should be considered very hazardous because of the residual vapors.

OTHER PRECAUTIONS
Do not drop containers. Store containers a safe distance from ignition sources.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION
If air is over specified TLV, use NIOSH approved positive-pressure self-contained breathing apparatus in accordance with 29 CFR 1910.134.

VENTILATION
Local exhaust necessary,(mechanical acceptable), using only explosion proof equipment.

PROTECTIVE GLOVES
Wear OSHA standard gloves.

EYE PROTECTION
Always wear protective goggles when handling this material.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT
Wear gloves, apron, and footwear impervious to this material. Wash clothing prior to reuse.

WORK/HYGIENIC PRACTICES
Always wash hands and skin with soap and water after using this product.

SECTION IX - DISCLAIMER

DISCLAIMER
The information herein is given in good faith, but no warranty, expressed or implied, is made. These recommendations are offered for the user's consideration and examination, and it is the user's responsibilty to satisfy itself that they are suitable and complete for it's particular use. Buyer assumes all risks and liabilities in using this product.

BAR & CHAIN

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Date of issue: 04/28/2016 Revision date: 07/08/2016 Version: 2.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name & code : BAR & CHAIN ALL CUSTOMERS Product code: LP1048

BAR & CHAIN Product code: LP1048E

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Anything that requires a chain lubricant

1.3. Details of the supplier of the safety data sheet

Olympic Oil
5000 West 41st Street
Cicero, IL 60804 - USA
T 708-876-7900 Mon-Fri 6:00am to 4:30pm
sds.inquiry@olympicoil.us

1.4. Emergency telephone number

Emergency number : CHEMTREC 1 (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available.

2.4. Unknown acute toxicity (GHS US)

Not applicable.

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable.

3.2. Mixture

Name	Product identifier	%
None by OSHA HazCom 2012 criteria		

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May cause respiratory tract irritation.

Symptoms/injuries after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide (CO_2), dry chemical powder, foam, water spray.

Unsuitable extinguishing media : Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon, aldehydes, oxides of nitrogen, oxides of sulfur, oxides of phosphorous, smoke, toxic fumes.

5.3. Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Cool closed containers exposed to fire with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Keep unnecessary personnel away from the release.

6.2. Methods and material for containment and cleaning up

For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Scoop up material and place in a disposal container. Provide ventilation. Spill area may be slippery.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Keep away from heat, sparks, and flame.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Oil Mist (Mineral)		
ACGIH	ACGIH TWA (mg/m³)	5 mg/m³
ACGIH	ACGIH STEL (mg/m³)	10 mg/m³
OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection : Wear chemically resistant protective gloves.

Eye protection : Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Amber colored[1,2]
Color	:	Amber[1,2]
Odor	:	Mild[1,2]
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	446 °F (COC D92)[1,2]
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Not flammable
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Vapor pressure	:	No data available
Relative density	:	0.87 - 0.89[1], 0.90 - 0.929[2] (60 °F)
Relative vapor density at 20 °C	:	No data available
Solubility	:	Water: Negligable[1,2]
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	70 - 95 cSt[1, 2] @ 104 °F 9.5 - 12.5 cSt[1, 2] @ 212 °F
Viscosity, dynamic	:	No data available

9.2. Other information

[1]BAR & CHAIN ALL CUSTOMERS
[2]BAR & CHAIN

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Sparks. Open flame. Incompatible materials.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon, aldehydes, oxides of nitrogen, oxides of sulfur, oxides of phosphorous, smoke, toxic fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

BAR & CHAIN	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	No data available

Skin corrosion/irritation	:	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	:	Based on available data, the classification criteria are not met.
Respiratory or skin sensitization	:	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	:	Based on available data, the classification criteria are not met.
Carcinogenicity	:	Based on available data, the classification criteria are not met.
Reproductive toxicity	:	Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure)	:	Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure)	:	Based on available data, the classification criteria are not met.
Aspiration hazard	:	Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	:	May cause respiratory tract irritation.
Symptoms/injuries after skin contact	:	May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/injuries after eye contact	:	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/injuries after ingestion	:	May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

BAR & CHAIN	
Persistence and degradability	This material is not expected to be readily biodegradable based on component data.

12.3. Bioaccumulative potential

BAR & CHAIN	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

15.3. US State regulations

BAR & CHAIN	
State or local regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

SECTION 16: Other information

Version number	:	2.0
Date of issue	:	04/28/2016
Revision date	:	07/08/2016
Other information	:	None.

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Safety Data Sheet
6220-9-34
2-2-15

Section 1 - Product and Company Identification

Material Name	-	**Black Jack Plastic Roof Cement**
Chemical Category	-	Mixture
Product Code	-	6220-9-34
Product Description	-	Black paste.
Product Use	-	Repair cracks, seams and holes in roofing materials.
Synonyms	-	Roof and Flashing cement
Manufacturer	-	Gardner-Gibson 4161 E. 7th Avenue Tampa, FL 33605 United States
Telephone		
Technical	-	813-248-2101 - Customer Service: 8 AM - 5 PM M-F Eastern Standard Time
Emergency	-	800-424-9300 - CHEMTREC
Emergency	-	703-527-3887 - CHEMTREC (Outside US)
Last Revision Date	-	2-2-2015

Section 2 - Hazards Identification

GHS HAZARDS AND PRECAUTIONS

SIGNAL WORD: WARNING!

Flammable liquid (paste) and Vapor. Contains Combustible Petroleum Distillates. Harmful or Fatal if swallowed. Keep away from heat, sparks, and open flame. Avoid prolonged breathing of vapor and use only in adequate ventilation. Repeated and prolonged overexposure to solvent vapor may cause brain and nervous system damage, respiratory tract irritation, dizziness, or loss of consciousness. May cause skin and eye irritation.

Prevention	Avoid breathing dust, fume, gas, mist, vapors and/or spray. Do not handle until all safety precautions have been read and understood. Keep away from flames and hot surfaces. - No smoking. Use personal protective equipment as required. Keep out of reach of children.
Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
Storage/Disposal	Store in a closed container. Store in a well-ventilated place. Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Physical Form	-	Liquid (PASTE)
Color	-	Black
Odor	-	Petroleum solvent odor.
Flash Point	-	105 F(40.5556 C)
OSHA HCS 2012	-	Flammable Liquids - Category 3, Skin Corrosion/Irritation - Category 2, Serious Eye Damage, Eye Irritation - Category 2A, Carcinogenicity - Category 1A
WHMIS	-	Class B - Flammable and Combustible Materials - Division 3, Class D - Poisonous and Infectious Materials - Division 2 - Subdivision A

- 
- R65, R25, R36/37/38, R45

GHS - Flammable Liquids - Category 3, Skin Corrosion/Irritation - Category 2, Serious Eye Damage, Eye Irritation - Category 2A, Carcinogenicity - Category 1A

Route Of Entry - Inhalation, Skin, Eye, Ingestion/Oral

Potential Health Effects

Inhalation

Acute (Immediate) - May cause irritation. Excessive breathing of high vapor concentration can cause possible unconsciousness and even asphyxiation.

Chronic (Delayed) - Refer to other information found in Section 11-Toxicology.

Skin

Acute (Immediate) - May cause irritation.

Chronic (Delayed) - Repeated and prolonged exposure to the skin may cause dermatitis.

Eye

Acute (Immediate) - May cause irritation.

Chronic (Delayed) - Repeated and prolonged exposure may cause irritation.

Ingestion

Acute (Immediate) - May be harmful or fatal if swallowed.

Chronic (Delayed) - Repeated and prolonged exposure may be harmful.

Carcinogenic Effects - This product or one of its ingredients present at 0.1% or more is listed as a carcinogen by NTP, IARC or OSHA. See Section 11 - Toxicological Information for more details.

Carcinogenic Effects			
	CAS	**IARC**	**NTP**
Asphalt	8052-42-4	Group 2B-Possible Carcinogen	Under Consideration

Section 3 - Composition/Information on Ingredients

Hazardous Components						
Chemical Name	**CAS**	**%(wt)**	**UN;EINECS**	**LD50/LC50**	**Classifications According to Regulation/Directive**	
Asphalt	8052-42-4	30% TO 40%	NA1999, 232-490-9	Ingestion/Oral-Rat LD50 · >5000 mg/kgInhalation-Rat LC50 · >94.4 mg/m³	**WHMIS:** Other Toxic Effects - D2A **UN GHS:** Carc. 2; Eye Irrit. 2A; Skin Irrit. 2 **EU DSD/DPD:**	
Mineral spirits	8052-41-3	8% TO 15%	232-489-3		**EU DSD/DPD:** Carc.Cat.2; R45 Muta.Cat.2; R46 Xn; R65	
Cellulose	9004-34-6	2% TO 6%	232-674-9	Ingestion/Oral-Rat LD50 · >5 g/kgInhalation-Rat LC50 · >5800 mg/m³ 4 Hour(s)Skin-Rabbit LD50 · >2 g/kg	**WHMIS:** Other Toxic Effects - D2B **UN GHS:** Eye Irrit. 2A; Skin Irrit. 2 **EU DSD/DPD:**	
Bentonite	1302-78-9	1% TO 5%	215-108-5	NDA	**WHMIS:** Other Toxic Effects - D2A **UN GHS:** STOT RE 2	
1,2,4-Trimethylbenzene	95-63-6	< 1%	202-436-9	Ingestion/Oral-Rat LD50 · 5 g/kgInhalation-Rat LC50 · 18000 mg/m³ 4 Hour(s)	**UN GHS:** Acute Tox. 4 (Inhalation); Aquatic Chronic 2; Flam. Liq. 3; Eye Irrit. 2A; Skin Irrit. 2; STOT RE 2; STOT SE 2 **EU DSD/DPD:** R10Xn; R20Xi; R36/37/38N; R51 R53	
Benzene, 1,3,5-trimethyl	108-67-8	< 1%	UN2325, 203-604-4		R10 Xi; R37 N; R51 R53	

Non-Hazardous Components						
Chemical Name	**CAS**	**%(wt)**	**UN;EINECS**	**LD50/LC50**	**EU R & S Phrases**	**Other**
Water	7732-18-5	35% TO 45%	231-791-2		NDA	

This product is an encapsulated mixture which reduces the likelihood of exposure to hazardous particulates. Airborne exposures to hazardous dusts or mists may be generated by spraying, sanding or grinding.

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

Inhalation - IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell. Move victim to fresh air. If breathing is difficult, give oxygen.

Skin - IF ON SKIN: Wash with plenty of soap and water. If irritation develops and persists, get medical attention.

Eye - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion - If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Section 5 - Fire Fighting Measures

Extinguishing Media - LARGE FIRE: Water spray, fog or regular foam.
SMALL FIRES: Dry chemical, CO2, water spray or regular foam.

Unsuitable Extinguishing Media - Do not use direct stream of water.

Firefighting Procedures - Fight advanced or massive fires from safe distance or protected location. Avoid water in a straight hose stream as the stream will cause splatter and spread fire. If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and are ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release.

Unusual Fire and Explosion Hazards - Combustible liquid. May release irritating or toxic gases, fumes, or vapors.

Hazardous Combustion Products - Carbon monoxide, carbon dioxide, hydrocarbons.

Protection of Firefighters - Firefighters should wear self-contained breathing apparatus and full protective gear.

Flash Point - 105°F(40°C) CC (Closed Cup)

Explosion Limits

Upper - 6 %

Lower - .9 %

Autoignition Temperature - 450 °F(232°C)

Section 6 - Accidental Release Measures

Personal Precautions - Do not handle damaged containers or spilled material unless wearing appropriate protective clothing. Stay upwind and Ventilate the area before entry.

Emergency Procedures - ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can without risk. Isolate the area and contain the spilled material. Persons not wearing the appropriate PPE should be removed from the area until the spill is cleaned up. Keep unauthorized personnel away.

Environmental Precautions - Prevent entry into waterways, sewers, basements or confined areas.

Containment/Clean-up Measures	-	Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in suitable container. Do not use water to flush spill area. Use appropriate Personal Protective Equipment (PPE).
Prohibited Materials	-	Avoid contact with strong oxidizing agents.

Section 7 - Handling and Storage

Handling	-	KEEP OUT OF THE REACH OF CHILDREN! Keep away from heat and ignition sources – No Smoking. Use only with adequate ventilation.
Storage	-	Store in a well-ventilated place. Keep container tightly closed. Keep container/package tightly closed in a cool, well-ventilated place. No open flames, no sparks and no smoking.
Special Packaging Materials	-	No data available
Incompatible Materials or Ignition Sources	-	Avoid contact with strong oxidizing agents and acids.

Section 8 - Exposure Controls/Personal Protection

Personal Protective Equipment Pictograms	-	
Respiratory	-	In case of insufficient ventilation, wear suitable respiratory equipment. If listed exposure limits are expected to be exceeded, use approved respirtory protection suitable for the hazard.
Eye/Face	-	Wear ANSI approved safety glasses with side shields or safety goggles.
Hands	-	Wear chemical protective gloves made of Nitrile or Neoprene.
Skin/Body	-	Wear clothing that covers the skin to prevent skin exposure.
General Industrial Hygiene Considerations	-	Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Avoid breathing vapors.
Engineering Measures/Controls	-	Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Use precaution to protect building intake from fumes and vapors created outdoors.

Exposure Limits/Guidelines					
	Result	**ACGIH**	**Canada Ontario**	**OSHA**	**United States - California**
Cellulose (9004-34-6)	TWAs	10 mg/m3 TWA	10 mg/m3 TWAEV (paper fibre, total dust)	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)	10 mg/m3 PEL (total dust); 5 mg/m3 PEL (respirable fraction)
mineral spirits (8052-41-3)	TWAs	100 ppm TWA	525 mg/m3 TWAEV	500 ppm TWA; 2900 mg/m3 TWA	100 ppm PEL; 525 mg/m3 PEL
Asphalt (8052-42-4)	TWAs	0.5 mg/m3 TWA (as benzene soluble aerosol, fume, inhalable fraction)	0.5 mg/m3 TWAEV (fume, inhalable, as benzene-soluble aerosol)	Not established	5 mg/m3 PEL (fume)

Exposure Control Notations

ACGIH

- Asphalt (8052-42-4):Carcinogens:A4 - Not Classifiable as a Human Carcinogen (fume, coal tar-free)

Key to abbreviations

PEL = Permissible Exposure Level determined by the Occupational Safety and Health Administration (OSHA)

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

Physical Form - Liquid
Appearance/Description - Thick black paste (semi-liquid)

Color: Black		**Odor**: Petroleum solvent odor.	
Taste: NDA		**Odor Threshold**: NDA	
Boiling Point:	300 to 400 F(148.8889 to 204.4444 C)	**Vapor Pressure:**	= 2 mmHg (torr) @ 68 F(20 C)
Melting Point:	NDA	**Vapor Density:**	= 1 Air=1
Specific Gravity/Relative Density:	= 1.046 Water=1	**Evaporation Rate:**	NDA
Density:	= 8.71 lbs/gal	**VOC (Wt.):**	= 1.66 lbs/gal
Bulk Density:	NDA	**VOC (Vol.):**	< 250 g/L
pH:	NDA	**Volatiles (Wt.):**	NDA
Water Solubility:	NDA	**Volatiles (Vol.):**	= 60 %
Solvent Solubility:	Yes	**Flash Point:**	>105° F(40°C)
Viscosity:	NDA	**Flash Point Test Type:**	CC (Closed Cup)
Coefficient of Water:	NDA	**Autoignition:**	450 F(232.2222 C)

Section 10 - Stability and Reactivity

Stability - Stable under normal temperatures and pressures.
Hazardous Polymerization - Hazardous polymerization will not occur.
Conditions to Avoid - Avoid contact with strong oxidizing agents and flame.
Incompatible Materials - Strong oxidizers and acids.
Hazardous Decomposition Products - Carbon monoxide, carbon dioxide and hydrocarbons.

Section 11 - Toxicological Information

Component Name	Concentration	CAS	Data
Water	35% TO 45%	7732-18-5	Acute Toxicity: ; orl-rat LD50:>90 mL/kg
Asphalt	30% TO 40%	8052-42-4	Acute Toxicity: ; orl-rat LD50:>5000 mg/kg; ihl-rat LC50:>94.4 mg/m3 Tumorigen/Carcinogen: ; skn-mus TD :69 gm/kg/43W-I; skn-mus TDLo:905gm/kg/2Y-I
Cellulose	2% TO 6%	9004-34-6	Acute Toxicity: ; orl-rat LD50:>5 gm/kg; ihl-rat LC50:>5800 mg/m3/4H; skn-rbt LD50:>2 gm/kg
Bentonite	1% TO 5%	1302-78-9	Acute Toxicity: ; orl-mus TDLo:14 gm/kg/7D-I
1,2,4-Trimethylbenzene	< 1%	95-63-6	Acute Toxicity: ; orl-rat LD50:5 gm/kg; ihl-rat LC50:18000 mg/m3/4H

Other Component Information - IARC has concluded that the following chemicals in this product are carcinogenic to humans (Group 1): silica, quartz. ACGIH has designated the following chemicals in this product as suspected human carcinogens (A2): silica, quartz. NTP has listed the following chemicals in this product as known human carcinogens: silica, quartz. Risk of cancer depends on duration and level of exposure to this product as a dust or aerosol mist.

Other Information - This product contains petroleum asphalt. Petroleum asphalt is not listed as a carcinogen by OSHA or NTP. The National Institute of Occupational Safety and Health (NIOSH), has concluded that at higher temperatures roofing asphalt fumes are a potential occupational carcinogen. If this product is heated or comes in contact with heated material, avoid breathing fumes. This product may contain small amounts of polycyclic aromatic hydrocarbons (PAH's) which are recognized carcinogens in humans and experimental animals. Mouse skin painting studies of roofing asphalt vapor concentrate have shown evidence of tumor formation associated with localized skin irritation in recent studies. Inhalation studies of high airborne concentrations of asphalt/bitumen fumes in rats and mice produced bronchitis, pneumonitis, and lung changes such as fibrosis and cell damage.

Section 12 - Ecological Information

Ecological Fate - No data available.
Persistence/Degradability - No data available.
Bioaccumulation Potential - No data available.
Mobility in Soil - No data available.

Section 13 - Disposal Considerations

Product - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transportation Information

DOT – Department of Transportation - Not Regulated when shipped in containers <119 gallons.

TDG Transportation Other Information▪: Not Restricted under General Exemption for small container packaging.
TDG - **Canada Transportation of Dangerous Goods:** Tars, Liquids; UN1999; Hazard Class: 3; Packing Group: III 1.33 Class 3, Flammable Liquids

IMO/IMDG –International Maritime Transport ▪ IMDG Code 2.3.2.5 - exempted from marking, labeling & testing of packages.

IATA - International Air Transport Association - TARS, LIQUID; UN1999; Hazard Class: 3; Packing Group: III.

Section 15 - Regulatory Information

SARA Hazard Classifications - Acute, Chronic
Risk & Safety Phrases - California PROP 65: Asphalt and Asphalt Fumes may contain detectable amounts of chemicals known to the State of California to cause cancer or reproductive harm. .

State Right To Know					
Component	CAS	MA	MN	NJ	PA
Water	7732-18-5	No	No	No	No
Asphalt	8052-42-4	Yes	Yes	Yes	Yes
mineral spirits	8052-41-3	Yes	Yes	Yes	Yes
Cellulose	9004-34-6	Yes	Yes	Yes	Yes
Bentonite	1302-78-9	No	No	No	No
1,2,4-Trimethylbenzene	95-63-6	Yes	Yes	Yes	Yes
Benzene, 1,3,5-trimethyl	108-67-8	Yes	No	No	No

Inventory			
Component	CAS	EU EINECS	TSCA
Water	7732-18-5	Yes	Yes
Asphalt	8052-42-4	Yes	Yes
mineral spirits	8052-41-3	Yes	Yes
Cellulose	9004-34-6	Yes	Yes
Bentonite	1302-78-9	Yes	Yes

Inventory			
Component	**CAS**	**EU EINECS**	**TSCA**
1,2,4-Trimethylbenzene	95-63-6	Yes	Yes
Benzene, 1,3,5-trimethyl	108-67-8	Yes	Yes

United States

Environment

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

▪ Cellulose	9004-34-6	2% TO 6%	Not Listed
▪ Asphalt	8052-42-4	30% TO 40%	Not Listed
▪ 1,2,4-Trimethylbenzene	95-63-6	< 1%	1.0 % de minimis concentration
▪ Bentonite	1302-78-9	1% TO 5%	Not Listed
▪ Water	7732-18-5	35% TO 45%	Not Listed
▪ mineral spirits	8052-41-3	8% TO 15%	Not Listed
▪ Benzene, 1,3,5-trimethyl	108-67-8	< 1%	Not Listed

Section 16 - Other Information

Last Revision Date - 02/02/2015

Prepared By - GG Inc.

Disclaimer/Statement of Liability - This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to verify the suitability and completeness of such information for particular use. Gardner-Gibson does not accept liability for any loss or damage that may occur from the use of this information.

NFPA

MATERIAL SAFETY DATA SHEET

Effective Date: 10-16-97 Revision Date: none

Brake Kleen (Aerosol) 765-1314 (R)

Code: CRC

Section 1 - Product and Company Identification

PRODUCT NAME: Brake Kleen (Aerosol) 765-1314 (R)

MANUFACTURER'S NAME:
CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974

EMERGENCY TELEPHONE NUMBER
(800)424-9300

MISCELLANEOUS INFORMATION
(215)674-4300

Section 2 - Hazardous Ingredients

INGREDIENTS	CAS #	ACGIH TLV	OSHA PEL	OTHER LIMITS	%
Tetrachloroethylene	127-18-4	25 ppm	25 ppm	--	65-75
Petroleum Distillate	8052-41-3	N/A	N/A	100 ppm	<10
Toluene	108-88-3	100 ppm	100 ppm		25-35
Carbon Dioxide	124-35-9	5000 ppm	10000		<10

Section 3 - Hazards Indentification

SIGNS AND SYMPTOMS OF EXPOSURE:

1. ACUTE OVEREXPOSURE: Eye & skin - Irritation
   Inhalation - Causes central nervous system effects, headaches, dizziness, drunkeness, irritation to upper respiratory tract, uncosciousness and irregular heartbeats.

2. CHRONIC OVEREXPOSURE: Repeated overexposures have caused liver and kidney effects in laboratory animals.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Risk to your health depends on your level and duration of exposure.

Section 4 - First Aid Measures

EMERGENCY AND FIRST AID PROCEDURES: If symptoms persist, call aPhysician.

1. INHALATION: Remove to fresh air. Apply artificial respiration if necessary.

2. EYES: Flush with large amounts of water for 15 minutes.

3. SKIN: Remove contaminated clothing. Wash exposed area with soap and water.

4. INGESTION: DO NOT induce vomiting - Call a physicain.

MATERIAL SAFETY DATA SHEET

Section 5 - Firefighting Measures

FLASHPOINT: 40 F
METHOD : TCC

FLAMMABLE LIMITS: NO
LEL: --
UEL: --

EXTINGUISHING MEDIA: Water fog

UNUSUAL HAZARDS: Aerosol cans may burst above 120 F

Section 6 - Environmental Release Measures

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Store in a cool, dry area.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Keep out of water supply. Ventilate area. Do not enter spill area without respirator. Dike area and pump into containers or use absorbent to pick up.

Section 7 - Handling and Storage

SPECIAL PRECAUTION AND USE DIRECTIONS:
Avoid contact with skin. Avoid breathing vapors. Vapors are heavier than air and will collect in low areas. If vapors are suspected in low areas, do not enter unless special breathinf apparatus is used and an observer is present for assistance. Tertachloroethylene is listed as a carcinogen.

Section 8 - Exposure Controls/Personal Protection

VENTILATION: Adequate to prevent accumulation of vapors.

RESPIRATORY: Positive pressure self-contained breathing apparatus if accumulation of vapors is suspected.

GLOVES: Solvent resistant.

EYES & FACE: Safety glasses.

OTHER PROTECTIVE EQUIPMENT: Apron and boots if possibility of body contact exists.

MATERIAL SAFETY DATA SHEET

Effective Date: 10-16-97 Revision Date: none

Brake Kleen (Aerosol) 765-1314 (R)

Code: CRC

Section 9 - Physical and Chemical Properties

(without propellant)

SPECIFIC GRAVITY : 1.282
BOILING POINT : Est. 231 F
FREEZING POINT : ND
APPEARANCE & ODOR: Colorleass liqid, irritating ododr at high concentration.
SOLUBILITY : Slight solubility in water - good solvent for many organic materials.
VAPOR PRESSURE : ND
% VOLATILE : 100
EVAPORATION RATE : Rapid
VAPOR DENSITY : ND
pH : NA

Section 10 - Stability and Reactivity

STABILITY. : sTABLE

HAZARDOUS DECOMPOSITION PRODUCTS : Thermal - Hydrogen chloride, chlorine and some phosgene - avoid open flames, arcs, or high temperatures.

MATERIALS TO AVOID : Avoid storage in aluminum containers or contact with aluminum and/or zinc powders.

Section 11 - Toxicological Information

CHEMCIAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:
NATIONAL TOXICOLOGY PROGRAM: Yes - National Toxicology Program
IARC MONOGRAPHS : Yes - IARC Monogram
OSHA : Yes - OSHA

Section 12 - Ecological Information

Section 13 - Disposal Considerations

WASTE DISPOSAL: All used and unused product should be disposed of in conformance with local, state and federal regulations.

Section 14 - Transport Information

MATERIAL SAFETY DATA SHEET

Effective Date: 10-16-97 Revision Date: none

Brake Kleen (Aerosol) 765-1314 (R)

Code: CRC Page: 4

Section 15 - Regulatory Information

NFPA HAZARD RATINGS:
HEALTH : 2
FLAMMABILITY: 3
REACTIVITY : 0

SARA INFORAMTION:
This product contains the followinf chemicals that are subject to release reporting under Section 313 of SARA Title III:

CHEMCIAL NAME	CAS #	PERCENT
Tetrachloroetylene	127-18-4	65-75
Toluene	108-88-3	25-35

Section 16 - Other Information

********** End of MSDS **********

CEMENT & CONCRETE PRODUCTS™

C1: Portland Cement Based Concrete Products

SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
5 Concourse Parkway, Suite 1900
Atlanta, GA 30328

Emergency Telephone Number
INFOTRAC (800) 535-5053
Information Telephone Number
(800) 282-5828

SDS C1
Revision: Feb-18

QUIKRETE® Product Name	Item #(s)
Fence Post Mix	1005
Fiber-Reinforced Concrete Mix	1006
Crack Resistant Concrete Mix	1006-80
Pro-Finish Crack Resistant Concrete Mix	1006-68
QUIKRETE 5000 Concrete Mix	1007
QUIKRETE 6000 Concrete Mix	1007
Pro-Finish QUIKRETE 5000	1007-85
Lightweight Concrete Mix	1008
Basic Concrete Mix	1015
Maximum Yield Concrete Mix	1100-80
Concrete Mix	1101-10, -20, -40, -60, -80, -90
Green Concrete Mix	1101-63, -73
B-Crete	1101-81
Red-E-Crete Concrete mix	1101-91, -87; 1141-62, -63, -92, -93, Bulk NR810035
Countertop Mix	1106-80
Form & Pour Concrete Mix	1120-80/NR810065
Form & Pour Concrete Mix MS	1120-80/NR810065
All-Star Concrete Mix	1121
Rip Rap	1129
Rip Rap Scrim	1134-80
Handicrete Concrete Mix	1141-59, -60, -80
RiteMix Concrete	1171-60
Fiber Reinforced Deck Mix	1251-80, -81
All-Star Crack Resistant Concrete Mix	1470-03
All-Star 5000 Concrete Mix	1470-01
FlowCrete 5000 (Mix 801)	8080026/NR80026
Mix 801 Concrete Mix	NR81001

Product Use: Portland cement-based, aggregated products for general construction

See most current revision of this document at www.QUIKRETE.com.

SECTION II - HAZARD IDENTIFICATION

Hazard-determining components of labeling: Silica, Portland cement

2.1 Classification of the substance or mixture

Carcinogen – Category 1A
Skin Corrosion – Category 1B
Eye Damage – Category 1
Skin Sensitization – Category 1B
Specific Target Organ Toxicity Repeat Exposure – Category 1
Specific Target Organ Toxicity: Single Exposure – Category 3

2.2a Signal word DANGER!

2.2b Hazard Statements

May cause cancer through chronic inhalation
Causes severe skin burns and serious eye damage
May cause an allergic skin reaction
Causes damage to lungs through prolonged or repeated inhalation
May cause respiratory irritation
Harmful if swallowed.

2.2c Pictograms

2.2d Precautionary statements

Do not handle until all safety precautions have been read and understood.
Wear impervious gloves, such as nitrile. Wear eye protection, and protective clothing.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.
Use only in a well-ventilated area. Wear a NIOSH approved respirator (mask) such as N95 in poorly ventilated areas, when used for extended periods, when use is frequent, or when permissible exposure limits may be exceeded.
Do not breathe dust.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If inhaled: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If on skin (or hair): Remove immediately all contaminated clothing and wash before re-use. Rinse skin or hair with water.
If significant skin irritation or rash occurs: get medical advice or attention.

Immediately seek medical advice or attention if symptoms are significant or persist.

Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/containers in accordance with all regulations.

2.3 Additional Information
The Portland cement in this product can cause serious, potentially irreversible damage to skin, eye, respiratory and digestive tracts due to chemical (caustic) burns, including third degree burns. Burns from Portland cement may not cause immediate pain or discomfort. You cannot rely on pain to alert you to cement burns. Portland cement can cause dermatitis or sensitization. Therefore precautions must be taken to prevent all contact with Portland cement. Cement burns can become worse even after contact has ended. If there is contact with this product, immediately remove all product from body and thoroughly rinse with water. If you experience or suspect a cement burn or inflammation you should immediately see a health care professional.

Skin burns and irritation may be caused by brief exposure, though often are caused by extended exposure of 15 minutes, an hour, or longer. Interaction of Portland cement with water or sweat releases a caustic solution which produces the burns or irritation. Any extended exposure should be treated as though a burn has occurred until determined otherwise.

Skin contact with Portland cement can also cause inflammation of the skin, referred to as dermatitis. Signs and symptoms of dermatitis can include itching, redness, swelling, blisters, scaling, and other changes in the normal condition of the skin. Signs and symptoms of burns include the above and whitening, yellowing, blackening, peeling or cracking of skin.

The Portland cement in this product may cause allergic contact dermatitis in sensitized individuals. This overreaction of the immune system can lead to severe inflammation. Sensitization may result from a single exposure to the low levels of Cr (VI) in Portland cement or repeated exposures over months or years. Sensitization is long lasting and, after sensitization, even very small quantities can trigger the dermatitis. Sensitization is uncommon. Individuals who experience skin problems, including seemingly minor ones, are advised to seek medical attention.

2.3a HNOC – Hazards not otherwise classified: Not applicable
2.3b Unknown Acute Toxicity: None

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	% by Weight
Sand, Silica, Quartz	14808-60-7	60-100*
Portland Cement	65997 15 1	10-30*
Fly Ash	68131-74-8	5-10*

*The concentrations ranges are provided due to batch-to-batch variability.
None of the constituents of this material are of unknown toxicity.

SECTION IV – FIRST AID MEASURES

4.1 Description of the first-aid measures
General information:
After inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. In case of unconsciousness, place patient stably in side position for transportation.
After skin contact: Wash skin with cool water and pH-neutral soap or a mild detergent. If significant skin irritation or rash occurs: get medical advice or attention.
After eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
After swallowing: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed
Inhalation: May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated inhalation. This product contains crystalline silica. Prolonged or repeated inhalation of respirable silica from this product can cause silicosis.
Skin contact: Skin burns and irritation may be caused by brief exposure, though often are caused by extended exposure of 15 minutes, an hour, or longer.
Eye Contact: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Ingestion: May be harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

4.3 Indication of immediate medical attention and special treatment needed:
Immediately seek medical advice or attention if symptoms are significant or persist.

SECTION V - FIRE FIGHTING MEASURES

5.1 Flammability of the Product: Non-flammable and non-combustible
5.2 Suitable extinguishing agents: Treat for surrounding material
5.3 Special hazards arising from the substance or mixture: None

5.3a Products of Combustion: None
5.3b Explosion Hazards in Presence of Various Substances: Non-explosive in presence of shocks

SECTION VI – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Wear personal protective equipment (See section VIII). Keep unprotected persons away.

6.2 Methods and material for containment and cleaning up:
Do not allow to enter sewers/ surface or ground water. Dispose of unwanted materials and containers properly in accordance with all regulations.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

7.1 Handling
Precautions for safe handling: Ensure good ventilation/exhaustion at the workplace. DO NOT BREATHE DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator and tight fitting goggles is recommended. Wear appropriate PPE (See section 8).Do not mix with other chemical products, except as indicated by the manufacturer. Do not get in eyes, on skin or clothing. Good housekeeping is important to prevent accumulation of dust.

7.2 Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep out of the reach of children. Keep container tightly closed and prevent exposure to humidity. Do not allow water to contact the product until time of use to preserve product utility.

SECTION VIII – EXPOSURE CONTROL MEASURES / PERSONAL PROTECTION

8.1 Components with limit values that require monitoring at the workplace:

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Silica Sand, crystalline	14808-60-7	0.1	0.025 (resp)
Portland Cement	65997-15-1	5 (resp) 15 (total)	10 (resp)
Fly Ash	68131-74-8	N/A	N/A

8.2 Exposure Controls
Use ventilation adequate to keep exposures below recommended exposure limits.

8.3 General protective and hygienic measures
Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

8.3a Personal protective equipment
Protection of hands:
Wear gloves of adequate length to offer appropriate skin protection from splashes. Nitrile, Butyl and PVC gloves have been found to offer adequate protection for incidental contact. You cannot rely on pain to alert you to cement burns. Portland cement can cause dermatitis or sensitization.

Eye protection:
Wear approved eye protection (properly fitted dust- or splash-proof chemical safety glasses.

Respiratory protection:
Wear a NIOSH approved respirator (mask) such as N95 in poorly ventilated areas, when used for extended periods, when use is frequent, or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional, following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

General Information

Appearance	Form: Granular Solid Color: Gray to gray-brown colored Odor: None
pH-value at 20°C (68 °F):	13 (10%)
Boiling point/Boiling range:	Not applicable
Flash point:	Not applicable
Auto igniting:	Product is not self-igniting
Vapor pressure at 21°C (70°F)	Not available
Density at 25°C (77 °F):	2.6 to 3.15

Solubility in / Miscibility with Water:	Insoluble
VOC content:	0 g/L VOC

SECTION X – STABILITY AND REACTIVITY

10.1 Reactivity
No dangerous reaction known under conditions of normal use.
10.2 Chemical stability
Stable under normal storage conditions. Keep in dry storage.

10.3 Possibility of hazardous reaction
No dangerous reaction known under conditions of normal use.
10.4 Thermal decomposition / conditions to be avoided
No decomposition if used according to specifications.
10.5 Incompatible materials
Contact of silica with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, or oxygen difluoride may cause fires
10.6 Hazardous Decomposition or By-products
Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas – silicon tetrafluoride.

SECTION XI – TOXICOLOGICAL INFORMATION

11.1 Exposure Routes: Skin contact, skin adsorption, eye contact, inhalation, or ingestion.

11.2 Symptoms related to physical/chemical/toxicological characteristics:

Inhalation: May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated exposure. This product contains crystalline silica. Prolonged or repeated inhalation of respirable silica from this product can cause silicosis.

Skin contact: Causes severe skin burns. Handling can cause dry skin, discomfort, irritation, and dermatitis. May cause sensitization by skin contact. Product becomes extremely alkaline when exposed to moisture, and can cause alkali burns and affect the mucous membranes.

Eye Contact: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Ingestion: Harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

11.3 Delayed, immediate and chronic effects of short-term and long-term exposure
Short Term
Skin Corrosion/Irritation: Causes severe skin burns.
Serious Eye Damage/Irritation: Causes severe eye damage.
Respiratory Sensitization: Not available
Skin Sensitization: May cause an allergic skin reaction.
Specific Target Organ Toxicity-Single Exposure: (Category 3) May cause respiratory irritation.
Aspiration Hazard: Not available
Long Term
Carcinogenicity: May cause cancer through chronic inhalation.
Germ Cell Mutagenicity: Not available
Reproductive Toxicity: Not available

Specific Target Organ Toxicity- Repeated Exposure: (Category 1) Causes damage to lungs through prolonged/repeated exposure
Synergistic/Antagonistic Effects: Not available.

SECTION XII – ECOLOGICAL INFORMATION

12.1 Ecotoxicity
May cause long-term adverse effects to the aquatic environment. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or un-neutralized

12.2 Persistence and degradability
No further relevant information available.

12.3 Bioaccumulative potential:
No further relevant information available.

12.4 Mobility in soil
No further relevant information available.

12.5 Other Adverse Effects
No further relevant information available.

SECTION XIII – DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Method
The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302). Disposal must be made in accordance with local, state and federal regulations.

13.2 Other disposal considerations
Uncleaned packaging
Recommendation: Disposal must be made in accordance with local, state and federal regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION XIV – TRANSPORT INFORMATION

	DOT (U.S.)	TDG (Canada)
UN-Number	Not Regulated	Not Regulated
UN proper shipping name	Not Regulated	Not Regulated
Transport Hazard Class(es)	Not Regulated	Not Regulated
Packing Group (if applicable)	Not Regulated	Not Regulated

14.1 Environmental hazards:
Not Available

14.2 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code
Not available

14.3 Special precautions for user
Do not handle until all safety precautions have been read and understood.

SECTION XV – OTHER REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislations specific for the chemical

Canada
WHMIS Classification: Considered to be a hazardous material under the Hazardous Products Act as defined by the Hazardous Products Regulations and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the HPR.

15.2 US Federal Information

SARA 302/311/312/313 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302, 311, 312 or 313.
RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.
CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.
Emergency Planning and Community Right to Know Act (SARA Title III): Crystalline silica (quartz) is not an extremely hazardous substance under Section 302 and is not a toxic chemical subject to the requirements of Section 313.
FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3)(xxvi).
NTP: Respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is classified as Known to be a Human Carcinogen.
OSHA Carcinogen: Crystalline silica (quartz) is not listed.

15.3 State Right to Know Laws

California Prop. 65 Components

WARNING: This product can expose you to chemicals including crystalline silica which is known to the State of California to cause cancer and hexavalent chromium compounds which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Inhalation Reference Exposure Level (REL): California established a chronic REL of 3 µg for silica (crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no adverse health effects are anticipated in individuals indefinitely exposed to the substance at that level.

Massachusetts Toxic Use Reduction Act: Silica, crystalline (respirable size, <10 microns) is "toxic" for purposes of the Massachusetts Toxic Use Reduction Act.

15.4 Global Inventories

DSL All components of this product are on the Canadian DSL list.

TSCA No.: Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7. All constituents are listed in the TSCA inventory.

SECTION XVI – OTHER INFORMATION

Last Updated: February 7, 2018

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

Prepared by The QUIKRETE Companies, LLC

End of SDS

Safety Data Sheet

Issue Date: 22-Oct-2012 **Revision Date:** 28-May-2015 **Version** 1

1. IDENTIFICATION

Product Identifier
Product Name **CARQUEST Power Steering Fluid**

Other means of identification N/A
SDS # CQ-026

Recommended use of the chemical and restrictions on use
Recommended Use Power Steering Fluid.

Details of the supplier of the safety data sheet
Supplier Address
Warren Oil Company
915 E. Jefferson Ave.
West Memphis, AR 72301

Emergency Telephone Number
Company Phone Number 1-800-428-9284
Emergency Telephone (24 hr) CHEMTREC 1-800-424-9300 (North America) 1-703-527-3887 (International)

2. HAZARDS IDENTIFICATION

Appearance Light amber, liquid **Physical State** Liquid **Odor** Typical petroleum

Classification
This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Petroleum distillates, hydrotreated heavy paraffinic	64742-54-7	90-100
Severely Hydrotreated Heavy Naphthenic Petroleum Oil	64742-52-5	90-100

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact Flush eyes with large amounts of water, for at least 15 minutes, until irritation subsides. If irritation persists get medical attention.

Skin Contact No treatment is necessary under ordinary circumstances. Remove contaminated clothing and shoes. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs and persists, seek medical attention. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should seek immediate medical attention.

Inhalation Remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

Ingestion If swallowed, do not induce vomiting. If victim exhibits signs of lung aspiration such as coughing or choking, seek immediate medical attention.

Most important symptoms and effects

Symptoms Expected to be a minor eye irritant. Repeated or prolonged skin contact may cause dermatitis.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use dry chemical, foam, carbon dioxide or water fog.

Unsuitable Extinguishing Media While carbon dioxide and inert will extinguish the fire, they can also displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces.

Specific Hazards Arising from the Chemical

This material can burn but will not readily ignite. This material will release vapors when heated above the flashpoint temperature that can ignite when exposed to a source of ignition. In enclosed spaces, heated vapor can ignite with explosive force. Mists or sprays may burn at temperatures below the flashpoint. Dense smoke may be generated while burning.

Hazardous Combustion Products Carbon monoxide. Carbon dioxide (CO2). Aldehydes. Ketones. Combustion products of sulfur and nitrogen.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Avoid breathing smoke and vapor. Water may be used to cool containers exposed to heat or flame.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

Methods and material for containment and cleaning up

Methods for Containment Remove sources of ignition. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Clean-Up Take up small spills with absorbent pads. Large spills may be taken up with pump or vacuum.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store at ambient conditions. Store at atmospheric pressure. Keep container tightly closed. Store in a cool, well-ventilated place. Keep away from heat, sparks, and flame. Empty containers retain product residues.

Incompatible Materials This product may react with strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Severely Hydrotreated Heavy Naphthenic Petroleum Oil 64742-52-5	TWA: 5 mg/m^3 (oil mist) STEL: 10 mg/m^3 (oil mist)	TWA: 5mg/m^3 (oil mist) STEL: none estab.	TWA: none estab. STEL: none estab.
Severely Hydrotreated Heavy Naphthenic Petroleum Oil 64742-52-5	TWA: 5 mg/m^3 (oil mist) STEL: 10 mg/m^3 (oil mist)	TWA: 5mg/m^3 (oil mist) STEL: none estab.	TWA: none estab. STEL: none estab.

Appropriate engineering controls

Engineering Controls Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces. If product is heated above 70 C (155 F) in the presence of water, hydrogen sulfide vapors may be released. Ventilation should be sufficient to keep hydrogen sulfide levels below recommended exposure limits. Eye wash fountains are recommended.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses. Wear chemical goggles or face shield if splash or mist occurs.

Skin and Body Protection Use impervious gloves for prolonged contact. Wear oil-impervious garments if contact is unavoidable.

Respiratory Protection If mist is generated (heating, spraying) and engineering controls are not sufficient, wear approved organic vapor respirator suitable for oil mist.

General Hygiene Considerations Use good hygiene when handling petroleum product. Launder contaminated clothing before reuse. Excessive misting may cause slippery floors - wear appropriate footwear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Viscous liquid		
Appearance	Light amber, viscous liquid	**Odor**	Typical petroleum
Color	Light amber	**Odor Threshold**	Not determined

Property	Values	Remarks • Method
pH	Not available	
Melting Point/Freezing Point	Not available	
Boiling Point/Boiling Range	Not available	
Flash Point	202 °C / 396 °F	ASTM D-92
Evaporation Rate	Not available	
Flammability (Solid, Gas)	Liquid-Not applicable	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not available	
Vapor Density	>1	(Air=1)
Specific Gravity	0.87	
Water Solubility	insoluble	
Solubility in other solvents	Not determined	
Partition Coefficient	Not available	

Property	Values	Remarks • Method
Auto-ignition Temperature	No data available	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to Avoid
Avoid formation of mists. Extreme heat, open flames or sparks. Keep separated from incompatible substances.

Incompatible Materials
This product may react with strong oxidizing agents.

Hazardous Decomposition Products
Decomposition of this product may yield oxides of boron, calcium, magnesium, nitrogen, phosphorus, sulfur including hydrogen sulfide and zinc as well as carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Avoid contact with eyes.

Skin Contact Avoid contact with skin.

Inhalation Do not inhale.

Ingestion Do not ingest.

Component Information

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Petroleum distillates, hydrotreated heavy paraffinic 64742-54-7		5000: 96 h Oncorhynchus mykiss mg/L LC50		1000: 48 h Daphnia magna mg/L EC50
Severely Hydrotreated Heavy Naphthenic Petroleum Oil 64742-52-5		5000: 96 h Oncorhynchus mykiss mg/L LC50		1000: 48 h Daphnia magna mg/L EC50

Persistence/Degradability
Not determined.

Bioaccumulation
Not determined.

Mobility
Not determined

Other Adverse Effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Petroleum distillates, hydrotreated heavy paraffinic	Present	X		Present		Present	X	Present	X	X
Chemical Name	**TSCA**	**DSL**	**NDSL**	**EINECS**	**ELINCS**	**ENCS**	**IECSC**	**KECL**	**PICCS**	**AICS**
Severely Hydrotreated Heavy Naphthenic Petroleum Oil	Present	X		Present		Present	X	Present	X	X

Legend:

TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*

DSL/NDSL *- Canadian Domestic Substances List/Non-Domestic Substances List*

EINECS/ELINCS *- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

ENCS *- Japan Existing and New Chemical Substances*

IECSC *- China Inventory of Existing Chemical Substances*

KECL *- Korean Existing and Evaluated Chemical Substances*

PICCS *- Philippines Inventory of Chemicals and Chemical Substances*

AICS *- Australian Inventory of Chemical Substances*

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated under applicable state right-to-know regulations

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	0	1	0	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	1	1	0	Not determined

Issue Date: 22-Oct-2012
Revision Date: 28-May-2015
Revision Note: New format

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Cationic Asphalt Emulsion

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 12/21/2017 Date of issue: 02/27/2017 Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Cationic Asphalt Emulsion

Synonyms: CSS-1, CSS-1H, CSS-1HM, CSS-1HH, CQS-1H, CQS-1F, CSS-1P, CRS-1H, CRS-2, CRS-2S, CRS-2P, CHFRS-2P, CMS-1, CMS-2, CMS-2H, CRS-1HP, CRS-1HM, EBL, NOVABOND, PMCRS-1S, PMCSS-1H, PMCRS-2S, Tack Oil, RoadTac , CSS-1HP

1.2. Intended Use of the Product

Use of the substance/mixture: Construction

1.3. Name, Address, and Telephone of the Responsible Party

Company

Vance Brothers
5201 Brighton Ave., P.O. Box 300107
Kansas City, MO 64130
T 816-923-4325/ 800-821-8549 - F 816-923-6472

1.4. Emergency Telephone Number

Emergency Number : 800-424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US classification

Skin Irrit. 2	H315
Carc. 2	H351
STOT RE 2	H373
Asp. Tox. 1	H304
Aquatic Acute 3	H402
Aquatic Chronic 2	H411

Full text of H-phrases: see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS07 GHS08 GHS09

Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) :
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H351 - Suspected of causing cancer.
H373 - May cause damage to organs through prolonged or repeated exposure.
H402 - Harmful to aquatic life.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary Statements (GHS-US) :
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe vapors, mist, spray.
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear eye protection, face shield, protective clothing, protective gloves.
P301+P310 - If swallowed: Immediately call a POISON CENTER, a doctor.
P302+P352 - If on skin: Wash with plenty of water.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see Section 4 on this SDS).
P331 - Do NOT induce vomiting.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P391 - Collect spillage.
P405 - Store locked up.

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards Exposure may aggravate pre-existing eye, skin, or respiratory conditions. If stored under heat for extended periods or significantly agitated, this material might evolve or release hydrogen sulfide, a flammable gas, which can raise and widen this material's actual flammability limits and significantly lower its auto-ignition temperature. Hydrogen sulfide is a toxic gas that can be fatal. It also has a rotten egg smell that causes odor fatigue very quickly and shouldn't be used as an indicator for the presence of gas. Flammable vapors can accumulate in head space of closed systems.

2.4. Unknown Acute Toxicity (GHS-US)

10 percent of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Asphalt	(CAS No) 8052-42-4	45 - 70	Carc. 2, H351
Water	(CAS No) 7732-18-5	30 - 55	Not classified
Proprietary Petroleum Distillate	Proprietary*	< 30	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Carc. 2, H351 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 3, H402 Aquatic Chronic 2, H411

*The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200].

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Remove contaminated clothing. Immediately flush skin with plenty of water for at least 60 minutes. Get immediate medical advice/attention. Wash contaminated clothing before reuse. In molten form: Cool skin rapidly with cold water after contact with molten product, Removal of solidified molten material from skin requires medical assistance.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention. In molten form: Protect skin and eyes from contact with molten material.

First-aid Measures After Ingestion: DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: Causes skin irritation. May cause an allergic skin reaction. There are potential chronic health effects to consider. Risk of thermal burns on contact with molten product.

Symptoms/Injuries After Inhalation: May cause respiratory irritation.

Symptoms/Injuries After Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction.

Symptoms/Injuries After Eye Contact: May cause eye irritation.

Symptoms/Injuries After Ingestion: The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Chronic Symptoms: May cause damage to organs through prolonged or repeated exposure. Suspected of causing cancer.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO_2).

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire. Do not use water when molten material is involved, contact of hot product with water will result in a violent expansion as the water turns to steam causing explosion with massive force.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable. Will not support combustion unless the water has evaporated.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Do not allow run-off from fire fighting to enter drains or water sources. Do not breathe fumes or vapors from fire. Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Other Information: Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all eyes and skin contact and do not breathe vapor and mist.

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see item 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Precautions for Safe Handling: Avoid breathing vapors, mist, spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Keep from freezing.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

Incompatible Products: Strong acids. Strong bases. Strong oxidizers.

Storage Area: Store locked up.

7.3. Specific End Use(s)

Construction

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Asphalt (8052-42-4)		
USA ACGIH	ACGIH TWA (mg/m³)	0.5 mg/m³ (fume, inhalable fraction)

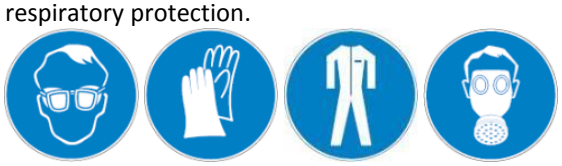
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen fume, coal tar-free
USA ACGIH	Biological Exposure Indices (BEI)	(Medium: urine - Time: end of shift at end of workweek - Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)
USA NIOSH	NIOSH REL (ceiling) (mg/m³)	5 mg/m³ (fume)

Proprietary Petroleum Distillate		
USA ACGIH	ACGIH TWA (mg/m³)	100 mg/m³ (inhalable fraction and vapor)
USA ACGIH	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route,Confirmed Animal Carcinogen with Unknown Relevance to Humans

8.2. Exposure Controls

Appropriate Engineering Controls : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment : Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing : Chemically resistant materials and fabrics.

Hand Protection : Wear chemically resistant protective gloves.

Eye Protection : Chemical safety goggles.

Skin and Body Protection : Wear suitable protective clothing.

Respiratory Protection : If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Thermal Hazard Protection : If material is hot, wear thermally resistant protective gloves.

Environmental Exposure Controls : Do not allow the product to be released into the environment.

Other Information : When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State : Liquid

Appearance : Brown to Black Material

Odor : No data available

Odor Threshold : No data available

pH : No data available

Evaporation Rate : Slower (Butyl Acetate=1)

Melting Point : N/A

Freezing Point : No data available

Boiling Point : 100 °C (212 °F)

Flash Point : > 212 °F (100 °C)

Auto-ignition Temperature : Not applicable

Decomposition Temperature : No data available

Flammability (solid, gas) : No data available

Vapor Pressure : Not determined

Relative Vapor Density at 20 °C : > 1 (air=1)

Specific Gravity : 1 (+/- 0.2 at 60 °F/15.56 °C)

Solubility : Water: Miscible

Partition Coefficient: N-Octanol/Water : No data available

Viscosity : No data available

Lower Flammable Limit : Unknown

Upper Flammable Limit : Unknown

9.2. Other Information

No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Hazardous reactions will not occur under normal conditions.

10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

10.5. Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

10.6. Hazardous Decomposition Products: May release flammable gases. Thermal decomposition generates : Hydrogen sulfide. Sulfur dioxide. Corrosive vapors.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

Asphalt (8052-42-4)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rabbit	> 2000 mg/kg
LC50 Inhalation Rat	> 94.4 mg/m³

Proprietary Petroleum Distillate	
LD50 Oral Rat	18.7 - 24.9 ml/kg
LD50 Dermal Rabbit	> 4300 mg/kg
LC50 Inhalation Rat	3.6 mg/l/4h

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Suspected of causing cancer.

Asphalt (8052-42-4)	
IARC group	2B
National Toxicology Program (NTP) Status	Twelfth Report - Items under consideration.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard: May be fatal if swallowed and enters airways.

Symptoms/Injuries After Inhalation: May cause respiratory irritation.

Symptoms/Injuries After Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction.

Symptoms/Injuries After Eye Contact: May cause eye irritation.

Symptoms/Injuries After Ingestion: The major health threat of ingestion occurs from the danger of aspiration(breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Chronic Symptoms: May cause damage to organs through prolonged or repeated exposure. Suspected of causing cancer.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Harmful to aquatic life. Toxic to aquatic life with long lasting effects.

Proprietary Petroleum Distillate	
LC50 Fish 1	57 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

12.2. Persistence and Degradability Not established

12.3. Bioaccumulative Potential

Asphalt (8052-42-4)	
BCF fish 1	(no bioaccumulation expected)
Log Pow	> 6

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Sewage Disposal Recommendations: Do not empty into drains. Do not dispose of waste into sewer.

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

Additional Information: Handle empty containers with care because residual vapors are flammable.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT

Marine Pollutant : Marine pollutant

14.2. In Accordance with IMDG

Marine Pollutant : Marine pollutant

14.3. In Accordance with IATA

Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

Cationic Asphalt Emulsion	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

Asphalt (8052-42-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard

Proprietary Petroleum Distillate
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2 US State Regulations

Asphalt (8052-42-4)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 12/21/2017

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

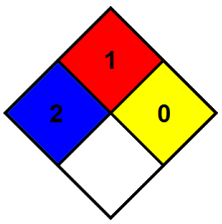
GHS Full Text Phrases:

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 2	Carcinogenicity Category 2
Flam. Liq. 3	Flammable liquids Category 3
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H226	Flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H332	Harmful if inhaled
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure
H402	Harmful to aquatic life
H411	Toxic to aquatic life with long lasting effects

NFPA Health Hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA Fire Hazard : 1 - Must be preheated before ignition can occur.

NFPA Reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

CHEVRON and TEXACO MID-GRADE UNLEADED GASOLINES

Product Use: Fuel
Product Number(s): 201001, 204041, 204044, 204063, 204096, 204278, 204312, 204313, 204753 [See Section 16 for Additional Product Numbers]
Synonyms: Calco Mid-Grade Unleaded Gasoline, Chevron Mid-Grade Unleaded Gasoline, Chevron Plus Unleaded Gasoline, Texaco Power Plus Gasoline
Company Identification
Chevron Products Company
6001 Bollinger Canyon Rd.
San Ramon, CA 94583
United States of America

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
Product Information: (800) 582-3835
SDS Requests: lubemsds@chevron.com

SPECIAL NOTES: This MSDS applies to: all motor gasoline.

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION: Flammable liquid: Category 1. Aspiration toxicant: Category 1. Carcinogen: Category 1A. Target organ toxicant (repeated exposure): Category 1. Eye irritation: Category 2A. Germ Cell Mutagen: Category 1B. Skin irritation: Category 2. Reproductive toxicant (developmental): Category 2. Target organ toxicant (central nervous system): Category 3. Acute aquatic toxicant: Category 2. Chronic aquatic toxicant: Category 2.

Signal Word: Danger

Physical Hazards: Extremely flammable liquid and vapor.

Health Hazards: May be fatal if swallowed and enters airways. May cause genetic defects. May cause cancer. Causes skin irritation. Causes serious eye irritation. Suspected of damaging the unborn child. May cause drowsiness or dizziness.

Target Organs: Causes damage to organs (Blood/Blood Forming Organs) through prolonged or repeated exposure.

Environmental Hazards: Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS:

General: Keep out of reach of children. Read label before use.

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. -- No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

Response: IF exposed or concerned: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor/physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF SWALLOWED: Immediately call a poison center or doctor/physician. Do NOT induce vomiting. In case of fire: Use media specified in the SDS to extinguish. Specific treatment (see Notes to Physician on this label). Collect spillage.

Storage: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

HAZARDS NOT OTHERWISE CLASSIFIED: Not Applicable

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Gasoline	86290-81-5	100 %vol/vol
Toluene (methylbenzene)	108-88-3	1 - 35 %vol/vol
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	1330-20-7	1 - 15 %vol/vol
Pentane, 2,2,4-trimethyl- (Isooctane)	540-84-1	1 - 13 %vol/vol
Butane	106-97-8	1 - 12 %vol/vol
Ethanol	64-17-5	0 - 10 %vol/vol
Benzene	71-43-2	0.1 - 4.9 %vol/vol
Hexane	110-54-3	1 - 5 %vol/vol
Heptane	142-82-5	1 - 4 %vol/vol
Ethyl benzene	100-41-4	0.1 - 3 %vol/vol
Cyclohexane	110-82-7	1 - 3 %vol/vol
Naphthalene	91-20-3	0.1 - 2 %vol/vol
Methylcyclohexane	108-87-2	1 - 2 %vol/vol

Motor gasoline is considered a mixture by EPA under the Toxic Substances Control Act (TSCA). The refinery streams used to blend motor gasoline are all on the TSCA Chemical Substances Inventory. The appropriate CAS number for refinery blended motor gasoline is 86290-81-5. The product specifications of motor gasoline sold in your area will depend on applicable Federal and State regulations.

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye: Flush eyes with water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get immediate medical attention.
Skin: Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.
Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.
Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue or if any other symptoms develop.

Most important symptoms and effects, both acute and delayed

IMMEDIATE HEALTH EFFECTS

Eye: Contact with the eyes causes severe irritation. Symptoms may include pain, tearing, reddening, swelling and impaired vision.

Skin: Contact with the skin causes irritation. Skin contact may cause drying or defatting of the skin. Symptoms may include pain, itching, discoloration, swelling, and blistering. Contact with the skin is not expected to cause an allergic skin response.

Ingestion: Highly toxic; may be fatal if swallowed. Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death. May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea.

Inhalation: Excessive or prolonged breathing of this material may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

DELAYED OR OTHER HEALTH EFFECTS:

Reproduction and Birth Defects: Contains material that may cause harm to the unborn child if inhaled above the recommended exposure limit.

Cancer: Prolonged or repeated exposure to this material may cause cancer. Gasoline has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Whole gasoline exhaust has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains benzene, which has been classified as a carcinogen by the National Toxicology Program (NTP) and a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Contains ethylbenzene which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Genetic Toxicity: Contains material that may cause heritable genetic damage based on animal data.

Target Organs: Contains material that may cause damage to the following organ(s) following repeated inhalation at concentrations above the recommended exposure limit:Blood/Blood Forming Organs Risk depends on duration and level of exposure. See Section 11 for additional information.

Indication of any immediate medical attention and special treatment needed

Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Dry Chemical, CO2, AFFF Foam or alcohol resistant foam.
Unusual Fire Hazards: See Section 7 for proper handling and storage.

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Precautionary Measures: This product presents an extreme fire hazard. Liquid very quickly evaporates, even at low temperatures, and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Never siphon gasoline by mouth.
Do not store in open or unlabeled containers. READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling. Keep out of the reach of children.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and

use appropriate mitigating procedures.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

General Storage Information: DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces . USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.
Skin Protection: Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted.
Suggested materials for protective gloves include: Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Nitrile Rubber, Polyurethane, Viton.
Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors.
When used as a fuel, this material can produce carbon monoxide in the exhaust. Determine if airborne concentrations are below the occupational exposure limit for carbon monoxide. If not, wear an approved positive-pressure air-supplying respirator.
Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Gasoline	ACGIH	300 ppm (weight)	500 ppm (weight)	--	A3
Toluene (methylbenzene)	ACGIH	20 ppm (weight)	--	--	--
Toluene (methylbenzene)	OSHA Z-2	200 ppm (weight)	--	300 ppm (weight)	--
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	ACGIH	100 ppm (weight)	150 ppm (weight)	--	--
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	OSHA Z-1	435 mg/m3	--	--	--
Pentane, 2,2,4-trimethyl- (Isooctane)	OSHA Z-1	2350 mg/m3	--	--	--
Pentane, 2,2,4-trimethyl- (Isooctane)	ACGIH	300 ppm (weight)	--	--	--
Butane	ACGIH	--	1000 ppm (weight)	--	--
Ethanol	ACGIH	1000 ppm (weight)	--	--	A4 A3
Ethanol	OSHA Z-1	1900 mg/m3	--	--	--
Benzene	ACGIH	.5 ppm (weight)	2.5 ppm (weight)	--	Skin A1 Skin
Benzene	OSHA SRS	1 ppm (weight)	5 ppm (weight)	--	--
Benzene	OSHA Z-2	10 ppm (weight)	--	25 ppm (weight)	--
Benzene	CVX	1 ppm (weight)	5 ppm (weight)	--	--
Hexane	ACGIH	50 ppm (weight)	--	--	Skin
Hexane	OSHA Z-1	1800 mg/m3	--	--	--
Heptane	ACGIH	400 ppm (weight)	500 ppm (weight)	--	--
Heptane	OSHA Z-1	2000 mg/m3	--	--	--
Ethyl benzene	ACGIH	20 ppm (weight)	--	--	A3
Ethyl benzene	OSHA Z-1	435 mg/m3	--	--	--
Cyclohexane	ACGIH	100 ppm (weight)	--	--	--
Cyclohexane	OSHA Z-1	1050 mg/m3	--	--	--

Naphthalene	ACGIH	10 ppm (weight)	15 ppm	--	Skin A3
Naphthalene	OSHA Z-1	50 mg/m3	--	--	--
Methylcyclohexane	ACGIH	400 ppm (weight)	--	--	--
Methylcyclohexane	OSHA Z-1	2000 mg/m3	--	--	--

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Colorless to yellow
Physical State: Liquid
Odor: Petroleum odor
Odor Threshold: No data available
pH: Not Applicable
Vapor Pressure: 5 psi - 15 psi (Typical) @ 37.8 °C (100 °F)
Vapor Density (Air = 1): 3 - 4 (Typical)
Initial Boiling Point: 27.2°C (81°F) - 204.4°C (400°F) (Typical)
Solubility: Insoluble in water; miscible with most organic solvents.
Freezing Point: Not Applicable
Melting Point: Not Applicable
Specific Gravity: 0.70 g/ml - 0.80 g/ml @ 15.6°C (60.1°F) (Typical)
Viscosity: <1 SUS @ 37.8°C (100°F)
Evaporation Rate: No data available
Decomposition temperature: No data available
Octanol/Water Partition Coefficient: 2 - 7

FLAMMABLE PROPERTIES:
Flammability (solid, gas): No Data Available

Flashpoint: (Tagliabue Closed Cup ASTM D56) < -45 °C (< -49 °F)
Autoignition: > 280 °C (> 536 °F)
Flammability (Explosive) Limits (% by volume in air): Lower: 1.4 Upper: 7.6

SECTION 10 STABILITY AND REACTIVITY

Reactivity: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: Not applicable

Hazardous Decomposition Products: None known (None expected)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects
Serious Eye Damage/Irritation: The eye irritation hazard is based on evaluation of data for product components.

Skin Corrosion/Irritation: For a 4-hour exposure, the Primary Irritation Index (PII) in rabbits is: 4.8/8.0.

Skin Sensitization: This material did not cause skin sensitization reactions in a Buehler guinea pig test.

Acute Dermal Toxicity: LD50: >3.75 g/kg (rabbit).

Acute Oral Toxicity: LD50: >5 ml/kg (rat).

Acute Inhalation Toxicity: 4 hour(s) LD50: >20000 mg/m3 (rat).
Acute Toxicity Estimate: Not Determined

Germ Cell Mutagenicity: The hazard evaluation is based on data for components or a similar material.

Carcinogenicity: The hazard evaluation is based on data for components or a similar material. Gasoline has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Whole gasoline exhaust has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains benzene, which has been classified as a carcinogen by the National Toxicology Program (NTP) and a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC).
Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Contains ethylbenzene which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Reproductive Toxicity: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Single Exposure: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Repeated Exposure: The hazard evaluation is based on data for components or a similar material.

ADDITIONAL TOXICOLOGY INFORMATION:

Gasolines are highly volatile and can produce significant concentrations of vapor at ambient temperatures. Gasoline vapor is heavier than air and at high concentrations may accumulate in confined spaces to present both safety and health hazards. When vapor exposures are low, or short duration and infrequent, such as during refueling and tanker loading/unloading, neither total hydrocarbon nor components such as benzene are likely to result in any adverse health effects. In situations such as accidents or spills where exposure to gasoline vapor is potentially high, attention should be paid to potential toxic effects of specific components. Information about specific components in gasoline can be found in Sections 2/3, 8 and 15 of this MSDS. More detailed information on the health hazards of specific gasoline components can be obtained calling the Chevron Emergency Information Center (see Section 1 for phone numbers).

Pathological misuse of solvents and gasoline, involving repeated and prolonged exposure to high concentrations of vapor is a significant exposure on which there are many reports in the medical literature. As with other solvents, persistent abuse involving repeated and prolonged exposures to high concentrations of vapor has been reported to result in central nervous system damage and eventually, death. In a study in which ten human volunteers were exposed for 30 minutes to approximately 200, 500 or 1000 ppm concentrations of gasoline vapor, irritation of the eyes was the only significant effect observed, based on both subjective and objective assessments.

Lifetime inhalation of wholly vaporized unleaded gasoline at 2056 ppm has caused increased liver tumors in female mice and kidney cancer in male rats. In their 1988 review of carcinogenic risk from gasoline, The International Agency for Research on Cancer (IARC) noted that, because published epidemiology studies did not include any exposure data, only occupations where gasoline exposure may have occurred were reviewed. These included gasoline service station attendants and automobile mechanics. IARC also noted that there was no opportunity to separate effects of combustion products from those of gasoline itself.

Although IARC allocated gasoline a final overall classification of Group 2B, i.e. possibly carcinogenic to humans, this was based on limited evidence in experimental animals plus supporting evidence including the presence in gasoline of benzene. The actual evidence for carcinogenicity in humans was considered inadequate.

MUTAGENICITY: Gasoline was not mutagenic, with or without activation, in the Ames assay (Salmonella typhimurium), Saccharamyces cerevisesae, or mouse lymphoma assays. In addition, point mutations were not induced in human lymphocytes. Gasoline was not mutagenic when tested in the mouse dominant lethal assay. Administration of gasoline to rats did not cause chomosomal aberrations in their bone marrow cells.

EPIDEMIOLOGY: To explore the health effects of workers potentially exposed to gasoline vapors in the marketing and distribution sectors of the petroleum industry, the American Petroleum Institute sponsored a cohort mortality study (Publication 4555), a nested case-control study (Publication 4551), and an exposure assessment study (Publication 4552). Histories of exposure to gasoline were reconstructed for cohort of more than 18,000 employees from four companies for the time period between 1946 and 1985. The results of the cohort mortality study indicated that there was no increased mortality from either kidney cancer or leukemia among marketing and marine distribution employees who were exposed to gasoline in the petroleum industry, when compared to the general population. More importantly, based on internal comparisons, there was no association between mortality from kidney cancer or leukemia and various indices of gasoline exposure. In particular, neither duration of employment, duration of exposure, age at first exposure, year of first exposure, job category, cumulative exposure, frequency of peak exposure, nor average intensity of exposure had any effect on kidney cancer or leukemia mortality. The results of the nested case-control study confirmed the findings of the original cohort study. That is, exposure to gasoline

at the levels experienced by this cohort of distribution workers is not a significant risk factor for leukemia (all cell types), acute myeloid leukemia, kidney cancer or multiple myeloma.

This product contains ethylbenzene.
BIRTH DEFECTS AND REPRODUCTION: Ethylbenzene is not expected to cause birth defects or other developmental effects based on well-conducted studies in rabbits and rats sponsored by NIOSH. Other studies in rats and mice which reported urinary tract malformations have many deficiencies and have limited usefulness in evaluating human risk. Reproductive effects are not expected based on a NIOSH study of fertility, and lack of effects observed for sperm counts and motility, estrous cycle and pathology of reproductive organs following repeated exposures. HEARING: Statistically significant losses in outer hair cells (OHCs) were observed in rats exposed to >=200 ppm ethylbenzene, 6 hours/day, 6 days/week for 13 weeks, after an 8-week recovery period. Following longer exposure, inner hair cells losses were also observed in rats exposed to >= 600 ppm ethylbenzene, but only occasionally in rats exposed to 400 ppm. The Lowest Observed Adverse Effect Level in rats (LOAEL) was 200 ppm for losses of OHCs. Guinea pigs exposed to ethylbenzene at 2,500 ppm, 6 hours/day for 5 days did not show auditory deficits or losses in OHCs. The concentration of ethylbenzene used in the JP-8 study was approximately 10 ppm. GENETIC TOXICITY: Ethylbenzene tested negative in the bacterial mutation test, Chinese Hamster Ovary (CHO) cell in vitro assay, sister chromatid exchange assay and an unscheduled DNA synthesis assay. Conflicting results have been reported for the mouse lymphoma cell assay. Increased micronuclei were reported in an in vitro Syrian hamster embryo cell assay; however, two in vivo micronuclei studies in mice were negative. In Syrian hamster embryo cells in vitro, cell transformation was observed at 7 days of incubation but not at 24 hours. Based on these results, ethylbenzene is not expected to be mutagenic or clastogenic. CARCINOGENICITY: In studies conducted by the National Toxicology Program, rats and mice were exposed to ethylbenzene at 25, 250 and 750 ppm for six hours per day, five days per week for 103 weeks. In rats exposed to 750 ppm, the incidence of kidney tubule hyperplasia and tumors was increased. Testicular tumors develop spontaneously in nearly all rats if allowed to complete their natural life span; in this study, the development of these tumors appeared to be enhanced in male rats exposed to 750 ppm. In mice, the incidences of lung tumors in males and liver tumors in females exposed to 750 ppm were increased as compared to control mice but were within the range of incidences observed historically in control mice. Other liver effects were observed in male mice exposed to 250 and 750 ppm. The incidences of hyperplasia were increased in the pituitary gland in female mice at 250 and 750 ppm and in the thyroid in male and female mice at 750 ppm.

This product contains toluene.
GENERAL TOXICITY: The primary effects of exposure to toluene in animals and humans are on the central nervous system. Solvent abusers, who typically inhale high concentrations (thousands of ppm) for brief periods of time, in addition to experiencing respiratory tract irritation, often suffer permanent central nervous system effects that include tremors, staggered gait, impaired speech, hearing and vision loss, and changes in brain tissue. Death in some solvent abusers has been attributed to cardiac arrhythmias, which appear to be have been triggered by epinephrine acting on solvent sensitized cardiac tissue. Although liver and kidney effects have been seen in some solvent abusers, results of animal testing with toluene do not support these as primary target organs.
HEARING: Humans who were occupationally exposed to concentrations of toluene as low as 100 ppm for long periods of time have experienced hearing deficits. Hearing loss, as demonstrated using behavioral

and electrophysiological testing as well as by observation of structural damage to cochlear hair cells, occurred in experimental animals exposed to toluene. It also appears that toluene exposure and noise may interact to produce hearing deficits.
COLOR VISION: In a single study of workers exposed to toluene at levels under 50 ppm, small decreases in the ability to discriminate colors in the blue-yellow range have been reported for female workers. This effect, which should be investigated further, is very subtle and would not likely have been noticed by the people tested.
REPRODUCTIVE/DEVELOPMENTAL TOXICITY: Toluene may also cause mental and/or growth retardation in the children of female solvent abusers who directly inhale toluene (usually at thousands of ppm) when they are pregnant. Toluene caused growth retardation in rats and rabbits when administered at doses that were toxic to the mothers. In rats, concentrations of up to 5000 ppm did not cause birth defects. No effects were observed in the offspring at doses that did not intoxicate the pregnant animals. The exposure level at which no effects were seen (No Observed Effect Level, NOEL) is 750 ppm in the rat and 500 ppm in the rabbit.

This product contains xylene.
ACUTE TOXICITY: The primary effects of exposure to xylene in animals and humans are on the central nervous system. In addition,in some individuals, xylene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation. DEVELOPMENTAL TOXICITY: Xylene has been reported to cause developmental toxicity in rats and mice exposed by inhalation during pregnancy. The effects noted consisted of delayed development and minor skeletal variations. In addition, when pregnant mice were exposed by ingestion to a level that killed nearly one-third of the test group, lethality (resorptions) and malformations (primarily cleft palate) occurred. Since xylene can cross the placenta, it may be appropriate to prevent exposure during pregnancy. GENETIC TOXICITY/CARCINOGENICITY: Xylene was not genotoxic in several mutagenicity testing assays including the Ames test. In a cancer study sponsored by the National Toxicology Program (NTP),technical grade xylene gave no evidence of carcinogenicity in rats or mice dosed daily for two years. HEARING: Mixed xylenes have been shown to cause measurable hearing loss in rats exposed to 800 ppm in the air for 14 hours per day for six weeks. Exposure to 1450 ppm xylene for 8 hours caused hearing loss while exposure to 1700 ppm for 4 hours did not. Although no information is available for lower concentrations, other chemicals that cause hearing loss in rats at relatively high concentrations do not cause hearing loss in rats at low concentrations. Worker exposure to xylenes at the permissible exposure limit (100 ppm, time-weighted average) is not expected to cause hearing loss.

This product contains naphthalene.
GENERAL TOXICITY: Exposure to naphthalene has been reported to cause methemoglobinemia and/or hemolytic anemia, especially in humans deficient in the enzyme glucose-6-phosphate dehydrogenase. Laboratory animals given repeated oral doses of naphthalene have developed cataracts.
REPRODUCTIVE TOXICITY AND BIRTH DEFECTS: Naphthalene did not cause birth defects when administered orally to rabbits, rats, and mice during pregnancy, but slightly reduced litter size in mice at dose levels that were lethal to the pregnant females. Naphthalene has been reported to cross the human placenta. GENETIC TOXICITY: Naphthalene caused chromosome aberrations and sister chromatid exchanges in Chinese hamster ovary cells, but was not a mutagen in several other in-vitro tests.CARCINOGENICITY: In a study conducted by the National Toxicology Program (NTP), mice exposed

to 10 or 30 ppm of naphthalene by inhalation daily for two years had chronic inflammation of the nose and lungs and increased incidences of metaplasia in those tissues. The incidence of benign lung tumors (alveolar/bronchiolar adenomas) was significantly increased in the high-dose female group but not in the male groups. In another two-year inhalation study conducted by NTP, exposure of rats to 10, 30, and 60 ppm naphthalene caused increases in the incidences of a variety of nonneoplastic lesions in the nose. Increases in nasal tumors were seen in both sexes, including olfactory neuroblastomas in females at 60 ppm and adenomas of the respiratory epithelium in males at all exposure levels. The relevance of these effects to humans has not been established. No carcinogenic effect was reported in a 2-year feeding study in rats receiving naphthalene at 41 mg/kg/day.

This product contains cyclohexane.
Cyclohexane primarily affects the central nervous systems of laboratory animals and humans. Acute or prolonged inhalation of cyclohexane at levels below the recommended exposure limits does not result in toxic effects while acute exposures to levels above these recommended limits can cause reversible central nervous system depression. Prolonged exposures of laboratory animals to high levels (up to low thousands of parts per million) have also caused reversible effects which included hyperactivity, diminished response to stimuli, and adaptive liver changes while very high levels (high thousands of parts per million) were fatal. No developmental effects were seen in rats or rabbits following exposures of up to 7000 ppm cyclohexane. No reproductive effects occurred in rats, although postnatal pup growth was reduced at 7000 ppm in a similar manner as observed in the parental animals. Cyclohexane has not been shown to be mutagenic in several in vitro and in vivo assays and has not produced tumors in several dermal application long-term bioassays. Based on these results and the lack of any mutagenic or genotoxic metabolites, cyclohexane is not expected to be mutagenic or genotoxic. Following dermal exposure, cyclohexane is rapidly absorbed, metabolized,and excreted.

This product contains ethanol (ethyl alcohol).
Chronic ingestion of ethanol can damage the liver, nervous system and heart. Chronic heavy consumption of alcoholic beverages has been associated with an increased risk of cancer. Ingestion of ethanol during pregnancy can cause human birth defects such as fetal alcohol syndrome. This product contains butane. An atmospheric concentration of 100,000 ppm (10%) butane is not noticeably irritating to the eyes, nose or respiratory tract, but will produce slight dizziness in a few minutes of exposure. No chronic systemic effect has been reported from occupational exposure.

This product contains benzene.
GENETIC TOXICITY/CANCER: Repeated or prolonged breathing of benzene vapor has been associated with the development of chromosomal damage in experimental animals and various blood diseases in humans ranging from aplastic anemia to leukemia (a form of cancer). All of these diseases can be fatal. In some individuals, benzene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation.
REPRODUCTIVE/DEVELOPMENTAL TOXICITY: No birth defects have been shown to occur in pregnant laboratory animals exposed to doses not toxic to the mother. However, some evidence of fetal toxicity such as delayed physical development has been seen at such levels. The available information on the effects of benzene on human pregnancies is inadequate but it has been established that benzene can cross the human placenta.

OCCUPATIONAL: The OSHA Benzene Standard (29 CFR 1910.1028) contains detailed requirements for training, exposure monitoring, respiratory protection and medical surveillance triggered by the exposure level. Refer to the OSHA Standard before using this product.

This product contains n-hexane.
TARGET ORGAN TOXICITY: Prolonged or repeated ingestion, skin contact or breathing of vapors of n-hexane has been shown to cause peripheral neuropathy. Recovery ranges from no recovery to complete recovery depending upon the severity of the nerve damage. Exposure to 1000 ppm n-hexane for 18 hr/day for 61 days has been shown to cause testicular damage in rats. However, when rats were exposed to higher concentrations for shorter daily periods (10,000 ppm for 6 h/day, 5 days/wk for 13 weeks), no testicular lesions were seen.
CARCINOGENICITY: Chronic exposure to commercial hexane (52% n-hexane) at a concentration of 9000ppm was not carcinogenic to rats or to male mice, but did result in an increased incidence of liver tumors in female mice. No carcinogenic effects were observed in female mice exposed to 900 or 3000 ppm hexane or in male mice. The relevance for humans of these hexane-induced mouse liver tumors is questionable.
GENETIC TOXICITY: n-Hexane caused chromosome aberrations in bone marrow of rats, but was negative in the AMES and mouse lymphoma tests.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
This material is expected to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

48 hour(s) LC50: 3.0 mg/l (Daphnia magna)
96 hour(s) LC50: 1.8 mg/l (Mysidopsis bahia)
96 hour(s) LC50: 8.3 mg/l (Cyprinodon variegatus)
96 hour(s) LC50: 2.7 mg/l (Oncorhynchus mykiss)

MOBILITY
No data available.

PERSISTENCE AND DEGRADABILITY
This material is expected to be readily biodegradable. Following spillage, the more volatile components of gasoline will be rapidly lost, with concurrent dissolution of these and other constituents into the water. Factors such as local environmental conditions (temperature, wind, mixing or wave action, soil type, etc), photo-oxidation, biodegradation and adsorption onto suspended sediments, can contribute to the weathering of spilled gasoline.

The aqueous solubility of non-oxygenated unleaded gasoline, based on analysis of benzene, toluene, ethylbenzene+xylenes and naphthalene, is reported to be 112 mg/l. Solubility data on individual gasoline

constituents also available.

POTENTIAL TO BIOACCUMULATE
Bioconcentration Factor: No data available.
Octanol/Water Partition Coefficient: 2 - 7

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by international, country, or local laws and regulations. Check governmental regulations and local authorities for approved disposal of this material.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: UN1203, GASOLINE, 3, II; OPTIONAL DISCLOSURE: UN1203, GASOLINE, 3, II, MARINE POLLUTANT (GASOLINE)

IMO/IMDG Shipping Description: UN1203, GASOLINE, 3, II, FLASH POINT SEE SECTION 5 OR 9, MARINE POLLUTANT (GASOLINE)

ICAO/IATA Shipping Description: UN1203, GASOLINE, 3, II

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:

1.	Immediate (Acute) Health Effects:	YES
2.	Delayed (Chronic) Health Effects:	YES
3.	Fire Hazard:	YES
4.	Sudden Release of Pressure Hazard:	NO
5.	Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Cyclohexane	05, 06, 07
Heptane	05, 06, 07
Methylcyclohexane	05, 06, 07
Pentane, 2,2,4-trimethyl- (Isooctane)	05, 06, 07
Naphthalene	01-2B, 02, 04, 05, 06, 07
Butane	05, 06, 07
Ethanol	01-1, 02, 04, 05, 06, 07
Gasoline	01-2B, 07
Ethyl benzene	01-2B, 03, 04, 05, 06, 07
Toluene (methylbenzene)	04, 05, 06, 07
Benzene	01-1, 02, 03, 04, 05, 06, 07
Hexane	05, 06, 07
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	03, 05, 06, 07

CERCLA REPORTABLE QUANTITIES(RQ)/EPCRA 302 THRESHOLD PLANNING QUANTITIES(TPQ):

Component	Component RQ	Component TPQ	Product RQ
Benzene	10 lbs	None	186 lbs
Cyclohexane	1000 lbs	None	34188 lbs
Ethyl benzene	1000 lbs	None	34964 lbs
Hexane	5000 lbs	None	129149 lbs
Naphthalene	100 lbs	None	4000 lbs
Pentane, 2,2,4-trimethyl- (Isooctane)	1000 lbs	None	6270 lbs
Toluene (methylbenzene)	1000 lbs	None	2627 lbs
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	100 lbs	None	649 lbs

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 1 Flammability: 3 Reactivity: 0

HMIS RATINGS: Health: 2* Flammability: 3 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

Additional Product Number(s): 201003, 201004, 201006, 201007, 201008, 201010, 201011, 201018, 201021, 201025, 201031, 201032, 201033, 201034, 201036, 201037, 201038, 201041, 201043, 201046, 201048, 201064, 201208, 201210, 201211, 201212, 201230, 201231, 201232, 201260, 201261, 201262, 201271, 201272, 201273, 201280, 201281, 201282, 201288, 201290, 201291, 201292, 201851, 201852, 201858, 201859, 201860, 204004, 204005, 204012, 204013, 204024, 204025, 204048, 204049, 204072, 204073, 204090, 204091, 204106, 204107, 204118, 204119, 204142, 204143, 204166, 204167, 204190, 204191, 204202, 204203, 204209, 204214, 204215, 204226, 204227, 204250, 204251, 204274, 204275, 204292, 204293, 204325, 204326, 204360, 204361, 204366, 204367, 204372, 204373, 204378, 204379, 204384, 204385, 204390, 204391, 204396, 204397, 204402, 204403, 204408, 204409, 204414, 204415, 204420, 204421, 204426, 204427, 204432, 204433, 204438, 204439, 204468, 204469, 204486, 204487, 204504, 204505, 204522, 204523, 204540, 204541, 204558, 204559, 204576, 204577, 204594, 204595, 204612, 204613, 204630, 204631, 204648, 204649, 204666, 204667, 204692, 204693, 204698, 204699, 204704, 204705, 204710, 204711, 204723, 204724, 204729, 204730

REVISION STATEMENT:
SECTION 01 - Product Code(s) information was modified.
SECTION 05 - Extinguishing Media information was modified.
SECTION 08 - Occupational Exposure Limit Table information was modified.
SECTION 16 - HMIS Rating information was modified.
SECTION 16 - NFPA Rating information was modified.

Revision Date: October 04, 2016

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)

IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the 29 CFR 1910.1200 (2012) by Chevron Energy Technology Company, 6001 Bollinger Canyon Road, San Ramon, CA 94583.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

SAFETY DATA SHEET

Issuing Date January 5, 2015 **Revision Date** New **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Clorox Commercial Solutions® Pine-Sol® All Purpose Cleaner - Lemon Fresh**

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use General purpose dilutable cleaner

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address
The Clorox Company of Canada Ltd.
150 Biscayne Crescent
Brampton, Ontario L6W 4V3

Phone: 1-905-595-8200

Emergency telephone number

Emergency Phone Numbers For Medical Emergencies call: 1-800-446-1014
For Transportation Emergencies, call Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous under GHS.

Serious eye damage/eye irritation	Category 2B

GHS Label elements, including precautionary statements

Emergency Overview

Signal word **Warning**

Hazard statements
Causes eye irritation

No pictogram required.

Appearance Clear, yellow **Physical State** Slightly viscous liquid **Odour** Lemon, grapefruit, floral

Precautionary Statements - Prevention
Wash hands and any exposed skin thoroughly after handling

Precautionary Statements - Response
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Precautionary Statements - Storage
None

Precautionary Statements - Disposal
None

Hazards not otherwise classified (HNOC)
Not applicable

Unknown Toxicity
3.86% of the mixture consists of ingredient(s) of unknown toxicity

Other information
No information available.

Interactions with Other Chemicals
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade Secret
Alcohols, C10-14, ethoxylated	66455-15-0	1 - 5	*

* The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures

General Advice Show this safety data sheet to the doctor in attendance.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Get medical attention immediately if irritation persists.

Skin Contact Rinse skin with plenty of water. If irritation persists, call a doctor.

Inhalation Move to fresh air. If breathing is affected, call a doctor.

Ingestion Drink a glassful of water. Call a poison control center or doctor immediately. DO NOT induce vomiting unless told to do so by a poison control center or doctor.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects Stinging and irritation of eyes.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
No information available

Explosion Data

Sensitivity to Mechanical Impact None

Sensitivity to Static Discharge None

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental Precautions See Section 12 for additional ecological Information

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin, and clothing. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Products None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Alcohols, C10-14, ethoxylated 66455-15-0	None	None	None

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection	If splashes are likely to occur, wear safety glasses with side-shields. None required for consumer use.
Skin and Body Protection	No special protective equipment required.
Respiratory Protection	If irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene Measures	Remove and wash contaminated clothing before re-use. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Slightly viscous liquid		
Appearance	Clear	**Odour**	Lemon, grapefruit, floral
Colour	Yellow	**Odour Threshold**	No information available

Property	**Values**	**Remarks/ Method**
pH	10 - 11	None known
Melting/freezing point	No data available	None known
Boiling Point/Range	No data available	None known
Flash Point	No data available	None known
Evapouration rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
Upper flammability limit	No data available	None known
Lower flammability limit	No data available	None known
Vapour pressure	No data available	None known
Vapour density	No data available	None known
Specific Gravity	~1.0	None known
Water Solubility	Soluble in water.	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	~15 cP	None known
Explosive Properties	Not explosive	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	No data available

10. STABILITY AND REACTIVITY

Reactivity
No data available.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
None known.

Incompatible materials
None known.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Exposure to vapour or mist may irritate respiratory tract.
Eye Contact	May cause eye irritation.
Skin Contact	Prolonged contact may cause irritation.
Ingestion	Ingestion may cause irritation to mucous membranes and gastrointestinal irritation, nausea, vomiting, and diarrhea.

Information on toxicological effects

Symptoms May cause redness and tearing of the eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available.
Mutagenic Effects	No information available.
Carcinogenicity	Contains no ingredient listed as a carcinogen.
Reproductive Toxicity	No information available
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Chronic Toxicity	Carcinogenic potential is unknown.
Target Organ Effects	Eyes.
Aspiration Hazard	No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document Not applicable.

12. ECOLOGICAL INFORMATION

Ecotoxicity
No information available.

Persistence and Degradability
No information available.

Bioaccumulation
No information available.

Other Adverse Effects
No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods
Dispose of in accordance with all applicable federal, provincial, and local regulations.

Contaminated Packaging
Do not reuse empty containers. Dispose of in accordance with all applicable federal, provincial, and local regulations.

14. TRANSPORT INFORMATION

DOT	Not regulated
TDG	Not regulated
ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated

15. REGULATORY INFORMATION

Chemical Inventories

TSCA	All components of this product are either on the TSCA 8(b) Inventory or otherwise exempt from listing.
DSL/NDSL	All components are on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

Canada Regulations

Canada
WHMIS Hazard Class
D2B Toxic Materials

16. OTHER INFORMATION

NFPA	**Health Hazard**	1	**Flammability**	0	**Instability**	0	**Physical and Chemical Hazards** -
HMIS	**Health Hazard**	1	**Flammability**	0	**Physical Hazard**	0	**Personal Protection** A

Prepared By

Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Preparation/Revision Date January 5, 2015

Revision Note New

Reference 1056182-K/138376.001

General Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet

FICHE DE DONNÉES DE SÉCURITÉ

Date d'émission 5 janvier 2015 **Date de révision** Nouvelle **Numéro de révision** 0

1. IDENTIFICATION DE LA SUBSTANCE/DE LA PRÉPARATION ET DE LA SOCIÉTÉ/L'ENTREPRISE

Identificateur de produit

Nom du produit **Nettoyant multi-surface Pine-Sol® de Clorox Commercial Solutions® - Citron frais**

Autres moyens d'identification

Synonymes Aucun

Usage recommandé et restrictions d'utilisation du produit chimique

Usage recommandé Nettoyant diluable à usage général

Utilisations déconseillées Aucune information disponible

Données relatives au fournisseur de la fiche de données de sécurité

Adresse du fournisseur
The Clorox Company of Canada Ltd.
150 Biscayne Crescent
Brampton, Ontario L6W 4V3

Téléphone : 1 905 595-8200

Numéro de téléphone d'urgence

Numéros de téléphone d'urgence En cas d'urgence médicale, appeler le : 1 800 446-1014
Pour des urgences en matière de transport, appeler Chemtrec : 1 800 424-9300

2. IDENTIFICATION DES DANGERS

Classification

Ce produit chimique est considéré comme dangereux selon le SGH.

Lésions oculaires graves/irritation oculaire	Catégorie 2B

Éléments d'étiquetage SGH, y compris les conseils de prudence

Vue d'ensemble des procédures d'urgence

Mot indicateur **Avertissement**

Mentions de danger
Provoque une irritation oculaire

Aucun pictogramme requis.

Apparence Transparent, jaune **État physique** Liquide légèrement visqueux **Odeur** Citron, pamplemousse, florale

Conseils de prudence - Prévention
Se laver les mains et toute peau exposée à fond après manutention

Conseils de prudence - Réaction
En contact avec les yeux : Rincer prudemment avec de l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent facilement être enlevées. Continuer à rincer.
Si l'irritation oculaire persiste : Consulter un médecin

Conseils de prudence - Stockage
Aucun

Conseils de prudence - Élimination
Aucun

Dangers non classés ailleurs (DNCA)
Sans objet

Toxicité inconnue
3,86 % du mélange est constitué de composants d'une toxicité inconnue

Autres informations
Aucune information disponible.

Interactions avec d'autres produits chimiques
Aucune information disponible.

3. COMPOSITION / INFORMATION SUR LES COMPOSANTS

Nom chimique	N° CAS	% en poids	Secret commercial
Alcools, C_{10} à C_{14}, éthoxylés	66455-15-0	1 - 5	*

* Le pourcentage (concentration) exact de composition est retenu comme un secret commercial

4. PREMIERS SOINS

Premiers soins

Conseils généraux Présenter cette fiche signalétique au médecin traitant.

Contact avec les yeux Rincer immédiatement avec une grande quantité d'eau, également sous les paupières, pendant au moins quinze minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent facilement être enlevées. Continuer à rincer. Garder les yeux grands ouverts lors du rinçage. Obtenir immédiatement des soins médicaux si l'irritation persiste.

Contact avec la peau Rincer la peau avec beaucoup d'eau. Si l'irritation persiste, appeler un médecin.

Inhalation Déplacer à l'air frais. Si la respiration est touchée, appeler un médecin.

Ingestion Boire un verre d'eau. Appeler immédiatement un centre antipoison ou un médecin. NE PAS provoquer de vomissements à moins d'en avoir reçu la directive d'un centre antipoison ou d'un médecin.

Symptômes/effets les plus importants, aigus et retardés

Symptômes/effets les plus importants Picotement et irritation des yeux.

Indications quant à la nécessité éventuelle d'une prise en charge médicale immédiate ou d'un traitement spécial

Notes au médecin Traiter en fonction des symptômes.

5. MESURES À PRENDRE EN CAS D'INCENDIE

Agents extincteurs appropriés
Utiliser des mesures d'extinction appropriées aux circonstances locales et à l'environnement immédiat.

Agents extincteurs inappropriés
ATTENTION : L'utilisation d'une pulvérisation d'eau pour combattre un incendie peut ne pas être efficace.

Dangers spécifiques du produit
Aucune information disponible

Données sur les risques d'explosion

Sensibilité à un choc mécanique Aucun

Sensibilité à une décharge statique Aucun

Équipement de protection et précautions pour les pompiers
Comme avec tout incendie, porter un appareil respiratoire autonome à demande de pression, MSHA/NIOSH (homologué ou équivalent) et une tenue de protection complète.

6. MESURES À PRENDRE EN CAS DE DÉVERSEMENTS ACCIDENTELS

Précautions individuelles, équipements de protection et mesures d'urgence

Précautions individuelles Éviter le contact avec les yeux.

Autres informations Consulter les mesures de protection données aux sections 7 et 8.

Précautions relatives à l'environnement

Précautions relatives à l'environnement Consulter la section 12 pour des données écologiques supplémentaires

Méthodes et matériaux pour l'isolation et le nettoyage

Méthodes d'isolation Empêcher d'autres fuites ou déversements lorsqu'il est possible de le faire en toute sécurité.

Méthodes de nettoyage Absorber et conteneuriser. Laver les résidus et les envoyer à un égout sanitaire. Contacter une installation de traitement sanitaire à l'avance pour s'assurer de sa capacité à traiter le matériel emporté.

7. MANUTENTION ET STOCKAGE

Précautions relatives à la sécurité de manutention

Manutention Manipuler conformément aux bonnes pratiques de sécurité et d'hygiène industrielle. Éviter tout contact avec les yeux, la peau et les vêtements. Ne pas manger, boire ou fumer en manipulant le produit.

Conditions de sécurité de stockage, y compris les incompatibilités

Stockage Conserver les récipients bien fermés dans un endroit sec, frais et bien ventilé.

Produits incompatibles Aucun connu.

8. CONTRÔLE DE L'EXPOSITION/PROTECTION INDIVIDUELLE

Paramètres de contrôle

Directives relatives à l'exposition

Nom chimique	ACGIH TLV	OSHA PEL	NIOSH IDLH
Alcools, C_{10} à C_{14}, éthoxylés 66455-15-0	Aucun	Aucun	Aucun

ACGIH TLV : Conférence américaine des hygiénistes industriels gouvernementaux - valeur limite d'exposition. OSHA PEL : Administration de la sécurité et de la santé professionnelle - limites d'exposition admissibles. NIOSH IDLH : Dangereux immédiatement pour la santé ou la vie.

Contrôles d'ingénierie appropriés

Mesures techniques Douches
Douches oculaires
Systèmes de ventilation

Mesures de protection individuelle telles que les équipements de protection individuelle

Protection des yeux/du visage	En cas de risques d'éclaboussures, porter des lunettes de sécurité avec écrans latéraux. Aucune nécessaire pour une utilisation par le consommateur.
Protection de la peau et du corps	Aucun équipement de protection particulier requis.
Protection respiratoire	En cas d'irritation, il faut porter une protection respiratoire approuvée NIOSH/MSHA. Des respirateurs à adduction d'air à pression positive peuvent être requis pour des concentrations élevées de contaminants atmosphériques. Une protection respiratoire doit être fournie conformément à la réglementation locale en vigueur.
Mesures d'hygiène	Retirer et laver les vêtements contaminés avant de les réutiliser. Éviter le contact avec la peau, les yeux ou les vêtements. Ne pas manger, boire ou fumer en manipulant le produit.

9. PROPRIÉTÉS PHYSIQUES ET CHIMIQUES

Propriétés physiques et chimiques

État physique	Liquide légèrement visqueux		
Apparence	Transparent	**Odeur**	Citron, pamplemousse, florale
Couleur	Jaune	**Seuil olfactif**	Aucune information disponible

Propriété	**Valeurs**	**Remarques/ Méthode**
pH	10 - 11	Aucune connue
Point de fusion/point de congélation	Aucune donnée disponible	Aucune connue
Point d'ébullition/domaine d'ébullition	Aucune donnée disponible	Aucune connue
Point d'éclair	Aucune donnée disponible	Aucune connue
Taux d'évaporation	Aucune donnée disponible	Aucune connue
Inflammabilité (solide, gaz)	Aucune donnée disponible	Aucune connue
Limites d'inflammabilité dans l'air		
Limite supérieure d'inflammabilité	Aucune donnée disponible	Aucune connue
Limite inférieure d'inflammabilité	Aucune donnée disponible	Aucune connue
Pression de vapeur	Aucune donnée disponible	Aucune connue
Densité de vapeur	Aucune donnée disponible	Aucune connue
Densité	~ 1,0	Aucune connue
Solubilité dans l'eau	Soluble dans l'eau.	Aucune connue
Solubilité dans d'autres solvants	Aucune donnée disponible	Aucune connue
Coefficient de partage : n-octanol/eau	Aucune donnée disponible	Aucune connue
Température d'auto-inflammation	Aucune donnée disponible	Aucune connue
Température de décomposition	Aucune donnée disponible	Aucune connue
Viscosité cinématique	Aucune donnée disponible	Aucune connue
Viscosité dynamique	~ 15 cP	Aucune connue
Propriétés explosives	Non explosif	
Propriétés comburantes	Aucune donnée disponible	

Autres informations

Point de ramollissement	Aucune donnée disponible
Teneur en COV (%)	Aucune donnée disponible
Dimension des particules	Aucune donnée disponible
Distribution granulométrique	Aucune donnée disponible

10. STABILITÉ ET RÉACTIVITÉ

Réactivité
Aucune donnée disponible.

Stabilité chimique
Stable dans les conditions de stockage recommandées.

Risque de réactions dangereuses
Aucun dans des conditions normales de traitement.

Conditions à éviter
Aucune connue.

Matériaux incompatibles
Aucun connu.

Produits de décomposition dangereux
Aucun connu selon les renseignements fournis.

11. DONNÉES TOXICOLOGIQUES

Les voies d'exposition probables

Renseignements sur le produit

Inhalation	Une exposition aux vapeurs ou à la bruine peut irriter les voies respiratoires.
Contact avec les yeux	Peut causer une irritation des yeux.
Contact avec la peau	Un contact prolongé peut provoquer une irritation.
Ingestion	Une ingestion peut provoquer une irritation des muqueuses et du tractus gastro-intestinal, des nausées, des vomissements et une diarrhée.

Informations sur les effets toxicologiques

Symptômes	Peut causer une rougeur et un larmoiement des yeux.

Les effets retardés et immédiats ainsi que les effets chroniques dus à une exposition à court et long terme

Sensibilisation	Aucune information disponible.
Effets mutagènes	Aucune information disponible.
Cancérogénicité	Ne contient aucun ingrédient inscrit comme un cancérogène.
Toxicité pour la reproduction	Aucune information disponible
Toxicité pour certains organes cibles - exposition unique	Aucune information disponible.
Toxicité pour certains organes cibles - exposition répétée	Aucune information disponible.
Toxicité chronique	Le potentiel cancérogène est inconnu.
Effets sur les organes cibles	Yeux.
Danger par aspiration	Aucune information disponible.

Valeurs numériques de la toxicité Renseignements sur le produit

Les valeurs suivantes sont calculées selon le chapitre 3.1 du document SGH Sans objet.

12. DONNÉES ÉCOLOGIQUES

Écotoxicité
Aucune information disponible.

Persistance et dégradation
Aucune information disponible.

Bioaccumulation
Aucune information disponible.

Autres effets nocifs
Aucune information disponible.

13. DONNÉES SUR L'ÉLIMINATION DU PRODUIT

Méthodes d'élimination
Éliminer conformément à tous les règlements fédéraux, provinciaux et locaux.

Récipients contaminés
Ne pas réutiliser les récipients vides. Éliminer conformément à tous les règlements fédéraux, provinciaux et locaux.

14. INFORMATIONS RELATIVES AU TRANSPORT

DOT	Non réglementé
TMD	Non réglementé
OACI	Non réglementé
IATA	Non réglementé
IMDG/OMI	Non réglementé

15. INFORMATIONS SUR LA RÉGLEMENTATION

Inventaire de produits chimiques

TSCA	Tous les composants de ce produit sont soit inscrits sur l'inventaire TSCA 8(b) ou sont autrement exempts d'inscription.
LIS/LES	Tous les composants sont inscrits dans la LIS ou la LES.

TSCA - États-Unis - Section 8 (b) de l'inventaire TSCA (loi réglementant les substances toxiques)
LIS/LES – Liste intérieure des substances/liste extérieure des substances pour le Canada

Réglementation canadienne

Canada
Classe de dangers du SIMDUT
D2B Matières toxiques

16. AUTRES INFORMATIONS

NFPA	**Risque pour la santé** 1	**Inflammabilité** 0	**Instabilité** 0	**Dangers physiques et chimiques** -
HMIS	**Risque pour la santé** 1	**Inflammabilité** 0	**Danger physique** 0	**Protection individuelle** A

Préparée par
Product Stewardship
23 British American Blvd.
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Date de préparation/révision 5 janvier 2015

Note de révision Nouvelle

Référence 1056182-K/138376.001

Avis de non-responsabilité général
À notre connaissance et selon nos renseignements et notre opinion à la date de publication de cette fiche signalétique, les renseignements fournis dans cette dernière sont exacts. Les renseignements donnés sont conçus uniquement comme un guide pour la manipulation, l'utilisation, le traitement, l'entreposage, le transport, l'élimination et le rejet sécuritaires du produit et ne doivent pas être considérés comme une garantie ou une norme de qualité. Les renseignements sont liés uniquement au produit particulier indiqué et peuvent ne pas être valides pour un tel produit utilisé en association avec toute autre substance ou dans tout autre procédé, sauf si indiqué dans le texte.

Fin de la fiche signalétique

Safety Data Sheet

Material Name: Cold Mix Asphalt

Section 1 – Product and Company Identification

Manufacturer Information

Peckham Industries Inc.
20 Haarlem Ave.
White Plains, NY 10603
Phone: 914-949-2000
www.peckham.com

Section 2 – Hazardous Identification

GHS Classification:

Acute Toxicity Oral – Category 3
Skin Corrosion/Irritation – Category 1B
Eye Damage/Irritation – Category 1
Skin Sensitization – Category 1
Carcinogenicity – Category 1A
Toxic to Reproduction – Category 2
Specific Target Organ Toxicity Single Exposure – Category 2
Specific Target Organ Toxicity Repeated Exposure – Category 2
Hazardous to the Aquatic Environment Acute – Category 3
Hazardous to the Aquatic Environment Chronic – Category 2

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

Danger

Hazard Statements

Toxic if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May cause cancer.
Suspected of damaging fertility or the unborn child.
May cause damage to organs (lung, liver, kidney, nervous system, skin, spleen, thymus, blood, lymph nodes, testes, bone marrow) through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention

Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Do not breathe dusts/fume/gas/mist/vapors/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
Contaminated work clothing must not be allowed out of the workplace.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid release to the environment.

Response

If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center/doctor.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.

Storage

Store in an appropriate container or containment structure.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 – Composition / Information on Ingredients

CAS	Component	Percent
Not Available	Aggregate (crushed stone, sand and gravel)	90-95
Not Available	Petroleum Asphalt Oil	5-10
14808-60-7	Quartz	>1

Component Information/Information on Non-Hazardous Components

General Product Information

Trace Elements: Cold Mix Asphalt is made from materials mined from the earth and is processed using energy provided by fuels. Trace amounts of naturally occurring, potentially harmful chemical might be detected during chemical analysis.

Section 4 – First Aid Measures

First Aid: Eyes

Flush eye(s) with plenty of water for 15 minutes, while holding eyelids open. Beyond flushing, do not attempt to remove material from eyes except under medical supervision. Contact physician.

First Aid: Skin

Hot Material: Remove contaminated clothing and immediately flush in cool water for at least 15 minutes. Apply iced water or cold packs to burned area if burned area is less than 10% of the body surface. Do not attempt to remove material from the burn. Get prompt medical attention. Cold Material: Clean exposed skin with oil dissolving skin cleaner. Do not use solvents or thinners to remove material from the skin.

First Aid: Ingestion

Do not induce vomiting. If conscious, give large amounts of water. Contact a physician immediately.

First Aid: Inhalation

Remove to fresh air if breathing is difficult. Get prompt medical attention if breathing remains difficult or if irritation persists.

Section 5 – Fire Fighting Measures

General Fire Hazards

See Section 9 for Flammability Properties
None.

Hazardous Combustion Products

Hydrocarbons.

Extinguishing Media

Agents approved for Class B hazards.

Unsuitable Extinguishing Media

None.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear.

Section 6 – Accidental Release Measures

Recovery and Neutralization

Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.

Materials and Methods for Clean-Up

Personnel involved in cleanup processes should implement controls as identified in Section 8 as appropriate. Keep all ignition sources at least 50 feet away. Avoid personal contact with heated material. Collect cold material and dispose waste in accordance with local, state and federal regulations.

Emergency Measures

Isolate area. Keep unnecessary personnel away.

Personal Precautions and Protective Equipment

Wear appropriate protective equipment and clothing during cleanup.

Environmental Precautions

Prevent materials from entering streams, drainage's or sewers. Spills entering surface waters (or any other watercourse or sewers entering/leading to surface waters) that cause a sheen must be reported to the National Response Center 800/424-8802. None of the components are subject to the reporting requirements of Title III of SARA, 1986 and 40 CFR 372.

Prevention of Secondary Hazards

None.

Section 7 – Handling and Storage

Handling Procedures

Do not weld, heat, or drill container. Emptied container may contain hazardous material which may ignite explosively if heated sufficiently. When petroleum asphalt products are heated, potentially irritating emissions may be released. Respirable dust may be generated when hardened asphalt concrete is subjected to mechanical forces, such as in demolition work, surface treatment and recycling of pavement. Tripping accidents have occurred because of asphalt buildup on bottoms of shoes and boots. Materials should be removed regularly to prevent such accidents.

Storage Procedures

Store away from all ignition sources and open flames, in accordance with applicable laws and regulations. Storage containers should be ventilated to reduce fire and explosion hazard, and possible overexposure of personnel to fumes and vapors. Do not store near food and beverages or smoking material. Avoid incompatible materials.

Incompatibilities

Strong oxidizers may react with hydrocarbons. Adding water to hot asphalt presents an explosion hazard.

Section 8 – Exposure Controls / Personal Protection

Component Exposure Limits

Quartz (14808-60-7)

ACGIH:	0.025 mg/m3 TWA (respirable fraction)
NIOSH:	0.05 mg/m3 TWA (respirable dust)

Engineering Measures

Use local exhaust or general dilution ventilation to control exposure within applicable limits.

Personal Protective Equipment: Respiratory

Not required under normal use and working conditions. For air contamination concentrations which exceed or are likely to exceed applicable exposure limits, use a NIOSH/MSHA approved, contaminate specific air purifying respirator. If such concentrations are sufficiently high that the air purifying respirator is inadequate, or if oxygen adequate to sustain life is not present, use a positive pressure self-contained breathing apparatus. Consult an industrial hygienist for evaluation of exposures. Respirator and/or filter cartridge selection should be based on American National Standards Institute (ANSI) Standards Z88.2 Practices for Respiratory Protection.

Personal Protective Equipment: Hands

Resistant gloves should be worn to protect hands.

Personal Protective Equipment: Eyes

Safety glasses with side shields should be worn as a minimum protection. Wear chemical goggles to prevent eye contact with material.

Personal Protective Equipment: Skin and Body

Normal work clothing (long sleeved shirts and long pants) is recommended.

Section 9 – Physical & Chemical Properties

Appearance:	Coarse, black material	**Odor:**	Petroleum
Physical State:	Solid	**pH:**	Not Established
Vapor Pressure:	Not Applicable	**Vapor Density:**	Not Established
Boiling Point:	>350°F	**Melting Point:**	Not Established
Solubility(H20):	Not Established	**Specific Gravity:**	2.2 - 2.5
Evaporation Rate:	Not Applicable	**VOC:**	Not Determined
Octanol/H20 Coeff:	Not Determined	**Flash Point:**	Typ. >260°F
Flash Point Method:	Calculated	**Upper Flammability Limit (UFL):**	Not Established
Lower Flammability Limit (LFL)	Not Established	**Burning Rate:**	Not Established
Auto Ignition:	Not Established		

Section 10 – Chemical Stability & Reactivity Information

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Keep away from ignition sources. Avoid contact with incompatible materials.

Incompatible Products

Strong oxidizers may react with hydrocarbons. Adding water to hot asphalt presents an explosion hazard.

Hazardous Decomposition Products

Carbon monoxide, nitrogen oxide, sulfur dioxide, hydrogen sulfide, and various hydrocarbons may be released by thermal decomposition. Hazardous vapors may collect in enclosed vessels or areas if not properly ventilated.

Section 11 – Toxicological Information

Acute Toxicity

Component Analysis- LD50/LC50

Quartz (14808-60-7)

Oral LD50 Rat 500 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Heated material can cause severe thermal burns. Emissions may cause mild irritation. There may be an increased sensitivity to sunburn when the skin is exposed to asphalt fumes.

Potential Health Effects: Eye Critical Damage/Stimulativeness

Heated material can cause severe thermal burns. Asphalt fumes may cause eye irritation. Exposure to hydrogen sulfide at concentrations above 4 ppm may cause eye irritation.

Potential Health Effects: Ingestion

Direct contact with heated material can produce thermal burns on contacted tissues. Gastric masses and stomach obstructions have been reported in individuals who have chewed and swallowed asphalt.

Potential Heath Effects: Inhalation

Emissions from heated petroleum asphalt may have an unpleasant odor, and may produce nausea and irritation of the upper respiratory tract. Naphtha component vapors (hot asphalt) at high concentrations in enclosed spaces may cause symptoms of euphoria, respiratory irritation and edema, headaches, dizziness, drowsiness, concussions, coma, cyanosis and generalized depression. Hydrogen sulfide causes respiratory irritation at concentrations of 4 to 100 ppm. At low concentration H2S has a rotten egg odor. At elevated concentrations H2S acts as a systemic poison, causing unconsciousness and death by respiratory paralysis. Chronic inhalation of petroleum asphalt emissions may contribute to respiratory irritation. If hardened asphalt concrete is subjected to mechanical forces which generate dust particles, exposure to respirable crystalline silica dust is possible.

Respiratory Organs Sensitization/Skin Sensitization

Chronic exposure to petroleum asphalt has caused skin disorders such as dermatitis, folliculitis, or oil acne.

Generative Cell Mutagenicity

This product is not reported to have any mutagenic effects.

Carcinogenicity

A. General Product Information

May cause cancer.

Petroleum asphalt and the asphalt additives in this product are not listed as a carcinogen by NTP, OSHA, or IARC. Crystalline silica, a component in this product, is listed by IRAC not by OSHA. IRAC has determined that there is sufficient evidence for carcinogenicity to experimental animals exposed to crystalline silica and limited evidence for carcinogenicity to humans. “Limited evidence” means that a causal relationship is possible; however, other explanations such as chance, bias or confounding factors cannot adequately be excluded. NTP has listed crystalline silica as reasonably anticipated to be a human carcinogen.

B. Component Carcinogenicity

Quartz (14808-60-7)

ACGIH:	A2-Suspected Human Carcinogen
NIOSH:	potential occupational carcinogen
NTP:	Known Human Carcinogen (respirable size) (Select Carcinogen)
IARC:	Monograph 100C [2012] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources); Monograph 68 [1997] (Group 1(carcinogenic to humans))

Reproductive Toxicity

This product may contain components which may cause adverse reproductive and/or development effects.

Specified Target Organ General Toxicity: Single Exposure

Acute overexposure to this material or its components may cause systemic toxicity, including adverse effects to the following: liver, kidney, lung, skin, spleen, thymus, blood elements, lymph nodes, testes, bone marrow, and nervous system.

Specified Target Organ General Toxicity: Repeated Exposure

Chronic overexposure to this material or its components may cause systemic toxicity, including adverse effects to the following: liver, kidney, lung, skin, spleen, thymus, blood elements, lymph nodes, testes, bone marrow, and nervous system.

Aspiration Respiratory Organs Hazard

This product is not reported to have any aspiration hazard effects.

Other Toxicological Information

Exposure to components of this material may cause the following specific symptoms, depending on the concentration and duration of exposure: anemia, pallor, fatigue, loss of appetite, anxiety, and melanosis. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system. Intentional misuse by deliberately inhaling vapors may be harmful or fatal.

Section 12 – Ecological Information

Ecotoxicity

A. General Product Information

Harmful to aquatic life with long lasting effects. This material may be toxic to fish and other aquatic life and may impede growth of vegetation.

B. Component Analysis – Ecotoxicity – Aquatic Toxicity

No ecotoxicity data are available for this products components.

Persistence/Degradability

No information available for this product.

Bioaccumulation

No information available for this product.

Mobility in Soil

No information available for this product.

Section 13 – Disposal Considerations

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers of Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14 – Transportation Information

DOT Information

Shipping Name: Cold Mix Asphalt

Additional Info.: If the shipping temperature of a solid equals or exceeds 464 F, DOT regulations classify the solid as an “Elevated Temperature Material,” and a “Hot” label is required. Transportation in accordance with local regulations, where applicable. Consult 49 CFR 172.101 for shipping information.

Section 15 – Regulatory Information

Regulatory Information

US Federal Regulations

Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations

Component Analysis – State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	MA	MN	NJ	PA	RI
Quartz	14808-60-7	No	Yes	Yes	Yes	Yes	No

Component Analysis – WHMIS IDL

Component	CAS #	Minimum Concentration
Quartz	14808-60-7	1%

Additional Regulatory Information

Component Analysis – Inventory

Component	CAS #	TSCA	CAN	EEC
Quartz	14808-60-7	Yes	DSL	EINECS

Section 16 – Other Information

Hazardous Material Information System (HMIS):	**Health**	**2**
	Flammability	**1**
	Physical Hazard	
	Personal Protection	**B**

NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
Protective Equipment: Safety glasses, gloves, respirator

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Material Name: Cold Mix Asphalt

Literature References

None

Other Information

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFOMATION PROVIDED BY PECKHAM, except that the product shall conform to contracted specifications. The information provided herein was believed by Peckham Industries to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. Buyer's exclusive remedy shall be for damages and no claim of any kind, whether as to product delivered or for nondelivery of product, and whether based on contract, breach of warranty, negligence, or otherwise shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

End of Sheet

SAFETY DATA SHEET

1. Product And Company Identification

SDS ID: SDS 474
PRODUCT: CUSTOM BRAND ALL VEHICLE 50/50 PRE-MIX ANTIFREEZE COOLANT
PRODUCT NUMBER: Service Pro 16704-50, YA-943P, MC01/F, AF3300/F, ANT201/F, ANT255/F, FVPGREEN50/50, AF3355/F, GREEN-50/50-55GAL/F, RTU55GAL/F, PMAB53F, AF3300/F, AF3355/F, AF3300-1KL/F, AF3300BULK/F, 16704-50/F, 514196/F, RTU1GAL/F, RTU1GAL/F1, RTU55GAL/F, RTU55GAL/F1, MC01/F, FVPGREEN50/50 GAL/F, GREEN50/50-55GAL/F
FORMULA NUMBER: YA943P, YA943P-B, YA-989G-P50, TA-989G-P50-B

MANUFACTURER:	CANADIAN OFFICE:	MEXICO OFFICE:
Prestone Products Corporation 69 Eagle Rd. Danbury, CT 06810	AutoSupply Acquisition Canada Inc. 33 MacIntosh Blvd. Concord, ON L4K 4L5	ASG Operations Mexico S. de R.L. de C.V. Carretera Mexico Cuautitlan, Kilometro 31.5, Nave Industrial 5, Loma Bonita, Cuautitlan, Mexico, 54800

MEDICAL EMERGENCIES AND ALL OTHER INFORMATION PHONE NUMBER:
(888)269-0750 (in the US and Canada)
01-800-715-4135 (in Mexico)
TRANSPORTATION EMERGENCY PHONE NUMBER (Chemical Spills and Transport Accidents only):
CHEMTREC 1-800-424-9300 (in the US and Canada) +1 703 741-5970 (outside the US and Canada)

PRODUCT USE: Automobile antifreeze – consumer product
RESTRICTIONS ON USE: None identified

2. Hazards Identification

GHS / HAZCOM 2012 Classification:

Health	Physical
Acute Toxicity Category 4 Specific Target Organ Toxicity – Repeated Exposure Category 2	Not Hazardous

Label Elements

WARNING!
H302 Harmful if swallowed.
H373 May cause damage to kidneys through prolonged or repeated exposure.

Prevention:
P260 Do not breathe mist or vapors.
P264 Wash exposed skin thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
Response:
P301 + P312 IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.

P330 Rinse mouth.
Disposal:
P501 Dispose of contents and container in accordance with local and national regulations.

3. Composition/Information On Ingredients

Component	CAS No.	Amount
Ethylene Glycol	107-21-1	40-60%
Water	7732-18-5	40-60%
Diethylene Glycol	111-46-6	0-5%
Sodium Nitrite	7632-00-0	<0.3%

The exact concentrations are a trade secret.

4. First Aid Measures

INHALATION: Remove the victim to fresh air. If breathing has stopped administer artificial respiration. If breathing is difficult, have medical personnel administer oxygen. Get medical attention.

SKIN CONTACT: Remove contaminated clothing. Immediately wash contacted area thoroughly with soap and water. If irritation persists, get medical attention.

EYE CONTACT: Immediately flush eyes with large amounts of water for 15 minutes. Get medical attention if irritation persists.

INGESTION: Seek immediate medical attention. Immediately call local poison control center or go to an emergency department. Never give anything by mouth to or induce vomiting in an unconscious or drowsy person.

MOST IMPORTANT SYMPTOMS: May cause eye irritation. Inhalation of mists may cause nose and throat irritation and nervous system effects. Ingestion may cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, back pain, decrease in urine output, kidney failure, and central nervous system effects.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NEEDED: Seek immediate medical attention for large ingestions.

NOTES TO PHYSICIAN: The principal toxic effects of ethylene glycol, when swallowed, are kidney damage and metabolic acidosis. The combination of metabolic acidosis, an osmol gap and oxalate crystals in the urine is evidence of ethylene glycol poisoning. Pulmonary edema with hypoxemia has been described in a number of patients following poisoning with ethylene glycol. Respiratory support with mechanical ventilation may be required. There may be cranial nerve involvement in the late stages of toxicity from swallowed ethylene glycol. In particular, effects have been reported involving the seventh, eighth, and ninth cranial nerves, presenting with bilateral facial paralysis, diminished hearing and dysphagia.

Ethanol is antidotal and its early administration may block the formation of nephrotoxic metabolites of ethylene glycol in the liver. The objective is to rapidly achieve and maintain a blood ethanol level of approximately 100 mg/dl by giving a loading dose of ethanol followed by a maintenance dose. Intravenous administration of ethanol is the preferred route. Ethanol blood levels should be checked frequently. Hemodialysis may be required. 4-Methyl pyrazole (Fomepizole®), a potent inhibitor of alcohol dehydrogenase, has been used therapeutically to decrease the metabolic consequences of ethylene glycol poisoning. Fomepizole® is easier to use clinically than ethanol, does not cause CNS depression or hypoglycemia and requires less monitoring than ethanol. Additional therapeutic modalities which may decrease the adverse consequences of ethylene glycol metabolism are the administration of both thiamine and pyridoxine. As there are complicated and serious overdoses, we recommend you consult with the toxicologists at your poison control center.

The principal toxic effects of sodium nitrite poisoning are vasodilation and/or methemoglobinemia. Hypotension with syncope

and tachycardia are common findings. Coronary vasospasm due to acute withdrawal may be seen. Paradoxical bradycardia may occur rarely. Coronary ischemia and cerebrovascular disease can occur due to severe hypotension. Immediate life support measures should be provided because of associated hypotension, seizures, and methemoglobinemia-induced anoxia. Immediately contact a poison center or hospital emergency department for treatment advice.

5. Firefighting Measures

SUITABLE EXTINGUISHING MEDIA: For large fires, use alcohol type or all-purpose foams. For small fires, use water spray, carbon dioxide or dry chemical.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: A solid stream of water or foam directed into hot, burning liquid can cause frothing. Burning may produce carbon monoxide and carbon dioxide.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHERS: Do not spray pool fires directly. Cool fire exposed containers with water. Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

6: Accidental Release Measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Wear appropriate protective clothing and equipment (See Section 8).

METHODS AND MATERIALS FOR CONTAINMENT/CLEANUP: Collect with absorbent material and place in appropriate, labeled container for disposal or, if permitted flush spill area with water.

7. Handling and Storage

PRECAUTIONS FOR SAFE HANDLING:
Harmful or Fatal if Swallowed. Do not drink antifreeze or solution. Avoid eye and prolonged or repeated skin contact. Avoid breathing vapors or mists. Wash exposed skin thoroughly with soap and water after use. Do not store in opened or unlabeled containers. Keep container away from open flames and excessive heat. Do not reuse empty containers unless properly cleaned. Empty containers retain product residue and may be dangerous. Do not cut, weld, drill, etc. containers, even empty.

Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without any obvious ignition sources. Published "autoignition" or "ignition" temperatures cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Use of this product in elevated temperature applications should be thoroughly evaluated to assure safe operating conditions.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Store away from excessive heat and oxidizers.

NFPA Classification IIIB.

8. Exposure Controls / Personal Protection

EXPOSURE GUIDELINES

CHEMICAL	EXPOSURE LIMIT
Ethylene Glycol (aerosol)	100 mg/m^3 Ceiling ACGIH TLV
Diethylene Glycol	10 mg/m^3 TWA AIHA WEEL
Sodium Nitrite	None Established

APPROPRIATE ENGINEERING CONTROLS: Use general ventilation or local exhaust as required to maintain exposures below the occupational exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: For operations where the TLV is exceeded a NIOSH approved respirator with organic vapor cartridges and dust/mist prefilters or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration. Select and use in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

GLOVES: Chemical resistant gloves such as neoprene or PVC where contact is possible.

EYE PROTECTION: Splash proof goggles are recommended to prevent eye contact.

OTHER PROTECTIVE EQUIPMENT/CLOTHING: Appropriate protective clothing as needed to minimize skin contact. Suitable washing and eye flushing facilities should be available in the work area. Contaminated clothing should be removed and laundered before re-use.

9. Physical and Chemical Properties

APPEARANCE:	Green liquid	ODOR:	Characteristic
ODOR THRESHOLD:	Not determined	pH:	10.2
MELTING/FREEZING POINT:	-34°F (-36.7°C)	BOILING POINT/RANGE:	Greater than 108°F (42.2°C)
FLASH POINT:	220°F (104.4°C)	EVAPORATION RATE:	Less than 1
FLAMMABILITY (SOLID, GAS)	Not Applicable	FLAMMABILITY LIMITS:	LEL: Not determined UEL: Not determined
VAPOR PRESSURE:	Not determined	VAPOR DENSITY:	2.1
RELATIVE DENSITY:	1.07	SOLUBILITIES	Water: 100%
PARTITION COEFFICIENT (n-octanol/water)	Not determined	AUTOIGNITION TEMPERATURE:	Not determined
DECOMPOSITION TEMPERATURE:	Not determined	VISCOSITY:	Not determined

10. Stability and Reactivity

REACTIVITY: Normally unreactive

CHEMICAL STABILITY: Stable under normal conditions and use.

POSSIBILITY OF HAZARDOUS REACTIONS: Reaction with strong oxidizers will generate heat.

CONDITIONS TO AVOID: None known

INCOMPATIBLE MATERIALS: Avoid strong bases at high temperatures, strong acids, strong oxidizing agents, and materials reactive with hydroxyl compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.

11. Toxicological Information

POTENTIAL HEALTH EFFECTS:

ACUTE HAZARDS:
INHALATION: May cause irritation of the nose and throat with headache, particularly from mists. High vapor concentrations caused, for example, by heating the material in an enclosed and poorly ventilated workplace, may produce nausea, vomiting, headache, dizziness and irregular eye movements.

SKIN CONTACT: No evidence of adverse effects from available information.

EYE CONTACT: Liquid, vapors or mist may cause discomfort in the eye with persistent conjunctivitis, seen as slight excess redness of the conjunctiva. Serious corneal injury is not anticipated.

INGESTION: Following ingestion, a bitter taste may be noted. May cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, back pain, decrease in urine output, kidney failure, and central nervous system effects, including irregular eye movements, convulsions and coma. Cardiac failure and pulmonary edema may develop. Severe kidney damage which may be fatal may follow the swallowing of ethylene glycol. A few reports have been published describing the development of weakness of the facial muscles, diminishing hearing, and difficulty with swallowing, during the late stages of severe poisoning. This product contains less than 0.3% sodium nitrite. Swallowing sodium nitrite causes the formation of methemoglobin in the blood which may result in cyanosis, lowering of blood pressure, rapid heartbeat and severe headache. Doses as low as 14 mg/kg have been reported to cause toxic effects.

CHRONIC EFFECTS: Prolonged or repeated inhalation exposure may produce signs of central nervous system involvement, particularly dizziness and jerking eye movements. Prolonged or repeated skin contact may cause skin sensitization and an associated dermatitis in some individuals. Ethylene glycol has been found to cause birth defects in laboratory animals. The significance of this finding to humans has not been determined.

CARCINOGENICITY LISTING: None of the components of these products is listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH, or OSHA.

ACUTE TOXICITY VALUES:

Ethylene Glycol:	LD50 Oral Rat: 4700 mg/kg LD50 Skin Rabbit: 9530 mg/kg
Diethylene Glycol:	LD50 Oral Rat: 12,565 mg/kg LD50 Skin Rabbit: 11,890 mg/kg
Sodium Nitrite:	LD50 Oral Rat: 180 mg/kg LC50 Inhalation Rat: 5.5 mg/m3/4 hr.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH: Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. Also, in a preliminary study to assess the effects of exposure of pregnant rats and mice to aerosols at concentrations 150, 1,000 and 2,500 mg/m3 for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentrations, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol, percutaneous absorption of ethylene glycol from contaminated skin, or swallowing of ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1,000 and 2,500 mg/m3) and developmental toxicity in the fetus with minimal evidence of teratogenicity (2,500 mg/m3). The no-effects concentration (based on maternal toxicity) was 500 mg/m3. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to the skin of pregnant mice over the period of

organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen; there is currently no available information to suggest that ethylene glycol caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity; exposure to high aerosol concentration is only minimally effective in producing developmental toxicity; the major route for producing developmental toxicity is perorally.

Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence or a different pattern of tumors compared with untreated controls. The absence of carcinogenic potential for ethylene glycol has been supported by numerous invitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

12. Ecological Information

ECOTOXICITY:

Ethylene Glycol: LC50 Fathead Minnow <10,000 mg/L/96 hr.
EC50 Daphnia Magna 100,000 mg/L/48 hr
Bacterial (Pseudomonas putida): 10,000 mg/l
Protozoa (Entosiphon sulcatum and Uronema parduczi; Chatton-Lwoff): >10,000 mg/l
Algae (Microcystis aeruginosa): 2,000 mg/l
Green algae (Scenedesmus quandricauda): >10,000 mg/l

Diethylene Glycol: LC50 western mosquitofish >32,000 mg/L/96 hr

Sodium Nitrite: LC50 western mosquitofish 1.5 mg/L/96 hr
EC50 Daphnia Magna 43.6 mg/L/48 hr

PERSISTENCE AND DEGRADABILITY:

Ethylene Glycol is readily biodegradable (97-100% in 2-12 days).
Diethylene glycol is readily biodegradable (>70% in 19days).
Sodium Nitrite: Does not volatilize and is likely to remain in water until consumed by plants or other organisms.

BIOACCUMULATIVE POTENTIAL:

Ethylene glycol: A BCF of 10, reported for ethylene glycol in fish, Golden ide (Leuciscus idus melanotus), after 3 days of exposure suggests the potential for bioconcentration in aquatic organisms is low.
Diethylene glycol: An estimated BCF of 3 suggests the potential for bio concentration in aquatic organisms is low.

MOBILITY IN SOIL: Ethylene glycol and diethylene glycol are highly mobile in soil.

OTHER ADVERSE EFFECTS: None known

13. Disposal Considerations

Dispose of product in accordance with all local, state/provincial and federal regulations.

14. Transport Information

U.S. DOT HAZARD CLASSIFICATION: Not Regulated (unless package contains a reportable quantity)

Note: IF A SHIPMENT OF A REPORTABLE QUANTITY (8,333 LBS/933 GAL.) IN A SINGLE PACKAGE IS INVOLVED, THE FOLLOWING INFORMATION APPLIES:

PROPER SHIPPING NAME: RQ, Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol)
UN NUMBER: UN3082
PACKING GROUP: III
LABELS REQUIRED: Class 9

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

IMDG CODE SHIPPING CLASSIFICATION: Not Regulated

CANADIAN TDG CLASSIFICATION: Not Regulated

15. Regulatory Information

EPA SARA 311/312 HAZARD CLASSIFICATION: Acute Health, Chronic Health

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

Ethylene Glycol	107-21-1	40-60%

PROTECTION OF STRATOSPHERIC OZONE: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for this product, based on the RQ for Ethylene Glycol (60% maximum) of 5,000 lbs, is 8,333 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

CALIFORNIA PROPOSITION 65: This product contains the following chemicals regulated under California Proposition 65:

Ethylene Glycol	107-21-1	40-60%	developmental

EPA TSCA INVENTORY: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the ingredients are listed on the Canadian Domestic Substances List.

CHINA. All of the ingredients of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

16. Other Information

NFPA Rating: Fire: 1 Health: 2 Reactivity: 0

REVISION SUMMARY: Section 1: Manufacturer and Supplier Name and Address, Emergency Phone Numbers

SDS Date of Preparation/Revision: August 5, 2016

This SDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations.

While Prestone Products Corporation believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of tests conducted, the data are not to be taken as a warranty or representation for which Prestone Products Corporation assumes legal responsibility. They are offered for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

Section 1 - Product and Company Identification

Product Identifiers:

Product name: **Cutter Backwoods Insect Repellent**
EPA reg. number: 305-51-121
Recommended product use: Insect Repellent - Aerosol

Details of the Supplier of the Safety Data Sheet:

Manufacturer/Supplier: Chemsico
Div. of United Industries Corp.
P.O. Box 142642
St. Louis, MO 63114

For product information: 1-800-767-9927

For medical emergencies: 1-800-633-2873

Section 2 - Hazards Identification

Conforms to Hazard Communication Standard 29 CFR 1910.1200.

GHS Classification of Substance or Mixture: Flammable aerosol - Category 2

GHS Label Elements:

Hazard pictogram(s):

Signal word: WARNING

Hazard statements:
- Flammable aerosol
- Compressed gas – contents under pressure; may burst if heated
- Harmful if swallowed
- May cause an allergic skin reaction

Precautionary Statements:
- Contents under pressure.
- Do not use or store near heat or open flame.
- Do not puncture or incinerate container.
- Exposure to temperatures above 130°F may cause bursting.
- Wash hands with soap and water after handling. Do not eat, drink or smoke when using this product. If swallowed: Call a poison control center or doctor for treatment advice if you feel unwell. Rinse mouth.
- If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Section 3 - Composition / Information on Ingredients

Chemical Name	CAS#	Weight Percent
DEET (N,N-Diethyl-m-toluamide)	134-62-3	25.00%
Ethanol	64-17-5	23.00%
Isobutane	75-28-5	8.00%

Note: Ingredients not identified are proprietary or non-hazardous. Values are not product specifications.

Section 4 - First Aid Measures

Eye contact:	No special requirements
Skin contact:	After returning indoors, wash treated skin with soap and water. Discontinue use if irritation or rash occurs.
Inhalation:	No special requirements
Ingestion:	Call a poison control center or doctor immediately for treatment advice. Have person sip if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Note to Physician:	Probable mucosal damage may contraindicate the use of gastric lavage.
General advice:	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Keep out of reach of children.

Section 5 - Fire Fighting Measures

Flammable properties:	Pressurized aerosol container
NFPA classification:	NFPA level 1 aerosol
Suitable extinguishing media:	Water fog, foam, CO_2, dry chemical
Unsuitable extinguishing media:	Not available
Specific hazards arising from the chemical:	Contents under pressure – container may burst in heat of fire.
Protective equipment for firefighters:	Firefighters should wear full protective clothing including self-contained breathing apparatus.
Hazardous combustion products:	None known
Explosion data:	Not available
Sensitivity to static discharge:	Not available
Personal precautions:	Keep unnecessary personnel away. Do not touch or walk through spilled material.

Section 6 - Accidental Release Measures

Personnel precautions:	Remove all sources of ignition. Wear personnel protective equipment as recommended in Section 8. Wash thoroughly after handling.
For emergency responders:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.
Environmental precautions:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for containment and cleaning up:

Stop leak if without risk. Move containers from spill area. Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with earth, sand or absorbent material swept up and placed in suitable, covered, and labeled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use.

Section 7 - Handling and Storage

Precautions for safe handling:

Put on appropriate personal protective equipment as recommended in Section 8. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C (122°F). Do not pierce or burn, even after use. Do not ingest. Avoid contact with skin, eyes and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Storage:

Store in a cool, dry area away from open flame. Do not store above 50°C (122°F).

Section 8 - Exposure Controls / Personal Protection

Exposure guidelines:

Components with Occupational Exposure Limits								
		Exposure Limits						
		OSHA PEL		ACGIH TLV		SupplierOEL		
Chemical name		**ppm**	**mg/m³**	**ppm**	**mg/m³**	**ppm**	**mg/m³**	
DEET	TWA	None		None		None		
Ethanol	TWA	1000	1900	1000	------	1000	1900	
Isobutane	TWA	Not established		1000	------	Not established		

Engineering controls:

General ventilation normally adequate.

Personal protective equipment:

Eye/Face protection:

During application, prevent entry into eyes. Wear safety glasses with side shields if using in large applications.

Skin and body protection:

None required

Respiratory protection:

None required

General hygiene considerations:

Handle in accordance with good industrial hygiene and safety practices. When using, do not eat or drink. Wash hands before breaks and immediately after handling the product.

Section 9 - Physical & Chemical Properties

Appearance:

Clear

Color:	Light yellow
Physical state:	Pressurized liquid
Odor:	Ethanol and DEET
Odor threshold:	No data available
pH:	8.8 (liquid portion)
Melting point:	No data available
Freezing point:	No data available
Boiling point:	No data available
Flash point:	85°F (liquid portion)
Flame Extension	6-12”
Flammability limits in air, lower, % by volume:	No data available
Flammability limits in air, upper, % by volume:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative density @ 20°C:	0.955 (liquid portion)
Octanol/water coefficient:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Solubility:	Miscible in water
Evaporation rate:	No data available
% Volatile organic compounds:	31.2

Section 10 - Chemical Stability & Reactivity Information

Reactivity

Conditions to avoid: Do not mix with other chemicals.

Incompatible materials: Avoid strong oxidizers.

Chemical stability

Product stability: Stable under recommended storage conditions.

Other

Hazardous decomposition products: None known

Possibility of hazardous reactions: Hazardous polymerization does not occur.

Section 11 - Toxicological Information

Primary eye irritation:	Non-irritating (EPA tox. category IV)
Primary skin irritation:	Non-irritating (EPA tox. category IV)
Acute dermal:	LD_{50} > 5000 mg/kg (EPA tox. category IV)
Acute inhalation:	LC_{50} > 2 mg/L (EPA tox. category IV)
Acute oral:	LD_{50} > 2000 mg/kg (EPA tox. category III)

Sensitization:	May cause an allergic reaction after repeated contact.
Chronic effects/ Carcinogenicity:	No data available
Mutagenicity:	No data available
Reproductive effects:	No data available
Teratogenicity:	No data available
Ecotoxicity:	No data available

Section 12 - Ecological Information

Environmental effects:	No data available
Aquatic toxicity:	None
Persistence / degradability:	No data available
Bioaccumulation / accumulation:	No data available
Partition coefficient:	No data available
Mobility in environmental media:	No data available
Chemical fate information:	No data available

Section 13 - Disposal Considerations

Waste codes:	Not available
Disposal instructions:	Dispose in accordance with all applicable regulations.
Waste from residues / unused products:	Not available
Contaminated packaging:	Not available

Section 14 - Transportation Information

U.S. Department of Transportation (DOT):	UN-1950, Aerosols, Flammable, 2.1, Limited Quantity
IATA:	UN-1950, Aerosols, 2.1
IMDG:	UN-1950, Aerosols, Flammable, 2, Limited Quantity

Section 15 - Regulatory Information

29 CFR 1910.1200 hazardous chemical Occupational Safety and Health Administration (OSHA):	No
CERCLA (Superfund) reportable quantity:	Not available

Hazard categories

Superfund Amendments and Reauthorization Act of 1986 (SARA):

Immediate Hazard	No
Delayed Hazard	No
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

Section 302 extremely hazardous Substance:	No
Section 311 hazardous chemical:	No
Clean Air Act (CAA):	Not available
Clean Water Act (CWA):	Not available
State regulations:	

FIFRA labeling: This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Signal word: CAUTION

Precautionary statements: Harmful if swallowed. Use of this product may cause skin reactions in rare cases. Wash treated clothing before wearing it again. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

FLAMMABLE. Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.

Notification status: All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

California Prop. 65: This product does not contain any chemicals known to the state of California to cause cancer, birth defects or any other reproductive harm.

Disclaimer: Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Section 16 - Other Information

HMIS ratings:	Health Hazard 1 Flammability 2 Physical Hazard 1
Item number(s):	HG-96280; HG-96281; HG-96283
Formula number(s):	21-1323
Issue date:	2/17/2016
Prepared by:	Spectrum Division of United Industries Corp. P.O. Box 142642 St. Louis, MO 63114-0642 (800) 242-1166

Sheet No. 73 Revision Date: 15 December 2017

SAFETY DATA SHEET

HMIS:
Health- 1 Flammability- 2 Reactivity- 0 Pers. Protection- N

NFPA:
Health- 1 Flammability- 2 Reactivity- 0 Special Hazard- N

WHMIS: B 3, D 2 B

Section 1: Product and Company Identification

Product: Deodorizing Carpet Extractor Synonyms: Carpet Extractor

NILODOR, INC.
10966 INDUSTRIAL PARKWAY NW
BOLIVAR, OHIO 44612, USA

Non-Emergency:	24 hr Emergency Spill Information:
US 800-443-4321	Chem-Tel, Inc.
International +01-330-874-1017	US, Canada: 800-255-3924. International: +01-813-248-0585

Section 2. Hazards Identification

EMERGENCY OVERVIEW

Appearance/Odor: Pale blue liquid, spicy aroma

WARNING

Flammability : Not classified as flammable

Health Hazards Listed : May be a mild irritant

Ecological Hazards Listed : None known

Potential Health Effects: See section 11 for more information.

Risk Phrases:	R36/37/38 - Irritating to eyes, respiratory system and skin
Safety Phrases:	S2 - Keep out of the reach of children S7 - Keep container tightly closed S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
Hazard Phrases:	H320 - Causes eye irritation H333 - May be harmful if inhaled H302 - Harmful if swallowed
Precautionary Phrases:	P233 - Keep container tightly closed. P234 - Keep only in original container.

P235 - Keep cool.

Likely Routes of Exposure: Skin, eyes

Eye:	Direct exposure can irritate
Skin:	Prolonged exposure can irritate
Ingestion:	Not expected to be a problem
Inhalation:	Not likely to be a problem

Medical Conditions Aggravated By Exposure:

Allergies to fragrances

Target Organs: None known

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Potential Environmental Effects: (See section 12 for more information.)

None known

Section 3. Composition/Information on Ingredients

Component	CAS#	% by Weight	WHMIS Controlled
Water	7732-18-5	75-95	N
Ethanol	64-17-5	1 - 5	Y
Odor Counteractant (Proprietary)	NONE	1-3	N
Non-ionic Surfactant	84133-50-6	2-4	Y
Dipropylene glycol	25625-71-8	7 - 13	N
Sodium Xylene Sulfonate	1300-72-7	1-3	Y

Section 4. First Aid Measures

Eye Contact:	Flush eyes with copious amounts of clean water, holding lids open. If irritation persists, consult a physician.
Skin Contact:	Wash with soap and water.
Inhalation:	Remove to fresh air.
Ingestion:	Give water or milk to drink if conscious
Note to Physicians:	DO NOT INDUCE

Section 5. Fire Fighting Measures

Suitable Extinguishing Media:	Water, foam, carbon dioxide, dry chemical
Unsuitable Extinguishing Media:	None known
Products of Combustion:	Oxides of carbon, nitrogen, sulfur
Protection of Firefighters:	As for surrounding fire

Section 6. Accidental Release Measures

Personal Precautions:	Keep away from skin and eyes
Environmental Precautions:	Keep out of surface waters
Methods for Containment:	Dike area with sand, clay or other suitable material.
Methods for Clean-Up:	Absorb with sand, clay or other suitable material.

Other Information:

Section 7. Handling and Storage

HANDLING

Reasonable care. Keep away from skin and eyes.

STORAGE

Keep out of the reach of children. Store in original container at ambient conditions.

Section 8. Exposure Controls/Personal Protection

EXPOSURE GUIDELINES

COMPONENT:	TWA:	LD-50
Water	Not applicable	Not applicable
Ethanol	TLV 1000 ppm	7060 mg/kg
Odor Counteractant (Proprietary)	None established	None Established
Non-ionic Surfactant	None established	None established
Dipropylene glycol	None established	14800 mg/kg
Sodium Xylene Sulfonate	NA	NA

Engineering Controls: Not normally necessary

Eye/Face Protection: Protective goggles recommended if handling large quantities

Skin Protection: Rubber or other protective gloves recommended if handling large quantities

Respiratory Protection: Not normally necessary

General Hygiene Considerations: Keep out of food and beverages

Section 9. Physical and Chemical Properties

Color: Pale blue	Odor: Spicy
Physical State: Liquid	Odor Treshhold:
pH: 7.5-9.5	Freezing Point: Not determined
Evaporation Rate: As water	Boiling Point: >100 C / >212 F
Flash Point: 154 F PMCC	Flammability(solid,gas): Not applicable
Upper Flammability Limit: Not determined	Lower Flammabilty Limit: Not determined
Vapor Pressure: As water	Specific Gravity: 1
Vapor Density: Not determined	Auto-ignition Temperature: Not determined
Volatile Organic Compound (VOC),%weight:	Solubility (water): Soluble
Less than 5	Percent Volatile: 80 - 90 including water

Section 10. Stability and Reactivity

Stability: Stable

Conditions to Avoid: None known

Incompatable Materials: None known

Hazardous Decomposition Products: None known

Possibility of Hazardous Reactions: Will not occur

Section 11. Toxicology Information

ACCUTE EFFECTS

Oral LD50:	Not determined for mixture. Weighted average more than 13 grams per kilogram.
Dermal LD50:	Not classified as toxic by skin contact. Weighted average more than 14 grams per kilogram.
Inhalation:	Not classified as toxic by inhalation. Weighted average more than 10 milligrams per Liter.

Eye Irritation:	Direct contact can irritate eyes
Skin Irritation:	Prolonged or repeated contact can irritate or dry skin
Sensitization:	None known

CHRONIC EFFECTS

Carcinogenicity:	None known
Mutagenicity:	None known
Reproductive Effects:	None known
Developmental Effects:	None known

Section 12. Ecological Information

Ecotoxicity:	None known
Persistence/Degradability:	Biodegradable
Bioaccumulation/Accumulation:	None known
Mobility in Enviroment:	Not determined

Section 13. Disposal Considerations

Disposal: Dispose according to government regulations

Section 14. Transportation Information

US DOT (ground)

Proper Shipping Description: Not regulated

CANADA TDG (ground)

Proper Shipping Description: Not regulated

ICAO (air)

Proper Shipping Description: Not regulated

IMDG (water)

Proper Shipping Description: Not regulated

Section 15. Regulatory Information

Global Inventories

TSCA: United States	Included
DSL: Canada	Included
ECL: Korea	Not-Known
PICCS: Philippines	Not-Known
ENCS: Japan	Not-Known
AICS: Australia	Included
IECS: China	Not-Known
EINECS: European Union	Included

SARA 313 Information : No SARA 313 substances present at reportable levels

California Safe Drinking Water and Toxic Enforcement Act pf 1986 :(Proposition 65)

No Proposition 65 substances present

WHMIS: Canadian Workplace Hazardous Material Information System

B 3, D 2 B

Section 16. Other Information

Legends:

NFPA, HMIS:

0=Minimal Hazard, 1=Slight Hazard, 2=Moderate Hazard, 3=Severe Hazard, 4=Extreme Hazard

Prepared By: Technical Dept.

While we believe that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of tests conducted, the data are not to be taken as warranty or representation for which we assume legal responsibility. The information is offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with federal, state and local laws.

Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

DIESEL FUEL No. 2

Product Use: Fuel [See Section 16 for Additional Product Numbers]
Synonyms: 15 S Diesel Fuel 2; Alternative Low Aromatic Diesel (ALAD); CAL ULS S R6-20 B0-5 DF2; CAL ULS S R6-20 B0-5 DF2DY; Calco LS Diesel 2; CALCO ULS C-B0-B5 DF2; CALCO ULS C-B0-B5 DF2 DYED; CALCO ULS C-B2 DF2; CALCO ULS C-B2 DF2 DYED; CALCO ULS C-B5 DF2; CALCO ULS C-B5 DF2 DYED; Calco ULS DF2; Calco ULS Diesel 2; CALCO ULS S R6-20 DF2; CALCO ULS S R6-20 DF2 DYED; CALCO ULS S-B0-B5 DF2 DYED; Calco ULS S-B5 DF2; Calco ULS S-B5 DF2 DYED; CALCO ULS TC-B1 DF2; CALCO ULS TC-B1 DF2 DYED; CALCO ULS TC-B2 DF2; CALCO ULS TC-B2 DF2 DYED; CALCO ULS TC-B3 DF2; CALCO ULS TC-B3 DF2 DYED; CALCO ULS TC-B4 DF2; CALCO ULS TC-B4 DF2 DYED; CALCO ULS TC-B5 DF2; CALCO ULS TC-B5 DF2 DYED; CALCO ULS TX-B1 DF2; CALCO ULS TX-B1 DF2 DYED; CALCO ULS TX-B2 DF2; CALCO ULS TX-B2 DF2 DYED; CALCO ULS TX-B3 DF2; CALCO ULS TX-B3 DF2 DYED; CALCO ULS TX-B4 DF2; CALCO ULS TX-B4 DF2 DYED; CALCO ULS TX-B5 DF2; CALCO ULS TX-B5 DF2 DYED; Chevron LS Diesel 2; Chevron ULS Diesel 2; CT ULS C-B0-B5 DF2; CT ULS C-B0-B5 DF2 DYED; CT ULS C-B2 DF2; CT ULS C-B5 DF2; CT ULS S R6-20 B0-5 DF2; CT ULS S R6-20 DF2; CT ULS S R6-20 DF2 DYED; CT ULS S-B0-B5 DF2 DYED; CT ULS S-B5 DF2; CT ULS S-B5 DF2 DYED; CT ULS S-BO-B5 DF2; CT ULS SPECIAL DF2 DYED; CT ULS TC-B1 DF2; CT ULS TC-B2 DF2; CT ULS TC-B3 DF2; CT ULS TC-B4 DF2; CT ULS TC-B5 DF2; CT ULS TX-B1 DF2; CT ULS TX-B2 DF2; CT ULS TX-B3 DF2; CT ULS TX-B4 DF2; CT ULS TX-B5 DF2; Diesel Fuel Oil; Diesel Grade No. 2; Diesel No. 2-D S15; Diesel No. 2-D S500; Diesel No. 2-D S5000; Distillates, straight run; Gas Oil; HS Diesel 2; HS Heating Fuel 2; Light Diesel Oil Grade No. 2-D; LS Diesel 2; LS Heating Fuel 2; Marine Diesel; RR Diesel Fuel; Texaco Diesel; Texaco Diesel No. 2; ULS C-B0-B5 DF2; ULS C-B0-B5 DF2 DYED; ULS C-B2 DF2; ULS C-B2 DF2 DYED; ULS C-B5 DF2; ULS C-B5 DF2 DYED; ULS S R6-20 B0-5 DF2; ULS S R6-20 B0-5 DF2 DYED; ULS S R6-20 DF2; ULS S R6-20 DF2 DYED; ULS S-B0-B5 DF2 DYED; ULS S-B5 DF2; ULS S-BO-B5 DF2; ULS TC-B1 DF2; ULS TC-B1 DF2 DYED; ULS TC-B2 DF2; ULS TC-B2 DF2 DYED; ULS TC-B3 DF2; ULS TC-B3 DF2 DYED; ULS TC-B4 DF2; ULS TC-B4 DF2 DYED; ULS TC-B5 DF2; ULS TC-B5 DF2 DYED; ULS TX-B1 DF2; ULS TX-B1 DF2 DYED; ULS TX-B3 DF2; ULS TX-B3 DF2 DYED; ULS TX-B4 DF2; ULS TX-B4 DF2 DYED; ULS TX-B5 DF2; ULS TX-B5 DF2 DYED; Ultra Low Sulfur Diesel 2
Company Identification
Chevron Products Company
6001 Bollinger Canyon Rd.
San Ramon, CA 94583
United States of America

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
Product Information: (800) 582-3835
SDS Requests: lubemsds@chevron.com

SPECIAL NOTES: This SDS covers all Chevron, Texaco and Calco CARB & non-CARB Diesel No. 2 Fuels. The sulfur content is less than 0.5% (mass). Red dye is added to non-taxable fuel. (SDS 6894)
SPECIAL NOTES: This SDS covers all Chevron and Calco CARB Low Sulfur Diesel No. 2 Fuels. Red dye is added to non-taxable fuel. (SDS 7098)

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION: Flammable liquid: Category 3. Aspiration toxicant: Category 1. Carcinogen: Category 1B. Skin irritation: Category 2. Target organ toxicant (repeated exposure): Category 2. Target organ toxicant (central nervous system): Category 3. Acute inhalation toxicant: Category 4. Acute aquatic toxicant: Category 2. Chronic aquatic toxicant: Category 2.

Signal Word: Danger

Physical Hazards: Flammable liquid and vapor.

Health Hazards: May be fatal if swallowed and enters airways. May cause cancer. Causes skin irritation. Harmful if inhaled. May cause drowsiness or dizziness.

Target Organs: May cause damage to organs (Blood/Blood Forming Organs, Liver, Thymus) through prolonged or repeated exposure.

Environmental Hazards: Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS:
General: Keep out of reach of children. Read label before use.
Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. -- No smoking.

Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. Wash thoroughly after handling. Avoid release to the environment.
Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF SWALLOWED: Immediately call a poison center or doctor/physician. Do NOT induce vomiting. Call a poison center or doctor/physician if you feel unwell. In case of fire: Use media specified in the SDS to extinguish. Specific treatment (see Notes to Physician on this label). Collect spillage.
Storage: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Disposal: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

HAZARDS NOT OTHERWISE CLASSIFIED: Not Applicable

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Diesel Fuel No. 2	68476-34-6	95 - 100 %vol/vol
Renewable Diesel	Mixture	0 - 20 %vol/vol
Fatty Acid Methyl Esters (FAME)	Mixture	0 - 5 %vol/vol
Naphthalene	91-20-3	0.02 - 0.2 %vol/vol
Total sulfur	Mixture	0 - 5000 ppm (weight)

SECTION 4 FIRST AID MEASURES

Description of first aid measures
Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.
Skin: Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.
Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.
Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue or if any other symptoms develop.

Most important symptoms and effects, both acute and delayed

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin causes irritation. Symptoms may include pain, itching, discoloration, swelling, and blistering. Contact with the skin is not expected to cause an allergic skin response.

Ingestion: Highly toxic; may be fatal if swallowed. Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death. May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea.

Inhalation: The vapor or fumes from this material may cause respiratory irritation. Mists of this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. Excessive or prolonged breathing of this material may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

DELAYED OR OTHER HEALTH EFFECTS:

Cancer: Whole diesel engine exhaust has been classified as a Group 2A carcinogen (probably carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Prolonged or repeated exposure to this material may cause cancer. Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Target Organs: Contains material that may cause damage to the following organ(s) following repeated inhalation at concentrations above the recommended exposure limit based on animal data:Liver Blood/Blood Forming Organs Thymus Risk depends on duration and level of exposure. See Section 11 for additional information.

Indication of any immediate medical attention and special treatment needed

Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Unusual Fire Hazards: See Section 7 for proper handling and storage.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Precautionary Measures: Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive force. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches.
Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Do not breathe mist. Wash thoroughly after handling. Keep out of the reach of children.
Unusual Handling Hazards: WARNING! Do not use as portable heater or appliance fuel. Toxic fumes may accumulate and cause death. Slow heat generation may occur with oil-soaked rags, spent filter aids and spent absorbent material and may cause spontaneous combustion if stored near combustibles and not handled properly. Store biodiesel soaked rags, filter aids, and spill absorbent material in approved safety disposal containers and dispose of properly. Biodiesel soaked rags may be washed with soap and water and allowed to dry in well ventilated area.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

General Storage Information: DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces . USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.
Skin Protection: Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Nitrile Rubber, Polyurethane, Viton.
Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors.
When used as a fuel, this material can produce carbon monoxide in the exhaust. Determine if airborne concentrations are below the occupational exposure limit for carbon monoxide. If not, wear an approved positive-pressure air-supplying respirator.
Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Total sulfur	Not Applicable	--	--	--	--
Diesel Fuel No. 2	ACGIH	100 mg/m3	--	--	Skin A3 total hydrocarbon
Diesel Fuel No. 2	CVX	100 mg/m3	--	--	Skin total hydrocarbon

Renewable Diesel	Not Applicable	--	--	--	--
Fatty Acid Methyl Esters (FAME)	Not Applicable	--	--	--	--
Naphthalene	ACGIH	10 ppm (weight)	15 ppm	--	Skin A3
Naphthalene	OSHA Z-1	50 mg/m3	--	--	--

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Varies depending on specification
Physical State: Liquid
Odor: Petroleum odor
Odor Threshold: No data available
pH: Not Applicable
Vapor Pressure: 0.04 kPa (Approximate) @ 40 °C (104 °F)
Vapor Density (Air = 1): >1
Initial Boiling Point: 175.6°C (348.1°F) - 370°C (698°F)
Solubility: Soluble in hydrocarbons; insoluble in water
Freezing Point: Not Applicable
Melting Point: Not Applicable
Specific Gravity: 0.80 - 0.88 @ 15.6°C (60.1°F) (Typical)
Density: No data available
Viscosity: 1.90 cSt - 4.10 cSt @ 40°C (104°F)
Coefficient of Therm. Expansion / °F: No data available
Evaporation Rate: No data available
Decomposition temperature: No data available
Octanol/Water Partition Coefficient: No data available

FLAMMABLE PROPERTIES:
Flammability (solid, gas): No Data Available

Flashpoint: (Pensky-Martens Closed Cup) 52 °C (125 °F) Minimum
Autoignition: 257 °C (494 °F)
Flammability (Explosive) Limits (% by volume in air): Lower: 0.6 Upper: 4.7

SECTION 10 STABILITY AND REACTIVITY

Reactivity: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to Avoid: Avoid contact with heat, sparks, fire and oxidizing agents
Incompatibility With Other Materials: Not applicable
Hazardous Decomposition Products: None known (None expected)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects
Serious Eye Damage/Irritation: The eye irritation hazard is based on evaluation of data for similar materials.

Skin Corrosion/Irritation: The skin irritation hazard is based on evaluation of data for similar materials.

Skin Sensitization: The skin sensitization hazard is based on evaluation of data for similar materials.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials.
Acute Toxicity Estimate (inhalation): 1.2 mg/l

Germ Cell Mutagenicity: The hazard evaluation is based on data for components or a similar material.

Carcinogenicity: The hazard evaluation is based on data for components or a similar material. Whole diesel engine exhaust has been classified as a Group 2A carcinogen (probably carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Reproductive Toxicity: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Single Exposure: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Repeated Exposure: The hazard evaluation is based on data for components or a similar material.

ADDITIONAL TOXICOLOGY INFORMATION:
This product contains gas oils.
CONCAWE (product dossier 95/107) has summarized current health, safety and environmental data available for a number of gas oils, typically hydrodesulfurized middle distillates, CAS 64742-80-9, straight-run middle distillates, CAS 64741-44-2, and/or light cat-cracked distillate CAS 64741-59-9.
CARCINOGENICITY: All materials tested have caused the development of skin tumors in mice, but all

featured severe skin irritation and sometimes a long latency period before tumors developed. Straight-run and cracked gas oil samples were studied to determine the influence of dermal irritation on the carcinogenic activity of middle distillates. At non-irritant doses the straight-run gas oil was not carcinogenic, but at irritant doses, weak activity was demonstrated. Cracked gas oils, when diluted with mineral oil, demonstrated carcinogenic activity irrespective of the occurrence of skin irritation. Gas oils were tested on male mice to study tumor initiating/promoting activity. The results demonstrated that while a straight-run gas oil sample was neither an initiator or promotor, a blend of straight-run and FCC stock was both a tumor initiator and a promoter.

GENOTOXICITY: Hydrotreated & hydrodesulfurized gas oils range in activity from inactive to weakly positive in in-vitro bacterial mutagenicity assays. Mouse lymphoma assays on straight-run gas oils without subsequent hydrodesulphurization gave positive results in the presence of S9 metabolic activation. In-vivo bone marrow cytogenetics and sister chromatic exchange assay exhibited no activity for straight-run components with or without hydrodesulphurization. Thermally or catalytically cracked gas oils tested with in-vitro bacterial mutagenicity assays in the presence of S9 metabolic activation were shown to be mutagenic. In-vitro sister chromatic exchange assays on cracked gas oil gave equivocal results both with and without S9 metabolic activation. In-vivo bone marrow cytogenetics assay was inactive for two cracked gas oil samples. Three hydrocracked gas oils were tested with in-vitro bacterial mutagenicity assays with S9, and one of the three gave positive results. Twelve distillate fuel samples were tested with in-vitro bacterial mutagenicity assays & with S9 metabolic activation and showed negative to weakly positive results. In one series, activity was shown to be related to the PCA content of samples tested. Two in-vivo studies were also conducted. A mouse dominant lethal assay was negative for a sample of diesel fuel. In the other study, 9 samples of No 2 heating oil containing 50% cracked stocks caused a slight increase in the number of chromosomal aberrations in bone marrow cytogenetics assays. DEVELOPMENTAL TOXICITY: Diesel fuel vapor did not cause fetotoxic or teratogenic effects when pregnant rats were exposed on days 6-15 of pregnancy. Gas oils were applied to the skin of pregnant rats daily on days 0-19 of gestation. All but one (coker light gas oil) caused fetotoxicity (increased resorptions, reduced litter weight, reduced litter size) at dose levels that were also maternally toxic.

The National Institute of Occupational Safety and Health (NIOSH) has recommended that whole diesel exhaust be regarded as potentially causing cancer. This recommendation was based on test results showing increased lung cancer in laboratory animals exposed to whole diesel exhaust.

This product contains naphthalene.
GENERAL TOXICITY: Exposure to naphthalene has been reported to cause methemoglobinemia and/or hemolytic anemia, especially in humans deficient in the enzyme glucose-6-phosphate dehydrogenase. Laboratory animals given repeated oral doses of naphthalene have developed cataracts.
REPRODUCTIVE TOXICITY AND BIRTH DEFECTS: Naphthalene did not cause birth defects when administered orally to rabbits, rats, and mice during pregnancy, but slightly reduced litter size in mice at dose levels that were lethal to the pregnant females. Naphthalene has been reported to cross the human placenta. GENETIC TOXICITY: Naphthalene caused chromosome aberrations and sister chromatid exchanges in Chinese hamster ovary cells, but was not a mutagen in several other in-vitro tests.CARCINOGENICITY: In a study conducted by the National Toxicology Program (NTP), mice exposed to 10 or 30 ppm of naphthalene by inhalation daily for two years had chronic inflammation of the nose and lungs and increased incidences of metaplasia in those tissues. The incidence of benign lung tumors (alveolar/bronchiolar adenomas) was significantly increased in the high-dose female group but not in the

male groups. In another two-year inhalation study conducted by NTP, exposure of rats to 10, 30, and 60 ppm naphthalene caused increases in the incidences of a variety of nonneoplastic lesions in the nose. Increases in nasal tumors were seen in both sexes, including olfactory neuroblastomas in females at 60 ppm and adenomas of the respiratory epithelium in males at all exposure levels. The relevance of these effects to humans has not been established. No carcinogenic effect was reported in a 2-year feeding study in rats receiving naphthalene at 41 mg/kg/day.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

A series of studies on the acute toxicity of 4 diesel fuel samples were conducted by one laboratory using water accommodated fractions. The range of effective (EC50) or lethal concentrations (LC50) expressed as loading rates were: This material is expected to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

72 hour(s) EC50: 2.6-25 mg/l (Selenastrum capricornutum)
96 hour(s) LC50: 21-210 mg/l (Salmo gairdneri)
48 hour(s) EC50: 20-210 mg/l (Daphnia magna)

MOBILITY

No data available.

PERSISTENCE AND DEGRADABILITY

This material is not expected to be readily biodegradable. On release to the environment the lighter components of diesel fuel will generally evaporate but depending on local environmental conditions (temperature, wind, mixing or wave action, soil type, etc.) the remainder may become dispersed in the water column or absorbed to soil or sediment. Diesel fuel would not be expected to be readily biodegradable. In a modified Strum test (OECD method 301B) approximately 40% biodegradation was recorded over 28 days. However, it has been shown that most hydrocarbon components of diesel fuel are degraded in soil in the presence of oxygen. Under anaerobic conditions, such as in anoxic sediments, rates of biodegradation are negligible.
The product has not been tested. The statement has been derived from products of a similar structure and composition.

POTENTIAL TO BIOACCUMULATE

Bioconcentration Factor: No data available.
Octanol/Water Partition Coefficient: No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by international, country, or local laws and regulations.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: For packages with an Initial Boiling Point > 35 deg C and a Flash Point (PM Closed Cup) >/= 23 deg C but </= 60 deg C: UN1202, GAS OIL, 3, III; OPTIONAL DISCLOSURE: UN1202, GAS OIL, 3, III, MARINE POLLUTANT (DIESEL FUEL) Optional disclosure per 49 CFR when Flash Point (PM Closed Cup) >/= 38 deg C < 93 deg C per 49 173.150 (f): UN1202, GAS OIL, COMBUSTIBLE LIQUID, III; NON-BULK PACKAGES ARE EXEMPTED FROM THE PROVISIONS OF 49 CFR IN USA JURISDICTIONS Optional disclosure as a GHS Environmental Hazard/Marine Pollutant when Flash Point (PM Closed Cup) > 60 deg C: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(DIESEL FUEL), 9, III, MARINE POLLUTANT (DIESEL FUEL)

IMO/IMDG Shipping Description: For packages with an Initial Boiling Point > 35 deg C and a Flash Point (PM Closed Cup) >/= 23 deg C, </= 60 deg C: UN1202, GAS OIL, 3, III, FLASH POINT SEE SECTION 5 OR 9, MARINE POLLUTANT (DIESEL FUEL); OPTIONAL DISCLOSURE: UN1268, PETROLEUM DISTILLATES, N.O.S. (DIESEL FUEL), 3, III, FLASH POINT SEE SECTION 5 OR 9, MARINE POLLUTANT (DIESEL FUEL) For packages with a Flash Point (PM Closed Cup) > 60 deg C: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIESEL FUEL), 9, III, MARINE POLLUTANT (DIESEL FUEL)

ICAO/IATA Shipping Description: For packages with an Initial Boiling Point > 35 deg C and a Flash Point (PM Closed Cup) >/= 23 deg C, </= 60 deg C: UN1202, GAS OIL, 3, III For packages with a Flash Point (PM Closed Cup) > 60 deg C: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIESEL FUEL), 9, III, MARINE POLLUTANT (DIESEL FUEL)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:

1.	Immediate (Acute) Health Effects:	YES
2.	Delayed (Chronic) Health Effects:	YES
3.	Fire Hazard:	YES
4.	Sudden Release of Pressure Hazard:	NO
5.	Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1 03=EPCRA 313

01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Diesel Fuel No. 2	07
Naphthalene	01-2B, 02, 04, 06

CERCLA REPORTABLE QUANTITIES(RQ)/EPCRA 302 THRESHOLD PLANNING QUANTITIES(TPQ):

Component	Component RQ	Component TPQ	Product RQ
Naphthalene	100 lbs	None	40000 lbs

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), IECSC (China), KECI (Korea), PICCS (Philippines), TCSI (Taiwan), TSCA (United States).

NEW JERSEY RTK CLASSIFICATION:
Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: DIESEL FUEL

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 1 Flammability: 2 Reactivity: 0

HMIS RATINGS: Health: 2* Flammability: 2 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

Additional Product Number(s): 203408, 203410, 203413, 203417, 203431, 203436, 203437, 203441, 203443, 203447, 203449, 203450, 203477990, 203480990, 203481990, 203482990, 203483990, 203484990, 203485990, 203486990, 203487990, 203488990, 203489990, 220122, 225114, 225115, 225150, 266176, 270000, 270005, 270030, 270031, 270032, 270033, 270034, 270040, 270041, 270042, 270043, 270044, 270045, 270046, 270047, 270048, 270049, 270050, 270051, 270052, 270053, 270054, 270058, 270059, 270060, 270062, 270063, 270064, 270065, 270068, 270069, 270070, 270081, 270082, 270083, 270084, 270085, 270086, 270087, 270088, 270089, 270090, 270091, 270094, 270095, 270096, 270100, 270101, 270102, 270103, 270104, 270105, 270106, 270107, 270108, 270109, 270110, 270111,

270112, 270113, 270114, 270115, 270116, 270117, 270118, 270119, 270120, 270121, 270122, 270123, 270124, 271006, 272006, 272007, 272008, 272009, 272010, 272011, 272012, 272013, 272093, 272102, 272126, 272129, 272130, 272131, 272152, 272185, 272190, 272195, 272593, 272601, 272602, 272693, 272793, 273003, 273030, 273053, 275000

REVISION STATEMENT:

SECTION 15 - Regulatory Information information was modified.
SECTION 16 - Product Code(s) information was modified.

Revision Date: February 23, 2017

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the 29 CFR 1910.1200 (2012) by Chevron Energy Technology Company, 6001 Bollinger Canyon Road, San Ramon, CA 94583.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

MATERIAL SAFETY DATA SHEET

Fox Valley Systems, Inc
640 Industrial Dr.
Cary, Il 60013

Phone: 847-639-5744
Fax: 847-639-8190
Prepared: 21-Jul-2009

SECTION I: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Easy Marker Black
SYNONYMS: Power Paint Cartridge Black, Marking Paint Black
PRODUCT CODES: ETBK2D

MANUFACTURER: Fox Valley Systems, Inc
ADDRESS: 640 Industrial Dr, Cary, IL 60013

INFORMATION PHONE: 1-847-639-5744
INFOTRAC PHONE: 1-800-535-5053, 1-352-323-3500 (IF OUTSIDE U.S.A)
FAX PHONE: 1-847-639-8190

PRODUCT USE: Ground Marking

PREPARED BY: Fox Valley Systems, Inc

SECTION II: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS No.	% by Wt.	ACGIH® TLVs® TWA mg/m³	OSHA PELs TWA mg/m³	NIOSH RELs TWA mg/m³	EC No.
Acetone	67-64-1	10-20%	1188	1000	590	200-662-2
Butane	106-97-8	5-15%	1000	N/E	1900	203-448-7
2-Butoxyethanol	111-76-2	1-5%	97	240	24	203-905-0
Carbon Black	1333-86-4	1-5%	3.5	3.5	3.5	215-609-9
Ethylbenzene	100-41-4	1-5%	434	435	435	202-849-4
Propane	74-98-6	10-20%	1000	1800	1800	200-827-9
Stoddard Solvent	8052-41-3	1-5%	525	2900	350	232-489-3
Toluene	108-88-3	5-15%	75	750	190	203-625-9
VM&P Naptha	8032-32-4	5-10%	N/E	N/E	350	232-453-7
Xylene	1330-20-7	1-5%	434	435	435	215-535-7

SECTION III: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Contents under pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Extremely flammable liquid and vapor. Harmful if swallowed

ROUTES OF ENTRY: INHALATION of vapor or spray mist
EYE OR SKIN contact with the product vapor or spray mist.

POTENTIAL HEALTH EFFECTS

EYES: Irritation

SKIN: Prolonged or repeated exposure may cause irritation

INGESTION: Swallowing may cause abdominal spasms and other symptoms that parallel over-exposure from inhalation. Aspiration of material into the lungs can cause chemical pneumonitis, which may be fatal.

INHALATION: Inhalation may cause irritation of the upper respiratory tract. Symptoms of overexposure may include fatigue, confusion, headache, dizziness and drowsiness. Peculiar skin sensations (e. g. pins and needles) or numbness may be produced. Very high concentrations may cause unconsciousness and death.

SECTION III: HAZARDS IDENTIFICATION, CON'T

CHRONIC HEALTH HAZARDS

Overexposure to Toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans due to chronic overexposure, have included liver and cardiac abnormalities.

Overexposure to Xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen eye and blood damage as well as reproductive disorders. Effects in humans due to chronic overexposure, have included liver, cardiac abnormalities and nervous system disorders.

Overexposure to Ethylbenzene may cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confsion and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to Ethylbenzene with permanent brain and nervous system damage.

CARCINOGENICITY

IARC: Ethylbenzene is listed as a possible human carcinogen (2B) based on laboratory animal studies.

SECTION VI: FIRST AID MEASURES

EYES: Hold eyes open and flush with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area with soap and water. Get medical attention if irritation or rash develops. Remove contaminated clothing and launder before re-use.

INGESTION: Aspiration hazard. Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. CALL A PHYSICIAN IMMEDIATELY.

SECTION V: FIRE-FIGHTING MEASURES

FLASH POINT:	-156° F
UPPER EXPLOSIVE LIMIT:	9.8%
LOWER EXPOLOSIVE LIMIT	1.8%
EXTINGUISHING MEDIA:	Dry Chemical, Carbon Dioxide, Water Fog or Spray
SPECIAL FIRE FIGHTING PROCEDURES:	Full protective equipment including self-contained breathing apparatus should be used.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Perforation of pressurized containers may cause bursting of the containers. Closed containers may explode when exposed to extreme heat. Flash point is less than -20° F. Extremely flammable liquid and vapor.

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Cary, Il 60013

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Fax: 847-639-8190
Prepared: 21-Jul-2009

SECTION VI: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Steps should be taken in case material is released or spilled. Remove all sources of ignition. Ventilate the area. Remove with inert absorbent.

SECTION VII: HANDLING AND STORAGE

HANDLING AND STORAGE: Use only in a well ventilated area. Avoid breathing mist or vapor. Do not smoke. Extinguish all flames, pilot lights and heaters. Turn off stoves electric tools and appliances and any other sources of ignition.

Do not store above 120°F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Prevent build-up of vapors by opening all doors and windows to achieve cross ventilation.

VENTILATION : A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

RESPIRATORY PROTECTION: If the exposure limit is exceeded and engineering controls are not feasible, a half-face organic vapor respirator may be worn for up to ten times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece organic vapor respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

SKIN PROTECTION: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

EXPOSURE GUIDELINES: See section II

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SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Liquid
ODOR:	Solvent Like
PHYSICAL STATE:	Liquid
pH AS SUPPLIED:	Not Available
BOILING POINT:	<0 - 325°F
MELTING POINT:	Not Available
FREEZING POINT:	Not Available
VAPOR DENSITY (AIR = 1):	Heavier than air
EVAPORATION RATE:	Faster than Ether
SOLUBILITY IN WATER:	Not Available
VOLATILE ORGANIC COMPOUNDS(VOC):	<66% by Weight

SECTION X: STABILITY AND REACTIVITY

STABILITY:	Stable under normal storage conditions.
CONDITIONS TO AVOID (STABILITY):	Avoid temperature above 120°F. Avoid possible sources of ignition.
INCOMPATIBILITY (MATERIAL TO AVOID):	None Known
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:	When heated to decomposition, it emits acrid smoke and irritating fumes. By fire, Carbon Monoxide and Carbon Dioxide.
HAZARDOUS POLYMERIZATION:	Will not occur under normal conditions.

SECTION XI: TOXICOLOGICAL INFORMATION

Ingredient	CAS No.	LD50	Animal,Route	LC50	Exposure	Animal,Route
Acetone	67-64-1					
Butane	106-97-8					
2-Butoxyethanol	111-76-2					
Carbon Black	1333-86-4					
Ethylbenzene	100-41-4	3500 mg/kg	Oral, Rat			
Propane	74-98-6					
Stoddard Solvent	8052-41-3					
Toluene	108-88-3	636 mg/kg	Oral, Rat	4000 ppm	4 hr	Rat
VM&P Naptha	8032-32-4					
Xylene	1330-20-7	4300mg/kg	Oral, Rat	5000 ppm	4 hr	Rat

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SECTION XII: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No data available

SECTION XIII: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Waste from this product may be hazardous as defined under the Resouce Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State and Local Regulations.

SECTION XIV: TRANSPORT INFORMATION

US Ground (DOT)

May be classed as Consumer Commodity, ORM-D
UN1950, AEROSOLS, 2.1, LIMITED QUANTIITY, (ERG #126)

Canada (TDG)

May be classed as Consumer Commodity, ORM-D
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTIITY, (ERG #126)

International Maritime Organization (IMO)

May be shipped as Limited Quantity
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTIITY, EMS: F-D, S-U
Marine Polutant: NO

SECTION 14 NOTES: Proper Shipping Name: Aerosols, Flammable, Consumer Commodity, ORM-D

MATERIAL SAFETY DATA SHEET

Fox Valley Systems, Inc
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Cary, Il 60013

Phone: 847-639-5744
Fax: 847-639-8190
Prepared: 21-Jul-2009

SECTION XV: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): All chemicals in this product are listed, or are exempt from listing on the TSCA Inventory.

311/312 HAZARD CATEGORIES:
ACUTE: Yes
CHRONIC: Yes
FIRE: Yes

313 REPORTABLE INGREDIENTS:

Ingredient	CAS No.	EC No.	% by Wt.
Ethylbenzene	100-41-4	202-849-4	1-5%
Toluene	108-88-3	203-625-9	5-15%
Xylene	1330-20-7	215-535-7	1-5%

STATE REGULATIONS
California: This product contains a chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

FOREIGN REGULATIONS
Canada: WHMIS; Class A, B-5 --Flammable Aerosols--

SECTION XVI: OTHER INFORMATION

HMIS:
Health Hazard: 2
Fire Hazard: 4
Physical Hazard: 0

PREPARATION INFORMATION:
MSDS Revision Date: 21 July 2009
MSDS Author: Regulatory Department

DISCLAIMER: This information should be included in all MSDSs that are copied and distributed for these products.

This data sheet is not part of any contract of sale. The information contained herein is believed to be correct or is obtained form sources believed to be generally reliable. However, it is the responsibility of the user of these materials to investigate, understand and comply with the law and with procedures applicable to the safe handling and use of these materials. Fox Valley Systems, Inc. shall not be liable for any loss or damage directly or indirectly arising from the use of the product, and Fox Valley Systems, Inc. assumes no obligation or liability for reliance on the information contained herein, or omission here from.

MATERIAL SAFETY DATA SHEET

Fox Valley Systems, Inc
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Phone: 847-639-5744
Fax: 847-639-8190
Prepared: 23-Apr-2009

SECTION I: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Easy Marker Yellow
SYNONYMS: A.P.W.A. Yellow, Power Paint Cartridge Yellow, Marking Paint Yellow
PRODUCT CODES: ETYU2D

MANUFACTURER: Fox Valley Systems, Inc
ADDRESS: 640 Industrial Dr, Cary, IL 60013

INFORMATION PHONE: 1-847-639-5744
INFOTRAC PHONE: 1-800-535-5053, 1-352-323-3500 (IF OUTSIDE U.S.A)
FAX PHONE: 1-847-639-8190

PRODUCT USE: Ground Marking

PREPARED BY: Fox Valley Systems, Inc

SECTION II: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS No.	% by Wt.	ACGIH® TLVs® TWA mg/m³	OSHA PELs TWA mg/m³	NIOSH RELs TWA mg/m³	EC No.
Ethylbenzene	100-41-4	1-2%	434	435	435	202-849-4
IsoButane	75-28-5	15-20%	1000	N/E	1900	200-857-2
Propane	74-98-6	10-20%	1000	1800	1800	200-827-9
Toluene	108-88-3	20-30%	75	750	190	203-625-9
VM&P Naptha	64742-89-8	5-12%	100	N/E	N/E	265-192-2
Xylene	1330-20-7	3-8%	434	435	435	215-535-7

SECTION III: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Contents under pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Extremely flammable liquid and vapor. Harmful if swallowed

ROUTES OF ENTRY: INHALATION of vapor or spray mist
EYE OR SKIN contact with the product vapor or spray mist.

POTENTIAL HEALTH EFFECTS

EYES: Irritation

SKIN: Prolonged or repeated exposure may cause irritation

INGESTION: Swallowing may cause abdominal spasms and other symptoms that parallel over-exposure from inhalation. Aspiration of material into the lungs can cause chemical pneumonitis, which may be fatal.

INHALATION: Inhalation may cause irritation of the upper respiratory tract. Symptoms of overexposure may include fatigue, confusion, headache, dizziness and drowsiness. Peculiar skin sensations (e. g. pins and needles) or numbness may be produced. Very high concentrations may cause unconsciousness and death.

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SECTION III: HAZARDS IDENTIFICATION, CONT.

CHRONIC HEALTH HAZARDS

Overexposure to Toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans due to chronic overexposure, have included liver and cardiac abnormalities.

Overexposure to Xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen eye and blood damage as well as reproductive disorders. Effects in humans due to chronic overexposure, have included liver, cardiac abnormalities and nervous system disorders.

Overexposure to Ethylbenzene may cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confsion and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to Ethylbenzene with permanent brain and nervous system damage.

CARCINOGENICITY

IARC: Ethylbenzene is listed as a possible human carcinogen (2B) based on laboratory animal studies.

SECTION VI: FIRST AID MEASURES

EYES: Hold eyes open and flush with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area with soap and water. Get medical attention if irritation or rash develops. Remove contaminated clothing and launder before re-use.

INGESTION: Aspiration hazard. Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. CALL A PHYSICIAN IMMEDIATELY.

SECTION V: FIRE-FIGHTING MEASURES

FLASH POINT:	-156° F
UPPER EXPLOSIVE LIMIT:	9.8%
LOWER EXPOLOSIVE LIMIT	1.8%
EXTINGUISHING MEDIA:	Dry Chemical, Carbon Dioxide, Water Fog or Spray
SPECIAL FIRE FIGHTING PROCEDURES:	Full protective equipment including self-contained breathing apparatus should be used.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Perforation of pressurized containers may cause bursting of the containers. Closed containers may explode when exposed to extreme heat. Flash point is less than -20° F. Extremely flammable liquid and vapor.

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SECTION VI: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Steps should be taken in case material is released or spilled. Remove all sources of ignition. Ventilate the area. Remove with inert absorbent.

SECTION VII: HANDLING AND STORAGE

HANDLING AND STORAGE: Use only in a well ventilated area. Avoid breathing mist or vapor. Do not smoke. Extinguish all flames, pilot lights and heaters. Turn off stoves electric tools and appliances and any other sources of ignition.

Do not store above 120°F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Prevent build-up of vapors by opening all doors and windows to achieve cross ventilation.

VENTILATION : A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

RESPIRATORY PROTECTION: If the exposure limit is exceeded and engineering controls are not feasible, a half-face organic vapor respirator may be worn for up to ten times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece organic vapor respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

SKIN PROTECTION: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

EXPOSURE GUIDELINES: See section II

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SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Liquid
ODOR:	Solvent Like
PHYSICAL STATE:	Liquid
pH AS SUPPLIED:	Not Available
BOILING POINT:	<0 - 325°F
MELTING POINT:	Not Available
FREEZING POINT:	Not Available
VAPOR DENSITY (AIR = 1):	Heavier than air
EVAPORATION RATE:	Faster than Ether
SOLUBILITY IN WATER:	Not Available
VOLATILE ORGANIC COMPOUNDS(VOC):	<66% by Weight

SECTION X: STABILITY AND REACTIVITY

STABILITY:	Stable under normal storage conditions.
CONDITIONS TO AVOID (STABILITY):	Avoid temperature above 120°F. Avoid possible sources of ignition.
INCOMPATIBILITY (MATERIAL TO AVOID):	None Known
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:	When heated to decomposition, it emits acrid smoke and irritating fumes. By fire, Carbon Monoxide and Carbon Dioxide.
HAZARDOUS POLYMERIZATION:	Will not occur under normal conditions.

SECTION XI: TOXICOLOGICAL INFORMATION

Ingredient	CAS No.	LD50	Animal, Route	LC50	Exposure	Animal, Route
Ethylbenzene	100-41-4	3500 mg/kg	Oral, Rat			
IsoButane	75-28-5					
Propane	74-98-6					
Toluene	108-88-3	636 mg/kg	Oral, Rat	4000 ppm	4 hr	Rat
VM&P Naptha	64742-89-8					
Xylene	1330-20-7	4300mg/kg	Oral, Rat	5000 ppm	4 hr	Rat

SECTION XII: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No data available

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SECTION XIII: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:

Waste from this product may be hazardous as defined under the Resouce Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State and Local Regulations.

SECTION XIV: TRANSPORT INFORMATION

US Ground (DOT)

May be classed as Consumer Commodity, ORM-D
UN1950, AEROSOLS, 2.1, LIMITED QUANTIITY, (ERG #126)

Canada (TDG)

May be classed as Consumer Commodity, ORM-D
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTIITY, (ERG #126)

International Maritime Organization (IMO)

May be shipped as Limited Quantity
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTIITY, EMS: F-D, S-U
Marine Polutant: NO

SECTION 14 NOTES: Proper Shipping Name: Aerosols, Flammable, Consumer Commodity, ORM-D

MATERIAL SAFETY DATA SHEET

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SECTION XV: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): All chemicals in this product are listed, or are exempt from listing on the TSCA Inventory.

311/312 HAZARD CATEGORIES:
ACUTE: Yes
CHRONIC: Yes
FIRE: Yes

313 REPORTABLE INGREDIENTS:

Ingredient	CAS No.	EC No.	% by Wt.
Ethylbenzene	100-41-4	202-849-4	1-2%
Toluene	108-88-3	203-625-9	20-30%
Xylene	1330-20-7	215-535-7	3-8%

STATE REGULATIONS
California: This product contains a chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

FOREIGN REGULATIONS
Canada: WHMIS; Class A, B-5 --Flammable Aerosols--

SECTION XVI: OTHER INFORMATION

HMIS:
Health Hazard: 2
Fire Hazard: 4
Physical Hazard: 0

PREPARATION INFORMATION:
MSDS Revision Date: 17-April-2012
MSDS Author: Regulatory Department

DISCLAIMER: This information should be included in all MSDSs that are copied and distributed for these products.

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SAFETY DATA SHEET

This Safety Data Sheet complies with Regulation (EC) No 1907/2006, 1272/2008, ISO 11014-1 and ANSI Z400.1

ESAB 7018 (North America)

Replaces SDS: 2016-04-04

Issued: 2017-08-17

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name	ESAB 7018 (North America)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use	Arc Welding

1.3. Details of the supplier of the safety data sheet

Supplier	ESAB Welding & Cutting Products
Street address	801 Wilson Ave. Hanover, PA 17331
Telephone	1-717-637-8911
Fax	1-717-630-3458
Email	us.technical.fillermetals@esab.com
Web site	www.esabna.com

1.4. Emergency telephone number

Emergency phone number	1-800-424-9300 (Chemtrec)
Available outside office hours	Yes

Other

Classification: AWS A5.1; E7018

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Description	This product is not classified as hazardous according to applicable GHS hazard classification criteria as required and defined in OSHA Hazard Communication Standard (29CFR Part 1910.1200).

2.2. Label elements

More information	This product does not require labeling.

2.3. Other hazards

This product contains titanium dioxide which is possibly carcinogenic. This product contains quartz, but normally not in an inhalable fraction. Quartz can cause silicosis and may cause cancer. Avoid eye contact or inhalation of dust from the product.
Skin contact is normally no hazard but should be avoided to prevent possible allergic reactions. Persons with a pacemaker should not go

near welding or cutting operations until they have consulted their doctor and obtained information from the manufacturer of the device.

When this product is used in a welding process, the most important hazards are welding fumes, heat, radiation and electric shock.
Fumes: Overexposure to welding fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat or eyes. Chronic overexposure to welding fumes may affect pulmonary function. Overexposure to manganese and manganese compounds above safe exposure limits can cause irreversible damage to the central nervous system, including the brain, symptoms of which may include slurred speech, lethargy, tremor, muscular weakness, disturbances and spastic gait.
Heat: Spatter and melting metal can cause burn injuries and start fires.
Radiation: Arc rays can severely damage eyes or skin.
Electricity: Electric shock can kill.

Other

Emergency Overview: Coated metal rods in varying colors. This product is normally not considered hazardous when transported. Gloves should be worn when handling to prevent contaminating hands with product dust.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical name	***CAS No.*** ***EC No.*** ***REACH No.***	***Concentration***	***Classification***	***R-phrase*** ***H-phrase***
Iron	7439-89-6 231-096-4 01-2119462838 - 24	>60%	- -	- -
Calcium carbonate	1317-65-3 215-279-6 -	5 - 10%	- -	- -
Calcium fluoride	7789-75-5 232-188-7 -	5 - 10%	- -	- -
Feldspar	68476-25-5 270-666-7 -	1 - 5%	- -	- -
Manganese	7439-96-5 231-105-1 01-2119449803 - 34	1 - 5%	- -	- -
Silicate Binder (Sodium silicate)	1344-09-8 215-687-4 -	1 - 5%	- -	- -
Titanium oxide	13463-67-7 236-675-5 -	1 - 5%	- -	- -
Cellulose	9004-34-6	0,1 - 1%	-	-

	232-674-9 -		-	-
Iron oxide	1317-61-9 215-277-5 -	0,1 - 1%	- -	- -
Quartz	14808-60-7 238-878-4 -	0,1 - 1%	- STOT RE 1	- H372
Silicate Binder (Potassium silicate)	1312-76-1 215-199-1 -	0,1 - 1%	- -	- -
Silicon	7440-21-3 231-130-8 -	0,1 - 1%	- -	- -

Product based on This product is a preparation of core wire with extruded coating.

SECTION 4: First aid measures

4.1. Description of first aid measures

Electric shock: Disconnect and turn off the power. Use a nonconductive material to pull victim away from contact with live parts or wires. If not breathing, begin artificial respiration, preferably mouth-to-mouth. If no detectable pulse, begin Cardio Pulmonary Resuscitation (CPR). call emergency physician to the scene of the accident. Call a physician immediately.

Inhalation If breathing has stopped, perform artificial respiration and obtain medical assistance immediately! If breathing is difficult, provide fresh air and call physician.

Skin contact For skin burns from arc radiation, promptly flush with cold water. Get medical attention for burns or irritations that persist. To remove dust or particles wash with mild soap and water.

Eye contact For radiation burns due to arc flash, see physician. To remove dusts or fumes flush with water for at least fifteen minutes. If irritation persists, obtain medical assistance.

4.2. Most important symptoms and effects, both acute and delayed

Not applicable

4.3. Indication of any immediate medical attention and special treatment needed

Not applicable

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	No specific recommendations for welding consumables. Welding arcs and sparks can ignite combustible and flammable materials. Use the extinguishing media recommended for the burning materials and fire situation.

5.2. Special hazards arising from the substance or mixture

Not applicable

5.3. Advice for firefighters

Special protective equipment for fire-fighters	Wear self-contained breathing apparatus as fumes or vapors may be harmful.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Refer to Section 8.

6.2. Environmental precautions

Refer to Section 13.

6.3. Methods and material for containment and cleaning up

Solid objects may be picked up and placed into a container. Liquids or pastes should be scooped up and placed into a container. Wear proper protective equipment while handling these materials. Do not discard as refuse.

6.4. Reference to other sections

Refer to Section 8 and Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Preventive handling precautions	Handle with care to avoid stings and cuts. Wear gloves when handling welding consumables. Avoid exposure to dust. Do not ingest. Some individuals can develop an allergic reaction to certain materials. Retain all warning and identity labels.

7.2. Conditions for safe storage, including any incompatibilities

Keep separate from chemical substances like acids and strong bases, which could cause chemical reactions.

7.3. Specific end use(s)

Arc Welding

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits	Use industrial hygiene monitoring equipment to ensure that exposure does not exceed applicable national exposure limits. The following limits can be used as guidance. Unless noted, all values are for 8 hour time weighted averages (TWA). For information about welding fume analysis refer to Section 10. ACGIH TLV, mg/m3 Calcium carbonate Withdrawn Calcium fluoride (as F) 2.5 Cellulose 10 Iron and Iron oxide 5 Respirable fraction Manganese, fume, as Mn 0.02 Respirable fraction 0.1 Inhalable fraction Manganese and inorganic compounds, as Mn 0.02 Respirable fraction 0.1 Inhalable fraction Silicon Withdrawn Silicon dioxide (quartz) 0.025 Respirable fraction Titanium oxide 10 USA, OSHA PEL, mg/m3

National occupational exposure limits

Ingredient	*CAS no.*	*EC No.*	*Exposure limit mg/m3-ppm*		*Short-term exposure limit mg/m3-ppm*		*Ceiling exposure limit mg/m3-ppm*		*Remark*	*Source*	*Year*
Cellulose	9004-34-6	-	5	-	-	-	-	-	Respirable fraction	-	2017
Cellulose	9004-34-6	-	15	-	-	-	-	-	Total dust	-	2017
Iron	7439-89-6	-	10	-	-	-	-	-	Fume, as iron oxide	-	2017
Manganese, fume	7439-96-5	-	-	-	-	-	5	-	as Mn	-	2017
Manganese and inorganic compounds	7439-96-5	-	-	-	-	-	5	-	as Mn	-	2017
Calcium carbonate	1317-65-3	-	5	-	-	-	-	-	Respirable fraction	-	2017
Calcium carbonate	1317-65-3	-	15	-	-	-	-	-	Total dust	-	2017
Calcium fluoride	7789-75-5	-	2,5	-	-	-	-	-	as F	-	2017
Potassium feldspar	68476-25-5	-	-	-	-	-	-	-	No PEL	-	2017
Potassium silicate	1312-76-1	-	-	-	-	-	-	-	No PEL	-	2017
Quartz	14808-60-7	-	0,05	-	-	-	-	-	Respirable dust	-	2017
Silicon	7440-21-3	-	5	-	-	-	-	-	Respirable fraction	-	2017
Silicon	7440-21-3	-	15	-	-	-	-	-	Total dust	-	2017
Sodium silicate	6834-92-0	-	-	-	-	-	-	-	No PEL	-	2017
Titanium oxide	13463-67-7	-	15	-	-	-	-	-	Total dust	-	2017
Iron oxide	1317-61-9	-	10	-	-	-	-	-	Fume	-	2017

8.2. Exposure controls

Not applicable

Other

Avoid exposure to welding fumes, radiation, spatter, electric shock, heated materials and dust. Train welders to avoid contact with live electrical parts and insulate conductive parts.

Ventilation	Use respirator or air supplied respirator when welding or brazing in a confined space, or where local exhaust or ventilation is not sufficient to keep exposure values within safe limits. Use special care when welding painted or coated steels since hazardous substances from the coating may be emitted. Ensure sufficient ventilation, local exhaust, or both, to keep welding fumes and gases from breathing zone and general area.
Personal protective equipment	Wear hand, head, eyes, ear and body protection like welders gloves, helmet or face shield with filter lens, safety boots, apron, arm and shoulder protection. Keep protective clothing clean and dry.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Steel rod with extruded flux coating
Appearance, colour	Varying color
Appearance, physical state	Solid
Auto-ignition temperature	Not applicable
Decomposition temperature	No data available
Evaporation rate	Not applicable
Explosive properties	Not applicable
Flammability (solid, gas)	Not applicable
Flash point	Not applicable
Initial boiling point and boiling range	No data available
Melting point	>1300°C / >2300ºF
Melting point / freezing point	Not applicable
Odour	Not applicable
Odour treshold	Not applicable
Oxidising properties	Not applicable
Partition coefficient: n-octanol / water	Not applicable

pH value	Not applicable
Relative density	No data available
Solubility	No data available
Upper / lower flammability or explosive limits	No data available
Vapour density	Not applicable
Vapour pressure	Not applicable
Viscosity	Not applicable
Volatility	Not applicable

9.2. Other information

Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Contact with chemical substances like acids or strong bases could cause generation of gas.

10.2. Chemical stability

Chemical stability	Stable at normal conditions

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not applicable

10.4. Conditions to avoid

Conditions to avoid	This product is only intended for normal welding purposes.

10.5. Incompatible materials

Incompatible materials	Not applicable

10.6. Hazardous decomposition products

Hazardous decomposition products	When this product is used in a welding process, hazardous decomposition products would include those from the volatilization, reaction or oxidation of the materials listed in Section 3 and those from the base metal and coating. The amount of fumes generated from manual metal arc welding varies with welding parameters and dimensions, but is generally no more than 5 to 15 g/kg consumable. Fumes from this product may contain compounds of the following chemical elements: Fe, O, Mn, Na, K, Ca, Al, Si, F, and Ti. The rest is not analyzed, according to available standards.

Other

Refer to applicable national exposure limits for fume compounds, including those exposure limits for fume compounds found in Section 8.

Manganese has a low exposure limit, in some countries, that may be easily exceeded.
Reasonably expected gaseous products would include carbon oxides, nitrogen oxides and ozone. Air contaminants around the welding area can be affected by the welding process and influence the composition and quantity of fumes and gases produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on toxicological effects	Inhalation of welding fumes and gases can be dangerous to your health. Classification of welding fumes is difficult because of varying base materials, coatings, air contamination and processes. The International Agency for Research on Cancer has classified welding fumes as possibly carcinogenic to humans (Group 2B).
acute toxicity	Overexposure to welding fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat or eyes.
skin corrosion/irritation	Not applicable
serious eye damage/irritation	Not applicable
Respiratory/skin sensitization	Not applicable
germ cell mutagenicity	Not applicable
Genotoxicity	Not applicable
carcinogenicity	Not applicable
Repeated dose toxicity	Not applicable
reproductive toxicity	Not applicable
STOT-single exposure	Not applicable
STOT-repeated exposure	Not applicable
Aspiration hazard	Not applicable

Other

Long term effect	Chronic toxicity: Overexposure to welding fumes may affect pulmonary function. Overexposure to manganese and manganese compounds above safe exposure limits can cause irreversible damage to the central nervous system, including the brain, symptoms of which may include slurred speech, lethargy, tremor, muscular weakness, disturbances and spastic gait. Prolonged inhalation of titanium dioxide above safe exposure limits can cause cancer. Inhalable quartz is a respiratory carcinogen; however, the process of welding converts crystalline quartz to the amorphous form which is not considered to be a carcinogen.

SECTION 12: Ecological information

12.1. Toxicity

Not applicable

12.2. Persistence and degradability

Not applicable

12.3. Bioaccumulative potential

Not applicable

12.4. Mobility in soil

Not applicable

12.5. Results of PBT and vPvB assessment

Not applicable

12.6. Other adverse effects

Not applicable

Other

Welding consumables and materials could degrade/weather into components originating from the consumables or from the materials used in the welding process. Avoid exposure to conditions that could lead to accumulation in soils or groundwater.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal considerations	Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with federal and local regulations. Use recycling procedures if available. USA RCRA: This product is not considered hazardous waste if discarded. Residues from welding consumables and processes could degrade and accumulate in soils and groundwater. Welding slag from this product typically contains mainly the following components originating from the coating of the electrode: Fe, O, Mn, Na, K, Ca, Al, Si, F, and Ti.

SECTION 14: Transport information

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Other regulations, limitations and legal regulations	Canada: WHMIS classification: Class D; Division 2, Subdivision A Canadian Environmental Protection Act (CEPA): All constituents of this product are on the Domestic Substance List (DSL). USA: This product contains or produces a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm). (California Health & Safety Code § 25249.5 et seq.) United States EPA Toxic Substance Control Act: All constituents of this product are on the TSCA inventory list or are excluded from listing. CERCLA/SARA Title III Reportable Quantities (RQs) and/or Threshold Planning Quantities (TPQs): Product is a solid solution in the form of a solid article. - Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center and to your Local Emergency Planning Committee. Section 311 Hazard Class - As shipped: Immediate In Use: Immediate delayed EPCRA/SARA Title III 313 Toxic Chemicals: The following metallic components are listed as SARA 313 "Toxic Chemicals" and potential subject to annual SARA 313 reporting. See Section 3 for weight percent. Manganese: 1.0% de minimis concentration

15.2. Chemical safety assessment

Chemical safety assessment	No

Other

Read and understand the manufacturer's instructions, your employer's safety practices and the health and safety instructions on the label. Observe any federal and local regulations. Take precautions when welding and protect yourself and others.
WARNING: Welding fumes and gases are hazardous to your health and may damage lungs and other organs. Use adequate ventilation.
ELECTRIC SHOCK can kill.
ARC RAYS and SPARKS can injure eyes and burn skin.
Wear correct hand, head, eye and body protection.

SECTION 16: Other information

Changes to previous revision	This Safety Data Sheet has been revised due to modifications to Sections 1-16.

References to key literature and data sources	Refer to ESAB "Welding & Cutting - Risks and Measures", F52-529 "Precautions and Safe Practices for Electric Welding and Cutting" and F2035 "Precautions and Safe Practices for Gas Welding, Cutting and Heating" available from ESAB, and to: USA: Contact ESAB at www.esabna.com or 1-800 ESAB-123 if you have any questions about this SDS. American National Standard Z49.1 "Safety in Welding and Cutting", ANSI/AWS F1.5 "Methods for Sampling and Analyzing Gases from Welding and Allied Processes", ANSI/AWS F1.1 "Method for Sampling Airborne Particles Generated by Welding and Allied Processes", AWSF3.2M/F3.2 "Ventilation Guide for Weld Fume", American Welding Society, 550 North Le Jeune Road, Miami Florida 33135. Safety and Health Fact Sheets available from AWS at www.aws.org. OSHA Publication 2206 (29 C.F.R. 1910), U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 American Conference of Governmental Hygienists (ACGIH), Threshold Limit Values and Biological Exposure Indices, 6500 Glenway Ave., Cincinnati, Ohio 45211, USA. NFPA 51B "Standard for Fire Prevention During Welding, Cutting, and Other Hot Work" published by the National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169. UK: WMA Publication 236 and 237, "Hazards from Welding Fume", "The arc welder at work, some general aspects of health and safety". Germany: Unfallverhütungsvorschrift BGV D1, "Schweißen, Schneiden und verwandte Verfahren". Canada: CSA Standard CAN/CSA-W117.2-01 "Safety in Welding, Cutting, and Allied Processes". This product has been classified according to the hazard criteria of the CPR and the SDS contains all the information required by the CPR.
Phrase meaning	H372 - Causes damage to the lungs through prolonged or repeated exposure by inhalation.

Other

Additional information	ESAB requests the users of this product to study this Safety Data Sheet (SDS) and become aware of product hazards and safety information. To promote safe use of this product a user should: -notify its employees, agents and contractors of the information on this SDS and any product hazards/safety information. -furnish this same information to each of its customers for this product. -request such customers to notify employees and customers for the same product hazards and safety information. The information herein is given in good faith and based on technical data that ESAB believes to be reliable. Since the conditions of use is outside our control, we assume no liability in connection with any use of this information and no warranty, expressed or implied is given. Contact ESAB for more information.

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Excalibur® 308L-16
Product Size: 3/16" (4.8 mm)

Other means of identification
SDS number: 200000001877

Recommended use and restriction on use
Recommended use: SMAW (Shielded Metal Arc Welding)
Restrictions on use: Not known. Read this SDS before using this product.

Manufacturer/Importer/Supplier/Distributor Information

Company Name:	The Lincoln Electric Company
Address:	22801 Saint Clair Avenue Cleveland, Ohio 44117 USA
Telephone:	+1 (216) 481-8100
Contact Person:	Safety Data Sheet Questions: www.lincolnelectric.com/sds Arc Welding Safety Information: www.lincolnelectric.com/safety
Company Name:	The Lincoln Electric Company of Canada LP
Address:	179 Wicksteed Avenue Toronto, Ontario M4G 2B9 CANADA
Telephone:	+1 (416) 421-2600
Contact Person:	Safety Data Sheet Questions: www.lincolnelectric.com/sds Arc Welding Safety Information: www.lincolnelectric.com/safety

Emergency telephone number:

USA/Canada/Mexico	+1 (888) 609-1762
Americas/Europe	+1 (216) 383-8962
Asia Pacific	+1 (216) 383-8966
Middle East/Africa	+1 (216) 383-8969

3E Company Access Code: 333988

2. HAZARDS IDENTIFICATION

Classified according to the criteria of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), The United States Occupational Safety and Health Administration's Hazard Communication Standard (29 CFR 1910.1200), Canada's Hazardous Product Regulations and Mexico's Harmonized System for the Identification and Communication of Hazards and Risks from Hazardous Chemicals in the Workplace.

Hazard Classification Not classified as hazardous according to applicable GHS hazard classification criteria.

Label Elements

Hazard Symbol: No symbol

Signal Word: No signal word.

Hazard Statement: Not applicable

Precautionary Not applicable

Statements:

Other hazards which do not result in GHS classification:

Electrical Shock can kill. If welding must be performed in damp locations or with wet clothing, on metal structures or when in cramped positions such as sitting, kneeling or lying, or if there is a high risk of unavoidable or accidental contact with work piece, use the following equipment: Semiautomatic DC Welder, DC Manual (Stick) Welder, or AC Welder with Reduced Voltage Control.

Arc rays can injure eyes and burn skin. Welding arc and sparks can ignite combustibles and flammable materials. Overexposure to welding fumes and gases can be hazardous. Read and understand the manufacturer's instructions, Safety Data Sheets and the precautionary labels before using this product. Refer to Section 8.

Substance(s) formed under the conditions of use:

The welding fume produced from this welding electrode may contain the following constituent(s) and/or their complex metallic oxides as well as solid particles or other constituents from the consumables, base metal, or base metal coating not listed below.

Chemical Identity	CAS-No.
Carbon dioxide	124-38-9
Carbon monoxide	630-08-0
Nitrogen dioxide	10102-44-0
Ozone	10028-15-6
Manganese	7439-96-5
Chromium (VI)	18540-29-9
Nickel	7440-02-0
Chromium oxide	1308-38-9

3. COMPOSITION / INFORMATION ON INGREDIENTS

Reportable Hazardous Ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Iron	7439-89-6	50 - <100%
Chromium and chromium alloys or compounds (as Cr)	7440-47-3	10 - <20%
Titanium dioxide	13463-67-7	5 - <10%
Nickel	7440-02-0	5 - <10%
Limestone	1317-65-3	1 - <5%
Manganese	7439-96-5	1 - <5%
Potassium silicate	1312-76-1	1 - <5%
Feldspar	68476-25-5	1 - <5%
Aluminum oxide	1344-28-1	1 - <5%
Sodium silicate	1344-09-8	0.1 - <1%
Fluorides (as F)	16984-48-8	0.1 - <1%
Potassium oxide	12136-45-7	0.1 - <1%
Hydroxyethyl cellulose	9004-62-0	0.1 - <1%
Quartz	14808-60-7	0.1 - <1%

Kaolin	1332-58-7	0.1 - <1%
Silicon	7440-21-3	0.1 - <1%
Iron oxide	1309-37-1	0.1 - <1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition Comments: The term “Hazardous Ingredients” should be interpreted as a term defined in Hazard Communication standards and does not necessarily imply the existence of a welding hazard. The product may contain additional non-hazardous ingredients or may form additional compounds under the condition of use. Refer to Sections 2 and 8 for more information.

4. FIRST AID MEASURES

Ingestion: Unlikely due to form of product, except for granular materials. Avoid hand, clothing, food, and drink contact with metal fume or powder which can cause ingestion of particulate during hand to mouth activities such as drinking, eating, smoking, etc. If ingested, do not induce vomiting. Contact a poison control center. Unless the poison control center advises otherwise, wash out mouth thoroughly with water. If symptoms develop, seek medical attention at once.

Inhalation: Move to fresh air if breathing is difficult. If breathing has stopped, perform artificial respiration and obtain medical assistance at once.

Skin Contact: Remove contaminated clothing and wash the skin thoroughly with soap and water. For reddened or blistered skin, or thermal burns, obtain medical assistance at once.

Eye contact: Dust or fume from this product should be flushed from the eyes with copious amounts of clean, tepid water until transported to an emergency medical facility. Do not allow victim to rub or keep eyes tightly closed. Obtain medical assistance at once.

Arc rays can injure eyes. If exposed to arc rays, move victim to dark room, remove contact lenses as necessary for treatment, cover eyes with a padded dressing and rest. Obtain medical assistance if symptoms persist.

Most important symptoms/effects, acute and delayed

Symptoms: Short-term (acute) overexposure to fumes and gases from welding and allied processes may result in discomfort such as metal fume fever, dizziness, nausea, or dryness or irritation of nose, throat, or eyes. May aggravate pre-existing respiratory problems (e.g. asthma, emphysema). Long-term (chronic) overexposure to fumes and gases from welding and allied processes can lead to siderosis (iron deposits in lung), central nervous system effects, bronchitis and other pulmonary effects. Refer to Section 11 for more information.

Hazards: Welding and allied process hazards are complex and may include physical and health hazards such as but not limited to electric shock, physical strains, radiation burns (eye flash), thermal burns due to hot metal or spatter and potential health effects of overexposure to welding fume or dust. Refer to Section 11 for more information.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

General Fire Hazards:	As shipped, this product is nonflammable. However, welding arc and sparks can ignite combustibles and flammable products. Read and understand American National Standard Z49.1, "Safety In Welding, Cutting and Allied Processes" and National Fire Protection Association NFPA 51B, "Standard for Fire Prevention During Welding, Cutting and Other Hot Work" before using this product.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	As shipped, the product will not burn. In case of fire in the surroundings: use appropriate extinguishing agent.
Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical:	Welding arc and sparks can ignite combustibles and flammable products.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	Use standard firefighting procedures and consider the hazards of other involved materials.
Special protective equipment for fire-fighters:	Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	If airborne dust and/or fume is present, use adequate engineering controls and, if needed, personal protection to prevent overexposure. Refer to recommendations in Section 8.
Methods and material for containment and cleaning up:	Absorb with sand or other inert absorbent. Stop the flow of material, if this is without risk. Clean up spills immediately, observing precautions in the personal protective equipment in Section 8. Avoid generating dust. Prevent product from entering any drains, sewers or water sources. Refer to Section 13 for proper disposal.
Environmental Precautions:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages.

7. HANDLING AND STORAGE

Precautions for safe handling:	Prevent formation of dust. Provide appropriate exhaust ventilation at places where dust is formed. Read and understand the manufacturer's instruction and the precautionary label on the product. Refer to Lincoln Safety Publications at www.lincolnelectric.com/safety. See American National Standard Z49.1, "Safety In Welding, Cutting and Allied Processes" published by the American Welding Society, http://pubs.aws.org and OSHA Publication 2206 (29CFR1910), U.S. Government Printing Office, www.gpo.gov.
Conditions for safe storage, including any incompatibilities:	Store in closed original container in a dry place. Store in accordance with local/regional/national regulations. Store away from incompatible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Occupational Exposure Limits: US

Chemical Identity	Type	Exposure Limit Values	Source
Chromium and chromium alloys or compounds (as Cr) - as Cr	TWA	0.5 mg/m3	US. ACGIH Threshold Limit Values (12 2010)
	PEL	1 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	REL	0.5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Titanium dioxide	TWA	10 mg/m3	US. ACGIH Threshold Limit Values (12 2010)
Titanium dioxide - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Nickel - Inhalable fraction.	TWA	1.5 mg/m3	US. ACGIH Threshold Limit Values (12 2010)
Nickel - as Ni	PEL	1 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	REL	0.015 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Limestone - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Limestone - Respirable fraction.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Limestone - Respirable.	REL	5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Limestone - Total	REL	10 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Manganese - Fume. - as Mn	Ceiling	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	REL	1 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	STEL	3 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Manganese - Inhalable fraction. - as Mn	TWA	0.1 mg/m3	US. ACGIH Threshold Limit Values (03 2014)
Manganese - Respirable fraction. - as Mn	TWA	0.02 mg/m3	US. ACGIH Threshold Limit Values (03 2014)
Aluminum oxide - Respirable fraction.	TWA	1 mg/m3	US. ACGIH Threshold Limit Values (12 2010)
	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Aluminum oxide - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Fluorides (as F) - as F	TWA	2.5 mg/m3	US. ACGIH Threshold Limit Values (12 2010)
	PEL	2.5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Fluorides (as F) - Dust.	TWA	2.5 mg/m3	US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
Quartz - Respirable fraction.	TWA	0.025 mg/m3	US. ACGIH Threshold Limit Values (12 2010)
Quartz - Respirable.	TWA	2.4 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	0.1 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000)

			(2000)
Quartz - Respirable dust.	REL	0.05 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Quartz - Respirable dust.	TWA	0.05 mg/m3	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) (03 2016)
	OSHA_ACT	0.025 mg/m3	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) (03 2016)
Quartz - Respirable dust.	PEL	0.05 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016)
Kaolin - Respirable fraction.	TWA	2 mg/m3	US. ACGIH Threshold Limit Values (12 2010)
	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Kaolin - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Kaolin - Respirable.	REL	5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Kaolin - Total	REL	10 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Silicon - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Silicon - Respirable fraction.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Silicon - Respirable.	REL	5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Silicon - Total	REL	10 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Iron oxide - Respirable fraction.	TWA	5 mg/m3	US. ACGIH Threshold Limit Values (12 2010)
Iron oxide - Fume.	PEL	10 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Iron oxide - Dust and fume. - as Fe	REL	5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)

Occupational Exposure Limits: CANADA

Chemical Identity	Type	Exposure Limit Values	Source
Chromium and chromium alloys or compounds (as Cr) - as Cr	TWA	0.5 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
Chromium and chromium alloys or compounds (as Cr)	TWA	0.5 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Chromium and chromium alloys or compounds (as Cr) - as Cr	TWA	0.5 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	TWA	0.5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	8 HR ACL	0.5 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	1.5 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Chromium and chromium alloys or compounds (as Cr)	TWA	0.5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Titanium dioxide	TWA	10 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table

			2) (07 2009)
Titanium dioxide - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide	TWA	10 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	8 HR ACL	10 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	20 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Titanium dioxide - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Nickel	TWA	1.5 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	0.05 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Nickel - Inhalable fraction.	TWA	1.5 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
Nickel - Inhalable fraction. - as Ni	8 HR ACL	1.5 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	3 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Nickel	TWA	1 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Nickel - Inhalable fraction. - as Ni	TWA	1 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Limestone	TWA	10 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
Limestone - Total dust.	STEL	20 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Limestone - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Limestone	8 HR ACL	10 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN	20 mg/m3	Canada. Saskatchewan OELs

	ACL		(Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Limestone - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Manganese - as Mn	TWA	0.2 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	0.2 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	8 HR ACL	0.2 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	0.6 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Manganese - Fume. - as Mn	TWA	1 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Manganese - Dust. - as Mn	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Manganese - Fume. - as Mn	STEL	3 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Manganese - Respirable fraction. - as Mn	TWA	0.02 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2014)
Manganese - Inhalable fraction. - as Mn	TWA	0.1 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2014)
Manganese - as Mn	TWA	0.2 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Aluminum oxide	TWA	10 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
Aluminum oxide - Respirable.	TWA	1 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Aluminum oxide - Respirable fraction.	TWA	1 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	TWA	1 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Aluminum oxide	8 HR ACL	10 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	20 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Aluminum oxide - Total dust. - as Al	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Fluorides (as F) - as F	TWA	2.5 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	2.5 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	2.5 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

	TWA	2.5 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	TWA	2.5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	8 HR ACL	2.5 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	5 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	TWA	2.5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Quartz - Respirable particles.	TWA	0.025 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
Quartz - Respirable fraction.	TWA	0.025 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.025 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	8 HR ACL	0.05 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Quartz - Respirable dust.	TWA	0.1 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Quartz - Respirable fraction.	TWA	0.10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Kaolin - Respirable.	TWA	2 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	2 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Kaolin - Respirable fraction.	TWA	2 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	TWA	2 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	8 HR ACL	2 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	4 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Kaolin - Respirable dust.	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Silicon - Total dust.	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (07 2010)
Silicon	8 HR ACL	10 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	20 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Silicon - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Iron oxide - Respirable.	TWA	5 mg/m3	Canada. Alberta OELs (Occupational

			Health & Safety Code, Schedule 1, Table 2) (07 2009)
Iron oxide - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Iron oxide - Dust. - as Fe	TWA	5 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Iron oxide - Fume. - as Fe	STEL	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Iron oxide - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Iron oxide - Fume. - as Fe	TWA	5 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Iron oxide - Respirable fraction.	TWA	5 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	TWA	5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Iron oxide	8 HR ACL	10 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	20 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Iron oxide - Dust and fume. - as Fe	15 MIN ACL	10 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	8 HR ACL	5 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Iron oxide - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Iron oxide - Dust and fume. - as Fe	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

Occupational Exposure Limits: MEXICO

Chemical Identity	Type	Exposure Limit Values	Source
Chromium and chromium alloys or compounds (as Cr)	VLE-PPT	0.5 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
	VLE-PPT	0.05 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
	VLE-PPT	0.01 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
Titanium dioxide	VLE-PPT	10 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
Nickel - Inhalable fraction. - as Ni	VLE-PPT	1.5 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)

Manganese - as Mn	VLE-PPT	0.2 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
Aluminum oxide	VLE-PPT	10 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
Fluorides (as F) - as F	VLE-PPT	2.5 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
Quartz - Respirable fraction.	VLE-PPT	0.025 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
Kaolin - Respirable fraction.	VLE-PPT	2 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
Iron oxide - Respirable fraction.	VLE-PPT	5 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)

Biological Limit Values: US

Chemical Identity	Exposure Limit Values	Source
Fluorides (as F) (Fluoride: Sampling time: Prior to shift.)	2 mg/l (Urine)	ACGIH BEI (03 2013)
Fluorides (as F) (Fluoride: Sampling time: End of shift.)	3 mg/l (Urine)	ACGIH BEI (03 2013)

Biological Limit Values: MEXICO

Chemical Identity	Exposure Limit Values	Source
Fluorides (as F) (fluorides: Sampling time: Prior to shift.)	3 mg/g (Creatinine in urine)	MX IBE (06 2012)
Fluorides (as F) (fluorides: Sampling time: End of shift.)	10 mg/g (Creatinine in urine)	MX IBE (06 2012)
Fluorides (as F) (fluorides: Sampling time: Prior to shift.)	3 mg/g (Creatinine in urine)	MX IBE (06 2012)
Fluorides (as F) (fluorides: Sampling time: End of shift.)	10 mg/g (Creatinine in urine)	MX IBE (06 2012)

Additional exposure limits under the conditions of use: US

Chemical Identity	Type	Exposure Limit Values		Source
Carbon dioxide	TWA	5,000 ppm		US. ACGIH Threshold Limit Values (12 2010)
	STEL	30,000 ppm		US. ACGIH Threshold Limit Values (12 2010)
	PEL	5,000 ppm	9,000 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	STEL	30,000 ppm	54,000 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	REL	5,000 ppm	9,000 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Carbon monoxide	TWA	25 ppm		US. ACGIH Threshold Limit Values (12 2010)
	PEL	50 ppm	55 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	REL	35 ppm	40 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	Ceil_Time	200 ppm	229 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Nitrogen dioxide	TWA	0.2 ppm		US. ACGIH Threshold Limit Values (02 2012)
	Ceiling	5 ppm	9 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	STEL	1 ppm	1.8 mg/m3	US. NIOSH: Pocket Guide to Chemical

				Hazards (2005)
Ozone	PEL	0.1 ppm	0.2 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	Ceil_Time	0.1 ppm	0.2 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	0.05 ppm		US. ACGIH Threshold Limit Values (03 2014)
	TWA	0.20 ppm		US. ACGIH Threshold Limit Values (03 2014)
	TWA	0.10 ppm		US. ACGIH Threshold Limit Values (03 2014)
	TWA	0.08 ppm		US. ACGIH Threshold Limit Values (03 2014)
Manganese - Fume. - as Mn	Ceiling		5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	REL		1 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	STEL		3 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Manganese - Inhalable fraction. - as Mn	TWA		0.1 mg/m3	US. ACGIH Threshold Limit Values (03 2014)
Manganese - Respirable fraction. - as Mn	TWA		0.02 mg/m3	US. ACGIH Threshold Limit Values (03 2014)
Chromium (VI) - as Cr	TWA		0.05 mg/m3	US. ACGIH Threshold Limit Values (12 2010)
Chromium (VI)	TWA		0.005 mg/m3	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) (02 2006)
	OSHA_ACT		0.0025 mg/m3	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) (02 2006)
	Ceiling		0.1 mg/m3	US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
Chromium (VI) - as Cr(VI)	REL		0.0002 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2016)
Nickel - Inhalable fraction.	TWA		1.5 mg/m3	US. ACGIH Threshold Limit Values (12 2010)
Nickel - as Ni	PEL		1 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	REL		0.015 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Chromium oxide - as Cr	TWA		0.5 mg/m3	US. ACGIH Threshold Limit Values (03 2012)
	PEL		0.5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	REL		0.5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)

Additional exposure limits under the conditions of use: CANADA

Chemical Identity	Type	Exposure Limit Values		Source
Carbon dioxide	STEL	30,000 ppm	54,000 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	5,000 ppm	9,000 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	5,000 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	STEL	15,000 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as

				amended) (07 2007)
	TWA	5,000 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	STEL	30,000 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	STEL	30,000 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	TWA	5,000 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	8 HR ACL	5,000 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	30,000 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	TWA	5,000 ppm	9,000 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
	STEL	30,000 ppm	54,000 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Carbon monoxide	TWA	25 ppm	29 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	25 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	STEL	100 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	25 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	TWA	25 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (07 2010)
	8 HR ACL	25 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	190 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	TWA	35 ppm	40 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
	STEL	200 ppm	230 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Nitrogen dioxide	STEL	5 ppm	9.4 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	3 ppm	5.6 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	CEILING	1 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.2 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2012)
	STEL	5 ppm		Canada. Ontario OELs. (Control of

				Exposure to Biological or Chemical Agents) (11 2010)
	TWA	3 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	8 HR ACL	3 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	5 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	TWA	3 ppm	5.6 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Ozone	STEL	0.3 ppm	0.6 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	0.1 ppm	0.2 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	0.05 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.1 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.08 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.2 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.1 ppm	0.2 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (07 2010)
	STEL	0.3 ppm	0.6 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (07 2010)
	15 MIN ACL	0.15 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	8 HR ACL	0.05 ppm		Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	CEILING	0.1 ppm	0.2 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
	TWA	0.20 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2014)
	TWA	0.05 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2014)
	TWA	0.08 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2014)
	TWA	0.10 ppm		Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2014)
Manganese - as Mn	TWA		0.2 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA		0.2 mg/m3	Canada. British Columbia OELs.

			(Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	8 HR ACL	0.2 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	0.6 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Manganese - Fume. - as Mn	TWA	1 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Manganese - Dust. - as Mn	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Manganese - Fume. - as Mn	STEL	3 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Manganese - Respirable fraction. - as Mn	TWA	0.02 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2014)
Manganese - Inhalable fraction. - as Mn	TWA	0.1 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2014)
Manganese - as Mn	TWA	0.2 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Chromium (VI) - as Cr	TWA	0.01 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	0.05 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	0.025 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	CEILING	0.1 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.05 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	TWA	0.05 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	15 MIN ACL	0.03 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	0.15 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	8 HR ACL	0.01 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	8 HR ACL	0.05 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	TWA	0.05 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
	TWA	0.01 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Nickel	TWA	1.5 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)

	TWA	0.05 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Nickel - Inhalable fraction.	TWA	1.5 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
Nickel - Inhalable fraction. - as Ni	8 HR ACL	1.5 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	3 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Nickel	TWA	1 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Nickel - Inhalable fraction. - as Ni	TWA	1 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Chromium oxide - as Cr	TWA	0.5 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	0.5 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (09 2011)
	TWA	0.5 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2012)
	TWA	0.5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	8 HR ACL	0.5 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	1.5 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)

Additional exposure limits under the conditions of use: MEXICO

Chemical Identity	Type	Exposure Limit Values	Source
Carbon dioxide	VLE-CT	30,000 ppm	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
	VLE-PPT	5,000 ppm	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
Carbon monoxide	VLE-PPT	25 ppm	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
Nitrogen dioxide	VLE-PPT	0.2 ppm	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
Ozone	VLE-P	0.1 ppm	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
Manganese - as Mn	VLE-PPT	0.2 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
Chromium (VI)	VLE-PPT	0.05 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
Nickel - Inhalable fraction. - as Ni	VLE-PPT	1.5 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (04 2014)
Chromium oxide	VLE-PPT	0.5 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace;

			Assessment and Control) (04 2014)

Appropriate Engineering Controls

Ventilation: Use enough ventilation, local exhaust at the arc, or both to keep the fumes and gases from the worker's breathing zone and the general area. Train the welder to keep his head out of the fumes. **Keep exposure as low as possible.**

Individual protection measures, such as personal protective equipment

General information:

Exposure Guidelines: Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs) are values published by the American Conference of Government Industrial Hygienists (ACGIH). ACGIH Statement of Positions Regarding the TLVs® and BEIs® states that the TLV-TWA should be used as a guide in the control of health hazards and should not be used to indicate a fine line between safe and dangerous exposures. See Section 10 for information on potential fume constituents of health interest. Threshold Limit Values are figures published by the American Conference of Government Industrial Hygienists.

Maximum Fume Exposure Guideline™ (MFEG)™ for this product (based on content of Chromium (VI)) is 0.2 mg/m3. This exposure guideline is calculated using the most conservative value of the ACGIH TLV or OSHA PEL for the stated substance. If your local applicable exposure limits are lower than the ACGIH TLV or OSHA PEL for any of the metallic substances listed in Section 2 or 3 of this SDS, you must take that into consideration before utilizing or applying this guideline.

Eye/face protection:

Wear helmet or use face shield with filter lens shade number 12 or darker for open arc processes – or follow the recommendations as specified in ANSI Z49.1, Section 4, based on your process and settings. No specific lens shade recommendation for submerged arc or electroslag processes. Shield others by providing appropriate screens and flash goggles.

Skin Protection

Hand Protection:

Wear protective gloves. Suitable gloves can be recommended by the glove supplier.

Other:

Protective Clothing: Wear hand, head, and body protection which help to prevent injury from radiation, sparks and electrical shock. See Z49.1. At a minimum this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Wear dry gloves free of holes or split seams. Train the welder not to permit electrically live parts or electrodes to contact skin . . . or clothing or gloves if they are wet. Insulate yourself from the work piece and ground using dry plywood, rubber mats or other dry insulation.

Respiratory Protection:

Keep your head out of fumes. Use enough ventilation and local exhaust to keep fumes and gases from your breathing zone and the general area. An approved respirator should be used unless exposure assessments are below applicable exposure limits.

Hygiene measures:

Do not eat, drink or smoke when using the product. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Determine the composition and quantity of fumes and gases to which workers are exposed by taking an air sample from inside the welder's helmet if worn or in the worker's breathing zone. Improve ventilation if exposures are not below limits. See ANSI/AWS F1.1, F1.2, F1.3 and F1.5, available from the American Welding Society, www.aws.org.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Steel rod with extruded flux coating.
Physical state:	Solid
Form:	Solid
Color:	No data available.
Odor:	No data available.
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	No data available.
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Density:	No data available.
Relative density:	No data available.
Solubility(ies)	
Solubility in water:	No data available.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. STABILITY AND REACTIVITY

Reactivity:	The product is non-reactive under normal conditions of use, storage and transport.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	None under normal conditions.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	Strong acids. Strong oxidizing substances. Strong bases.
Hazardous Decomposition Products:	Fumes and gases from welding and allied processes cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedure and electrodes used. Other

conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coatings on the metal being welded (such as paint, plating, or galvanizing), the number of welders and the volume of the worker area, the quality and amount of ventilation, the position of the welder's head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing activities.)

When the electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 3. Decomposition products of normal operation include those originating from the volatilization, reaction, or oxidation of the materials shown in Section 3, plus those from the base metal and coating, etc., as noted above. Reasonably expected fume constituents produced during arc welding include the oxides of iron, manganese and other metals present in the welding consumable or base metal. Hexavalent chromium compounds may be in the welding fume of consumables or base metals which contain chromium. Gaseous and particulate fluoride may be in the welding fume of consumables which contain fluoride. Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from the arc.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation: Potential chronic health hazards related to the use of welding consumables are most applicable to the inhalation route of exposure. Refer to Inhalation statements in Section 11.

Skin Contact: Arc rays can burn skin. Skin cancer has been reported.

Eye contact: Arc rays can injure eyes.

Ingestion: Health injuries from ingestion are not known or expected under normal use.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: Respiratory exposure to the crystalline silica present in this welding electrode is not anticipated during normal use. Respiratory overexposure to airborne crystalline silica is known to cause silicosis, a form of disabling pulmonary fibrosis which can be progressive and may lead to death. Crystalline silica is on the IARC (International Agency for Research on Cancer) and NTP (National Toxicology Program) lists as posing a cancer risk to humans. Note: All regional authorities do not use the same criteria for assigning carcinogenic classifications to chemicals. For example, the European Union (EU) CLP does not require classifying crystalline silica as a carcinogenic compound. Short-term (acute) overexposure to fumes and gases from welding and allied processes may result in discomfort such as metal fume fever, dizziness, nausea, or dryness or irritation of nose, throat, or eyes. May aggravate pre-existing respiratory problems (e.g. asthma, emphysema). Long-term (chronic) overexposure to fumes and gases from welding and allied processes can lead to siderosis (iron deposits in lung), central nervous system effects, bronchitis and other pulmonary effects.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: Not classified

Specified substance(s):

Iron	LD 50 (Rat): 98.6 g/kg
Limestone	LD 50 (Rat): 6,450 mg/kg
Sodium silicate	LD 50 (Rat): 1.1 g/kg
Fluorides (as F)	LD 50 (Rat): 4,250 mg/kg

Dermal

Product: Not classified

Inhalation

Product: Not classified

Specified substance(s):

Aluminum oxide	LC 50 (Rat, 1 h): 7.6 mg/l

Repeated dose toxicity

Product: Not classified

Skin Corrosion/Irritation

Product: Not classified

Serious Eye Damage/Eye Irritation

Product: Not classified

Respiratory or Skin Sensitization

Product: Not classified

Carcinogenicity

Product: Arc rays: Skin cancer has been reported.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Titanium dioxide	Overall evaluation: 2B. Possibly carcinogenic to humans.
Nickel	Overall evaluation: 2B. Possibly carcinogenic to humans.
Quartz	Overall evaluation: 1. Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

Nickel	Reasonably Anticipated to be a Human Carcinogen.
Quartz	Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

Quartz	Cancer

Germ Cell Mutagenicity

In vitro

Product: Not classified

In vivo

Product: Not classified

Reproductive toxicity

Product: Not classified

Specific Target Organ Toxicity - Single Exposure

Product: Not classified

Specific Target Organ Toxicity - Repeated Exposure

Product: Not classified

Aspiration Hazard

Product:	Not classified
Other effects:	Organic polymers may be used in the manufacture of various welding consumables. Overexposure to their decomposition byproducts may result in a condition known as polymer fume fever. Polymer fume fever usually occurs within 4 to 8 hours of exposure with the presentation of flu like symptoms, including mild pulmonary irritation with or without an increase in body temperature. Signs of exposure can include an increase in white blood cell count. Resolution of symptoms typically occurs quickly, usually not lasting longer than 48 hours.

Symptoms related to the physical, chemical and toxicological characteristics under the condition of use

Inhalation:
Specified substance(s):

Manganese	Overexposure to manganese fumes may affect the brain and central nervous system, resulting in poor coordination, difficulty speaking, and arm or leg tremor. This condition can be irreversible.
Chromium (VI)	Chromates may cause ulceration, perforation of the nasal septum, and severe irritation of the bronchial tubes and lungs. Liver damage and allergic reactions, including skin rash, have been reported. Asthma has been reported in some sensitized individuals. Skin contact may result in irritation, ulceration, sensitization, and contact dermatitis. Chromates contain the hexavalent form of chromium. Hexavalent chromium and its compounds are on the IARC (International Agency for Research on Cancer) and NTP (National Toxicology Program) lists as posing a cancer risk to humans.
Nickel	Nickel and its compounds are on the IARC and NTP lists as posing respiratory cancer risk, and are skin sensitizers with symptoms ranging from slight itch to severe dermatitis.

Additional toxicological Information under the conditions of use:

Acute toxicity
Oral
Specified substance(s):

Chromium (VI)	LD 50 (Rat): 27 - 59 mg/kg

Inhalation
Specified substance(s):

Carbon dioxide	LC Lo (Human, 5 min): 90000 ppm
Carbon monoxide	LC 50 (Rat, 4 h): 1,300 mg/l
Nitrogen dioxide	LC 50 (Rat, 4 h): 88 ppm
Ozone	LC Lo (Human, 30 min): 50 ppm
Chromium (VI)	LC 50 (Rat, 4 h): 33 - 70 mg/m3

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
Specified substance(s):

Chromium (VI)	Overall evaluation: 1. Carcinogenic to humans.
Nickel	Overall evaluation: 2B. Possibly carcinogenic to humans.
Chromium oxide	Overall evaluation: 3. Not classifiable as to carcinogenicity to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:
Specified substance(s):

Chromium (VI)	Known To Be Human Carcinogen.
Nickel	Reasonably Anticipated to be a Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

Specified substance(s):

Chromium (VI)	Cancer

Other effects:

Specified substance(s):

Carbon dioxide	Asphyxia
Carbon monoxide	Carboxyhemoglobinemia
Nitrogen dioxide	Lower respiratory tract irritation
Nickel	Dermatitis Pneumoconiosis

12. ECOLOGICAL INFORMATION

Ecotoxicity

Acute hazards to the aquatic environment:

Fish

Product: Not classified

Specified substance(s):

Nickel	LC 50 (Fathead minnow (Pimephales promelas), 96 h): 2.916 mg/l
Sodium silicate	LC 50 (Western mosquitofish (Gambusia affinis), 96 h): 1,800 mg/l

Aquatic Invertebrates

Product: Not classified

Specified substance(s):

Nickel	EC 50 (Water flea (Daphnia magna), 48 h): 1 mg/l
Manganese	EC 50 (Water flea (Daphnia magna), 48 h): 40 mg/l
Sodium silicate	EC 50 (Water flea (Ceriodaphnia dubia), 48 h): 22.94 - 49.01 mg/l

Chronic hazards to the aquatic environment:

Fish

Product: Not classified

Aquatic Invertebrates

Product: Not classified

Toxicity to Aquatic Plants

Product: Not classified

Persistence and Degradability

Biodegradation

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

Nickel	Zebra mussel (Dreissena polymorpha), Bioconcentration Factor (BCF): 5,000 - 10,000 (Lotic) Bioconcentration factor calculated using dry weight tissue conc

Mobility in soil: No data available.

13. DISPOSAL CONSIDERATIONS

General information: The generation of waste should be avoided or minimized whenever possible. When practical, recycle in an environmentally acceptable, regulatory compliant manner. Dispose of non-recyclable products in accordance with all applicable Federal, State, Provincial, and Local requirements.

Disposal instructions:	Disposal of this product may be regulated as a Hazardous Waste. The welding consumable and/or by-product from the welding process (including, but not limited to slag, dust, etc.) may contain levels of leachable heavy metals such as Barium or Chromium. Prior to disposal, a representative sample must be analyzed in accordance with US EPA's Toxicity Characteristic Leaching Procedure (TCLP) to determine if any constituents exist above regulated threshold levels. Discard any product, residue, disposable container, or liner in an environmentally acceptable manner according to Federal, State and Local Regulations.
Contaminated Packaging:	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

14. TRANSPORT INFORMATION

DOT

UN Number:	
UN Proper Shipping Name:	NOT DG REGULATED
Transport Hazard Class(es)	
Class:	NR
Label(s):	–
Packing Group:	–
Marine Pollutant:	No

IMDG

UN Number:	
UN Proper Shipping Name:	NOT DG REGULATED
Transport Hazard Class(es)	
Class:	NR
Label(s):	–
EmS No.:	
Packing Group:	–
Marine Pollutant:	No

IATA

UN Number:	
Proper Shipping Name:	NOT DG REGULATED
Transport Hazard Class(es):	
Class:	NR
Label(s):	–
Packing Group:	–
Marine Pollutant:	No
Cargo aircraft only:	Allowed.

TDG

UN Number:	
UN Proper Shipping Name:	NOT DG REGULATED
Transport Hazard Class(es)	
Class:	NR
Label(s):	–
Packing Group:	–
Marine Pollutant:	No

15. REGULATORY INFORMATION

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Chemical Identity	OSHA hazard(s)
Quartz	kidney effects lung effects immune system effects Cancer

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity	Reportable quantity
Chromium and chromium alloys or compounds (as Cr)	5000lbs.
Nickel	100lbs.
Manganese	Included in the regulation but with no data values. See regulation for further details.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Not listed.

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

Chemical Identity	Reportable quantity
Chromium and chromium alloys or compounds (as Cr)	5000 lbs.
Nickel	100 lbs.
Manganese	Included in the regulation but with no data values. See regulation for further details.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
Iron	10000 lbs
Chromium and chromium alloys or compounds (as Cr)	10000 lbs
Titanium dioxide	10000 lbs
Nickel	10000 lbs
Limestone	10000 lbs
Manganese	10000 lbs
Potassium silicate	10000 lbs
Feldspar	10000 lbs
Aluminum oxide	10000 lbs
Sodium silicate	10000 lbs
Fluorides (as F)	10000 lbs
Potassium oxide	10000 lbs
Hydroxyethyl cellulose	10000 lbs
Quartz	10000 lbs
Kaolin	10000 lbs
Silicon	10000 lbs
Iron oxide	10000 lbs

SARA 313 (TRI Reporting)

Chemical Identity	Reporting threshold	Reporting threshold for

	for other users	manufacturing and processing
Chromium and chromium alloys or compounds (as Cr)	10000 lbs	25000 lbs.
Nickel	10000 lbs	25000 lbs.
Manganese	10000 lbs	25000 lbs.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

Titanium dioxide	Carcinogenic.
Nickel	Carcinogenic.
Quartz	Carcinogenic.

WARNING: This product contains or produces a chemical known to the State of California to cause cancer and birth defects (or other reproductive harm). (California Health & Safety Code Section 25249.5 et seq.)

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity

Chromium and chromium alloys or compounds (as Cr)
Titanium dioxide
Nickel
Limestone
Manganese
Aluminum oxide
Quartz

US. Massachusetts RTK - Substance List

Chemical Identity

Chromium and chromium alloys or compounds (as Cr)
Nickel
Quartz

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Chromium and chromium alloys or compounds (as Cr)
Titanium dioxide
Nickel
Limestone
Manganese
Aluminum oxide

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

Canada Federal Regulations

List of Toxic Substances (CEPA, Schedule 1)

Chemical Identity

Titanium dioxide
Aluminum oxide
Fluorides (as F)

Kaolin
Iron oxide

Export Control List (CEPA 1999, Schedule 3)
Not Regulated

National Pollutant Release Inventory (NPRI)
Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements

NPRI PT5	Not Regulated

Canada. Canadian Environmental Protection Act (CEPA). National Pollutant Release Inventory (NPRI) (Parts 1-4)

NPRI	Not Regulated

Greenhouse Gases
Not Regulated

Controlled Drugs and Substances Act

CA CDSI	Not Regulated
CA CDSII	Not Regulated
CA CDSIII	Not Regulated
CA CDSIV	Not Regulated
CA CDSV	Not Regulated
CA CDSVII	Not Regulated
CA CDSVIII	Not Regulated

Precursor Control Regulations
Not Regulated

Mexico. Substances subject to reporting for the pollutant release and transfer registry (PRTR): not applicable

Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	One or more components are not listed or are exempt from listing.
EINECS, ELINCS or NLP:	One or more components are not listed or are exempt from listing.
Japan (ENCS) List:	One or more components are not listed or are exempt from listing.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	One or more components are not listed or are exempt from listing.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	One or more components are not listed or are exempt from listing.
Japan Pharmacopoeia Listing:	One or more components are not listed or are exempt from listing.
Mexico INSQ:	One or more components are not listed or are exempt from listing.
Ontario Inventory:	One or more components are not listed or are exempt from listing.
Taiwan Chemical Substance Inventory:	One or more components are not listed or are exempt from listing.

16. OTHER INFORMATION

Definitions:

The Maximum Fume Exposure Guideline™ (MFEG)™ is a guideline limit for total welding fume exposure for a specific consumable product which may be used by employers to manage worker exposure to welding fume where that product is used. The MFEG™ is an estimate of the level of total welding fume exposure for a given product above which the exposure limit for one of the fume constituents may be exceeded. The exposure limits referenced are the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV®) and the U.S. OSHA Permissible Exposure Limit (PEL) whichever limit is lower. If local applicable limits for substances listed in Section 2 or 3 of this SDS are lower than the TLV or PEL this must be taken into consideration before utilizing or applying this guideline. The MFEG™ never exceeds 5 mg/m³ which is the maximum recommended exposure limit for total welding fume. **The MFEG™ is intended to serve as a general guideline to assist in the management of workplace exposure to welding fume and does not replace the regular measurement and analysis of worker exposure to individual welding fume constituents in accordance with recommended industrial hygiene practice.**

Revision Date:	10/04/2017
Further Information:	Additional information is available by request.
Disclaimer:	The Lincoln Electric Company urges each end user and recipient of this SDS to study it carefully. See also www.lincolnelectric.com/safety. If necessary, consult an industrial hygienist or other expert to understand this information and safeguard the environment and protect workers from potential hazards associated with the handling or use of this product. This information is believed to be accurate as of the revision date shown above. However, no warranty, expressed or implied, is given. Because the conditions or methods of use are beyond Lincoln Electric's control, we assume no liability resulting from the use of this product. Regulatory requirements are subject to change and may differ between various locations. Compliance with all applicable Federal, State, Provincial, and local laws and regulations remain the responsibility of the user.

NewellRubbermaid
Brands That Matter

SAFETY DATA SHEET

Section 1. Identification

Product name : Expo White Board Cleaner

Material uses : Cleaning solutions.

Manufacturer : Newell Rubbermaid
3500 Lacey Road, 10th Floor
Downers Grove, IL 60515
USA
800-323-0749 or 630-829-2500

Emergency telephone number (with hours of operation) : CHEMTREC (U.S. and Canada) 1-800-424-9300

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : Not applicable

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

General : Read label before use. If medical advice is needed, have product container or label at hand.

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
3-butoxypropan-2-ol	2 - 5	5131-66-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 3. Composition/information on ingredients

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Clear.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : Not available.

Flash point : Not available.

Burning time : Not applicable.

Burning rate : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

SADT : Not available.

Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
3-butoxypropan-2-ol	LD50 Dermal	Rabbit	3100 mg/kg	-

Irritation/Corrosion

No known significant effects or critical hazards.

Sensitization

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

No known significant effects or critical hazards.

Specific target organ toxicity (repeated exposure)

No known significant effects or critical hazards.

Aspiration hazard

No known significant effects or critical hazards.

Information on the likely routes of exposure : Not available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Section 11. Toxicological information

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Dermal	63798.6 mg/kg

Section 12. Ecological information

Toxicity

No known significant effects or critical hazards.

Persistence and degradability

No known significant effects or critical hazards.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
3-butoxypropan-2-ol	1.2	-	low

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
3-butoxypropan-2-ol	2 - 5	Yes.	No.	No.	Yes.	No.

California Prop. 65

This product does not contain Chemicals known to State of California to cause cancer, birth defects, or reproductive harm.

Canada

WHMIS (Canada) : Not controlled under WHMIS (Canada).

Canadian lists

Canadian NPRI : The following components are listed: Propylene glycol butyl ether

CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

Section 16. Other information

History

Date of issue/Date of revision : 8/5/2015

Date of previous issue : No previous validation

Version : 1

Prepared by : Product Safety.

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
UN = United Nations

Indicates information that has changed from previously issued version.

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations. The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions. It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations. The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

GOJO® NATURAL* ORANGE™ Smooth Hand Cleaner

Version 1.0 SDS Number: 400000000196 Revision Date: 11/17/2016

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : GOJO® NATURAL* ORANGE™ Smooth Hand Cleaner

Manufacturer or supplier's details

Company name of supplier : GOJO Industries, Inc.

Address : One GOJO Plaza, Suite 500
Akron, Ohio 44311

Telephone : 1 (330) 255-6000

Emergency telephone number : 1-800-424-9300 CHEMTREC

Recommended use of the chemical and restrictions on use

Recommended use : Skin-care

Restrictions on use : This is a personal care or cosmetic product that is safe for consumers and other users under normal and reasonably foreseeable use. Cosmetics and consumer products, specifically defined by regulations around the world, are exempt from the requirement of an SDS for the consumer. While this material is not considered hazardous, this SDS contains valuable information critical to the safe handling and proper use of the product for industrial workplace conditions as well as unusual and unintended exposures such as large spills. This SDS should be retained and available for employees and other users of this product. For specific intended-use guidance, please refer to the information provided on the package or instruction sheet.

Prepared by :

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Physical state	liquid
Colour	opaque, white, grey
Odour	citrus

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Potential Health Effects

Primary Routes of Entry	:	Inhalation Eye contact Skin contact
Aggravated Medical Condition	:	None known.

Carcinogenicity:

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical name	CAS-No.	Concentration (%)
C11-15 Alkane/cycloalkane	64742-47-8	>= 5 - < 10
Limonene	5989-27-5	>= 0.1 - < 1

SECTION 4. FIRST AID MEASURES

General advice	:	In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.
If inhaled	:	If inhaled, remove to fresh air. If symptoms persist, call a physician.
In case of skin contact	:	Wash with water and soap as a precaution. Get medical attention immediately if irritation develops and persists.
In case of eye contact	:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Seek medical advice.
If swallowed	:	If swallowed, DO NOT induce vomiting. Rinse mouth with water. Obtain medical attention.
Most important symptoms and effects, both acute and delayed	:	None known.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection and use the recommended protective clothing

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	:	None known.
Hazardous combustion products	:	Carbon oxides
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Material can create slippery conditions.
Environmental precautions	:	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly while observing environmental regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	For personal protection see section 8. Do not swallow. Avoid contact with eyes. Keep container closed when not in use.
Conditions for safe storage	:	Keep in properly labelled containers. Keep container tightly closed in a dry and well-ventilated place. Store in accordance with the particular national regulations.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
C11-15 Alkane/cycloalkane	64742-47-8	TWA	200 mg/m3 (As total hydrocarbon vapour)	CA BC OEL
		TWA	200 mg/m3 (As total hydrocarbon vapour)	CA AB OEL
		TWA (Mist)	5 mg/m3	CA AB OEL
		STEL (Mist)	10 mg/m3	CA AB OEL
		TWAEV (Mist)	5 mg/m3	CA QC OEL
		STEV (Mist)	10 mg/m3	CA QC OEL
		TWA	525 mg/m3	CA ON OEL
		TWA	200 mg/m3 (As total hydrocarbon vapour)	CA BC OEL
		TWA (Mist)	5 mg/m3	CA AB OEL
		STEL (Mist)	10 mg/m3	CA AB OEL
		TWAEV (Mist)	5 mg/m3	CA QC OEL
		STEV (Mist)	10 mg/m3	CA QC OEL
		TWA	525 mg/m3	CA ON OEL
		TWA	200 mg/m3 (as total hydrocarbon vapor)	ACGIH
Limonene	5989-27-5	TWA	20 ppm 111 mg/m3	CA AB OEL
		TWA	20 ppm 111 mg/m3	CA AB OEL
		TWA	20 ppm	ACGIH

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : No special protective equipment required.
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : No special protective equipment required.

Protective measures : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to

the specific work-place.

Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	opaque, white, grey
Odour	:	citrus
Odour Threshold	:	No data available
pH	:	6 - 8, (20 °C)
Melting point/range	:	11.4 °C
Initial boiling point and boiling range	:	95 °C
Flash point	:	> 100 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	0.9758 g/cm3
Solubility(ies)		
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Thermal decomposition	:	The substance or mixture is not classified self-reactive.
Viscosity		
Viscosity, kinematic	:	10000 - 45000 mm2/s (20 °C)
Explosive properties	:	Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.

Incompatible materials : Oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Eye contact
Skin contact

Acute toxicity

Not classified based on available information.

Components:

C11-15 Alkane/cycloalkane:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Limonene:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on data from similar materials

Skin corrosion/irritation

Not classified based on available information.

Components:

C11-15 Alkane/cycloalkane:

Assessment: Repeated exposure may cause skin dryness or cracking.

Limonene:
Species: Rabbit
Result: Skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

C11-15 Alkane/cycloalkane:
Species: Rabbit
Result: No eye irritation

Limonene:
Species: Rabbit
Result: No eye irritation

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Product:

Assessment: Does not cause skin sensitisation.

Components:

C11-15 Alkane/cycloalkane:
Test Type: Maximisation Test (GPMT)
Exposure routes: Skin contact
Species: Guinea pig
Result: negative
Remarks: Based on data from similar materials

Limonene:
Test Type: Local lymph node assay (LLNA)
Exposure routes: Skin contact
Species: Mouse
Result: positive

Assessment: Probability or evidence of skin sensitisation in humans

Germ cell mutagenicity

Not classified based on available information.

Components:

C11-15 Alkane/cycloalkane:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative
Genotoxicity in vivo	:	Test Type: Chromosomal aberration Test species: Rat Application Route: Intraperitoneal injection Result: negative Remarks: Based on data from similar materials

Limonene:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Result: negative

Genotoxicity in vivo : Test Type: Transgenic rodent somatic cell gene mutation assay
Test species: Rat
Application Route: Ingestion
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

Limonene:
Species: Mouse
Application Route: Ingestion
Exposure time: 103 weeks
Result: negative

Reproductive toxicity

Not classified based on available information.

Components:

C11-15 Alkane/cycloalkane:

Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

C11-15 Alkane/cycloalkane:
Species: Rat
NOAEL: > 10.4 mg/l
Application Route: inhalation (vapour)
Exposure time: 90 d
Remarks: Based on data from similar materials

Limonene:
Species: Rat
NOAEL: 600 mg/kg
Application Route: Ingestion

Exposure time: 13 w

Aspiration toxicity

Not classified based on available information.

Components:

C11-15 Alkane/cycloalkane:
The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Limonene:
The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

C11-15 Alkane/cycloalkane:

Toxicity to fish	:	LL50 (Danio rerio (zebra fish)): > 250 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Acartia tonsa): > 3,193 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction
Toxicity to algae	:	EL50 (Skeletonema costatum (marine diatom)): > 3,200 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction NOELR (Skeletonema costatum (marine diatom)): 993 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOELR (Ceriodaphnia Dubia (water flea)): > 70 mg/l Exposure time: 8 d Test substance: Water Accommodated Fraction
Toxicity to bacteria	:	EC50: > 100 mg/l Exposure time: 3 h

Limonene:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 0.72 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.36 mg/l Exposure time: 48 h
Toxicity to algae	:	ErC50 (Desmodesmus subspicatus (green algae)): 150 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction

Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 1

Persistence and degradability

Components:

C11-15 Alkane/cycloalkane:
Biodegradability : Result: Readily biodegradable.
Biodegradation: 82 %
Exposure time: 24 d
Method: OECD Test Guideline 301F

Limonene:
Biodegradability : Result: Readily biodegradable.
Biodegradation: 80 %
Exposure time: 28 d
Remarks: Based on data from similar materials

Bioaccumulative potential

Components:

Limonene:
Partition coefficient: n-octanol/water : log Pow: 4.38

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulation

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

National Regulations

TDG

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

WHMIS Classification : Not controlled.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

The components of this product are reported in the following inventories:

TSCA	:	On TSCA Inventory
CH INV	:	On the inventory, or in compliance with the inventory
AICS	:	On the inventory, or in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL.
ENCS	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory
NZIoC	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Material Safety Data Sheet

Great Finishes Wood Stain Oil-Based

1. Product and company identification

Product name : Great Finishes Wood Stain Oil-Based

Material uses : Coatings: Solvent based paint.

Code : 222A130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143

Manufacturer : Ace Hardware Paint Division
21901 South Central Avenue,
Matteson, IL 60443-2800
Phone #: (800) 311-8324

Supplier : Ace Hardware Corporation
2200 Kensington Court,
Oak Brook, IL 60523-2100
(800) 311-8324

Validation date : 06/29/2012.

Prepared by : Atrion International Inc.

In case of emergency : Infotrac (800) 535-5053
Outside USA (352) 323-3500

2. Hazards identification

Physical state : Liquid.

Color : Various

Odor : Characteristic.

Emergency overview

Signal word : WARNING!

Hazard statements : COMBUSTIBLE LIQUID AND VAPOR. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CAN CAUSE CANCER.

Precautions : Keep away from heat, sparks and flame. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not get on skin or clothing. Avoid contact with eyes. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation : Slightly irritating to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion : No known significant effects or critical hazards.

Skin : Slightly irritating to the skin.

Eyes : Slightly irritating to the eyes.

Potential chronic health effects

Chronic effects : Contains material that may cause target organ damage, based on animal data. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : Can cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

2. Hazards identification

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Target organs : Contains material which may cause damage to the following organs: lungs, upper respiratory tract, skin.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : No specific data.

Skin : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Eyes : Adverse symptoms may include the following:
irritation
watering
redness

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

United States

Name	CAS number	%
Solvent naphtha (petroleum), medium aliph.	64742-88-7	60-100
Linseed oil	8001-26-1	5-10
Titanium dioxide	13463-67-7	5-10
Gilsonite	12002-43-6	1-5
Carbon black	1333-86-4	0.1-1

Canada

Name	CAS number	%
Solvent naphtha (petroleum), medium aliph.	64742-88-7	60-100
Linseed oil	8001-26-1	5-10
Titanium dioxide	13463-67-7	5-10
Gilsonite	12002-43-6	1-5
Carbon black	1333-86-4	0.1-1
Ethanol	64-17-5	0.1-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

Flammability of the product : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

6. Accidental release measures

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
Solvent naphtha (petroleum), medium aliph.	**OSHA PEL 1989 (United States, 3/1989).** TWA: 100 ppm 8 hour(s). TWA: 400 mg/m³ 8 hour(s). **OSHA PEL (United States, 6/2010).** TWA: 100 ppm 8 hour(s). TWA: 400 mg/m³ 8 hour(s). **ACGIH TLV (United States, 1/2008).** TWA: 5 mg/m³ 8 hour(s). Form: Mist STEL: 10 mg/m³ 15 minute(s). Form: Mist
Titanium dioxide	**ACGIH TLV (United States, 1/2011).** TWA: 10 mg/m³ 8 hour(s). **OSHA PEL 1989 (United States, 3/1989).** TWA: 10 mg/m³ 8 hour(s). Form: Total dust **OSHA PEL (United States, 6/2010).** TWA: 15 mg/m³ 8 hour(s). Form: Total dust
Gilsonite	**ACGIH TLV (United States).** TWA: 10 mg/m³ Form: Inhalable

8. Exposure controls/personal protection

Carbon black	TWA: 3 mg/m³ Form: Respirable **OSHA PEL 1989 (United States, 3/1989).** TWA: 3.5 mg/m³ 8 hour(s). **NIOSH REL (United States, 6/2009).** TWA: 3.5 mg/m³ 10 hour(s). TWA: 0.1 mg of PAHs/cm³ 10 hour(s). **ACGIH TLV (United States, 1/2011).** TWA: 3 mg/m³ 8 hour(s). Form: Inhalable fraction **OSHA PEL (United States, 6/2010).** TWA: 3.5 mg/m³ 8 hour(s).

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	**List name**	**ppm**	**mg/m³**	**Other**	**ppm**	**mg/m³**	**Other**	**ppm**	**mg/m³**	**Other**	**Notations**
Solvent naphtha (petroleum), medium aliph.	US ACGIH 1/2008	-	5	-	-	10	-	-	-	-	[a]
Titanium dioxide	US ACGIH 1/2011	-	10	-	-	-	-	-	-	-	
	AB 4/2009	-	10	-	-	-	-	-	-	-	
	BC 9/2011	-	3	-	-	-	-	-	-	-	[b]
		-	10	-	-	-	-	-	-	-	[c]
	ON 7/2010	-	10	-	-	-	-	-	-	-	[d]
	QC 9/2011	-	10	-	-	-	-	-	-	-	[e]
Carbon black	US ACGIH 1/2011	-	3	-	-	-	-	-	-	-	[f]
	AB 4/2009	-	3.5	-	-	-	-	-	-	-	
	BC 9/2011	-	3	-	-	-	-	-	-	-	[g]
	ON 7/2010	-	3.5	-	-	-	-	-	-	-	
	QC 9/2011	-	3.5	-	-	-	-	-	-	-	
Ethanol	US ACGIH 1/2011	-	-	-	1000	-	-	-	-	-	
	AB 4/2009	1000	1880	-	-	-	-	-	-	-	
	BC 9/2011	-	-	-	1000	-	-	-	-	-	
	ON 7/2010	-	-	-	1000	-	-	-	-	-	
	QC 9/2011	1000	1880	-	-	-	-	-	-	-	
Gilsonite	US ACGIH	-	10	-	-	-	-	-	-	-	[g]
		-	3	-	-	-	-	-	-	-	[h]

Form: [a]Mist [b]Respirable dust [c]Total dust [d]total dust [e]Total dust. [f]Inhalable fraction [g]Inhalable [h]Respirable

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

8. Exposure controls/personal protection

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: 44.4 to 45.6°C (111.9 to 114.1°F) [Pensky-Martens.]

Auto-ignition temperature : Not available.

Flammable limits : Lower: 0.5%
Upper: 36%

Color : Various

Odor : Characteristic.

pH : Not available.

Boiling/condensation point : 64.4 to 260°C (147.9 to 500°F)

Melting/freezing point : Not available.

Relative density : 0.854 to 0.876

Density : 0.843 to 0.968 g/cm^3

Vapor pressure : Not available.

Vapor density : >1 [Air = 1]

VOC content : 4.3 to 4.45 lbs/gal (515 to 533 g/l)

Odor threshold : Not available.

Evaporation rate : Not available.

Viscosity : Not available.

Solubility : Insoluble in the following materials: cold water and hot water.

LogK_{ow} : Not available.

10. Stability and reactivity

Chemical stability : The product is stable.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Solvent naphtha (petroleum), medium aliph.	LC50 Inhalation Vapor	Rat	>2800 ppm	1 hours
	LC50 Inhalation Vapor	Rat	>1400 ppm	4 hours
	LD50 Dermal	Rabbit	>4 g/kg	-
	LD50 Oral	Rat	>8 g/kg	-
Carbon black	LD50 Oral	Rat	>15400 mg/kg	-
Ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m3	4 hours
	LD50 Oral	Rat	7 g/kg	-

Chronic toxicity

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Ethanol	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-

Sensitizer

Not available.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Titanium dioxide	A4	2B	-	+	-	-
Carbon black	A3	2B	-	+	-	-

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure

12. Ecological information

Titanium dioxide	Acute EC50 5.83 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute LC50 5.5 ppm Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
	Acute LC50 >1000000 ug/L Marine water	Fish - Fundulus heteroclitus	96 hours
Ethanol	Acute EC50 17.921 mg/L Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 ug/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 ug/L Marine water	Crustaceans - Artemia franchiscana - Larvae	48 hours
	Acute LC50 42000 ug/L Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae - 3 days	12 weeks

Persistence/degradability

Not available.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1263	Paint	3	III		**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 60 L **Cargo aircraft** Quantity limitation: 220 L **Special provisions** B1, B52, IB3, T2, TP1, TP29

14. Transport information

TDG Classification	UN1263	PAINT	3	III		**Explosive Limit and Limited Quantity Index** 5 **Passenger Carrying Road or Rail Index** 60 **Special provisions** 59
IMDG Class	UN1263	PAINT	3	III		**Emergency schedules (EmS)** F-E, _S-E_
IATA-DGR Class	UN1263	Paint	3	III		**Passenger and Cargo Aircraft**Quantity limitation: 60 L Packaging instructions: 355 **Cargo Aircraft Only**Quantity limitation: 220 L Packaging instructions: 366 **Limited Quantities - Passenger Aircraft**Quantity limitation: 10 L Packaging instructions: Y344

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Combustible liquid
Irritating material
Carcinogen
Target organ effects

U.S. Federal regulations : **TSCA 4(a) final test rules**: 4-methylpentan-2-one
TSCA 8(a) IUR: Not determined
United States inventory (TSCA 8b): Not determined.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Solvent naphtha (petroleum), medium aliph.; Linseed oil; Titanium dioxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Solvent naphtha (petroleum), medium aliph.: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; Linseed oil: Immediate (acute) health hazard; Titanium dioxide: Immediate (acute) health hazard

Clean Water Act (CWA) 307: ethylbenzene

Clean Water Act (CWA) 311: xylene; ethylbenzene

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

15. Regulatory information

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 313

Form R - Reporting requirements Not applicable.

Supplier notification Not applicable.

State regulations

Massachusetts : The following components are listed: TITANIUM DIOXIDE

New York : None of the components are listed.

New Jersey : The following components are listed: TITANIUM DIOXIDE; TITANIUM OXIDE (TiO2); CARBON BLACK

Pennsylvania : The following components are listed: TITANIUM OXIDE (TIO2); LINSEED OIL; CARBON BLACK

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.
WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Titanium dioxide	Yes.	No.	No.	No.
Carbon black	Yes.	No.	No.	No.
Ethanol	Yes.	No.	No.	No.
2-ethylhexanoic acid	No.	Yes.	No.	No.
Methanol	No.	Yes.	No.	No.
ethylbenzene	Yes.	No.	41 µg/day (ingestion) 54 µg/day (inhalation)	No.
Quartz (SiO2)	Yes.	No.	No.	No.
4-methylpentan-2-one	Yes.	No.	No.	No.

Canada

WHMIS (Canada) : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).
Class D-2A: Material causing other toxic effects (Very toxic).

Canadian lists

Canadian NPRI : The following components are listed: Solvent naphtha medium aliphatic

CEPA Toxic substances : None of the components are listed.

Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

15. Regulatory information

International lists : **Australia inventory (AICS)**: Not determined.
China inventory (IECSC): Not determined.
Japan inventory: Not determined.
Korea inventory: Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

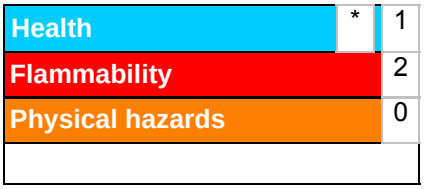
Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : COMBUSTIBLE LIQUID AND VAPOR. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CAN CAUSE CANCER.

Hazardous Material Information System (U.S.A.) :



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :

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16. Other information

Date of issue : 06/29/2012.

Date of previous issue : No previous validation.

Version : 1

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200)

Section 1: Identification

Product Identifier: **Guardol ECT™ Motor Oil**

Other means of identification: Guardol ECT™ Motor Oil, SAE 10W-30
Guardol ECT™ Motor Oil, SAE 15W-40

SDS Number: **778844**

Intended Use: Heavy Duty Diesel Engine Oil

Uses Advised Against: All others

24 Hour Emergency Phone Number: CHEMTREC 800-424-9300 (24 Hours)
CANUTEC 613-996-6666
CHEMTREC Mexico 01-800-681-9531

Manufacturer:
Phillips 66 Lubricants
P.O. Box 4428
Houston, TX 77210

SDS Information:
Phone: 800-762-0942
Email: SDS@P66.com
URL: www.Phillips66.com

Customer Service:
U.S.: 1-800-822-6457 or International: +1-83-2486-3363
Technical Information: 1-877-445-9198

Section 2: Hazards Identification

Classified Hazards
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Other Hazards
None Known

Label Elements

No classified hazards

Section 3: Composition / Information on Ingredients

Chemical Name	CASRN	Concentration[1]
Lubricant Base Oil (Petroleum)	VARIOUS	>75
Non-Hazardous Materials	VARIOUS	<25

[1] All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Section 4: First Aid Measures

Eye Contact: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Skin Contact: Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.

Inhalation (Breathing): First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.

Ingestion (Swallowing): First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

Most important symptoms and effects, both acute and delayed: Inhalation of oil mists or vapors generated at elevated temperatures may cause respiratory irritation. Accidental ingestion can result in minor irritation of the digestive tract, nausea and diarrhea. Dry skin and possible irritation with repeated or prolonged exposure.

Notes to Physician: Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Section 5: Fire-Fighting Measures

NFPA 704 Hazard Class

Health: 0 **Flammability:** 1 **Instability:** 0

0 (Minimal)
1 (Slight)
2 (Moderate)
3 (Serious)
4 (Severe)

Extinguishing Media: Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Specific hazards arising from the chemical

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

Hazardous Combustion Products: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

Special protective actions for firefighters: For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

Environmental Precautions: Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

Methods and material for containment and cleaning up: Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken. See Section 13 for information on appropriate disposal.

Section 7: Handling and Storage

Precautions for safe handling: Keep away from flames and hot surfaces. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Spills will produce very slippery surfaces. Used motor oils have been shown to cause skin cancer in mice after repeated application to the skin without washing. Brief or intermittent skin contact with used motor oil is not expected to cause harm if the oil is thoroughly removed by washing with soap and water. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

Conditions for safe storage: Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Section 8: Exposure controls/personal protection

Chemical Name	ACGIH	OSHA	Other
Lubricant Base Oil (Petroleum)	TWA: 5mg/m³ STEL: 10 mg/m³ as Oil Mist, if Generated	TWA: 5 mg/m³ as Oil Mist, if generated	---

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Eye/Face Protection: The use of eye/face protection is not normally required; however, good industrial hygiene practice suggests the use of eye protection that meets or exceeds ANSI Z.87.1 whenever working with chemicals.

Skin/Hand Protection: The use of skin protection is not normally required; however, good industrial hygiene practice suggests the use of gloves or other appropriate skin protection whenever working with chemicals. Suggested protective materials: Nitrile

Respiratory Protection: Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with R or P95 filters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

Section 9: Physical and Chemical Properties

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

Appearance: light brown
Physical Form: Liquid
Odor: Petroleum
Odor Threshold: No data
pH: Not applicable
Vapor Density (air=1): >1
Upper Explosive Limits (vol % in air): No data
Lower Explosive Limits (vol % in air): No data
Evaporation Rate (nBuAc=1): No data
Particle Size: Not applicable

Flash Point: > 438 °F / > 226 °C
Test Method: Cleveland Open Cup (COC), ASTM D92
Initial Boiling Point/Range: No data
Vapor Pressure: <1 mm Hg
Partition Coefficient (n-octanol/water) (Kow): No data
Melting/Freezing Point: No data
Auto-ignition Temperature: No data
Decomposition Temperature: No data
Specific Gravity (water=1): 0.8707 - 0.8759 @ 68ºF (20ºC)
Bulk Density: 7.27 - 7.31 lbs/gal

Percent Volatile: Negligible
Flammability (solid, gas): Not applicable
Solubility in Water: Negligible
Viscosity: 12.2 - 15.3 cSt @ 100°C; 80 - 117 cSt @ 40°C
Pour Point: -40 °F / -40 °C

Section 10: Stability and Reactivity

Reactivity: Not chemically reactive.

Chemical stability: Stable under normal ambient and anticipated conditions of use.

Possibility of hazardous reactions: Hazardous reactions not anticipated.

Conditions to avoid: Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

Incompatible materials: Avoid contact with Avoid contact with strong oxidizing agents and strong reducing agents.

Hazardous decomposition products: Not anticipated under normal conditions of use, During use in engines, contamination of oil with low levels of hazardous fuel combustion by-products may occur. Repeated and prolonged skin contact can cause drying and cracking.

Section 11: Toxicological Information

Information on Toxicological Effects of Substance/Mixture

Substance / Mixture

Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data
Inhalation	Unlikely to be harmful		>5 mg/L (mist, estimated)
Dermal	Unlikely to be harmful		> 2 g/kg (estimated)
Oral	Unlikely to be harmful		> 5 g/kg (estimated)

Aspiration Hazard: Not expected to be an aspiration hazard.

Skin Corrosion/Irritation: Not expected to be irritating. Repeated exposure may cause skin dryness or cracking.

Serious Eye Damage/Irritation: Not expected to be irritating.

Skin Sensitization: No information available on the mixture, however none of the components have been classified for skin sensitization (or are below the concentration threshold for classification).

Respiratory Sensitization: No information available.

Specific Target Organ Toxicity (Single Exposure): No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

Specific Target Organ Toxicity (Repeated Exposure): No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

Carcinogenicity: No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

Germ Cell Mutagenicity: No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

Reproductive Toxicity: No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

Other Comments: None Known

Information on Toxicological Effects of Components

Lubricant Base Oil (Petroleum)

Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including severe hydrocracking/hydroprocessing to reduce aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and are not considered carcinogens by NTP, IARC, or OSHA.

Section 12: Ecological Information

GHS Classification:
No classified hazards

Toxicity: All acute aquatic toxicity studies on samples of lubricant base oils show acute toxicity values greater than 100 mg/L for invertebrates, algae and fish. These tests were carried out on water accommodated fractions and the results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions.

Persistence and Degradability: The hydrocarbons in this material are not readily biodegradable, but since they can be degraded by microorganisms, they are regarded as inherently biodegradable.

Bioaccumulative Potential: Log Kow values measured for the hydrocarbon components of this material are greater than 5.3, and therefore regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

Mobility in Soil: Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of the hydrocarbon constituents in soil and sediment.

Other adverse effects: None anticipated.

Section 13: Disposal Considerations

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations. This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the SDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste.This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle used oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

Section 14: Transport Information

U.S. Department of Transportation (DOT)
Shipping Description: *Not regulated*
Note: *If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)*

International Maritime Dangerous Goods (IMDG)
Shipping Description: *Not regulated*
Note: *U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25.*

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
Not applicable

International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)
UN/ID #: *Not regulated*
Note: *U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 24.*

	LTD. QTY	Passenger Aircraft	Cargo Aircraft Only
Packaging Instruction #:	---	---	---
Max. Net Qty. Per Package:	---	---	---

Section 15: Regulatory Information

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):
This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

CERCLA/SARA - Section 311/312 (Title III Hazard Categories)

Acute Health Hazard:	No
Chronic Health Hazard:	No
Fire Hazard:	No
Pressure Hazard:	No
Reactive Hazard:	No

CERCLA/SARA - Section 313 and 40 CFR 372:
This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372:

Chemical Name	Concentration[1]	de minimis
Zinc Compound(s)	1.0 - 1.5	1.0%

EPA (CERCLA) Reportable Quantity (in pounds):
This material does not contain any chemicals with CERCLA Reportable Quantities.

California Proposition 65:
This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

International Hazard Classification

Canada:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the Regulations.

WHMIS Hazard Class:
none

National Chemical Inventories
All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.

All components are either on the DSL, or are exempt from DSL listing requirements.

U.S. Export Control Classification Number: EAR99

Section 16: Other Information

Date of Issue:	Previous Issue Date:	SDS Number:	Status:
26-Jun-2014	28-May-2008	778844	FINAL

Revised Sections or Basis for Revision:
Identified Hazards (Section 2); Composition (Section 3); Environmental hazards (Section 12)

Guide to Abbreviations:
ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

Disclaimer of Expressed and implied Warranties:
The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

United Resin Corporation

Safety Data Sheet

Issue on: 8/18/2015

1. Identification of Product & Company

Product Name: Hardener 550

Product type: Catalyst Mixture

Manufacturer/Supplier: United Resin Corporation
4359 Normandy Court
Royal Oak, MI 48073

Information Department: urcepoxy@unitedresin.com
www.unitedresin.com

Emergency Information: (248) 549 – 8200 **Medical Emergency Phone:** Poison Control Ctr.
(248) 549 – 9587 fax

2. Hazard Identification

Classification of the mixture:
Skin Irritation – Category 2
Eye Irritation – Category 2A
Skin Sensitization – Category 1
Acute Toxicity Oral – Category 4

Hazard Pictograms:

Signal Word: Warning

Hazard Statement:
H315-Skin Irritation
H320-Eye Irritation
H317-Skin Sensitization
H302-Harmful if swallowed

Precautionary Statement:
P270 – Do not eat, drink or smoke when using this product.
P271 – Use only in well ventilated area.
P280 – Wear eye protection and protective gloves.
P302+P352 – IF ON SKIN: Wash with plenty of soap and water.
P501 – Dispose of contents/container according to local, regional , national, and international regulations.

Other Hazards: No additional information available.

NFPA ratings (scale 0 – 4):

Health = 2, Fire = 1, Reactivity = 0

HMIS ratings (scale 0 – 4):

Health = 2, Fire = 1, Reactivity = 0

3. Composition/Information on Ingredients

Chemical Name:	Amino Ethyl Piperazine	**CAS No. Description:**	00140-31-8
Chemical Name:	Calcium Carbonate	**CAS No. Description:**	1317-65-3
Chemical Name:	Amorphous Silica	**CAS No. Description:**	7631-86-9

4. First Aid Measures

After inhalation: Supply fresh air and be sure to call for a doctor.
After skin contact: Immediately wash with water and soap and rinse thoroughly. Remove contaminated clothing. Launder contaminated clothing before re-use.
After eye contact: Rinse opened eye for several minutes under running water. Seek medical attention if irritation develops.
After swallowing: Do not induce vomiting; immediately call for medical help.

5. Fire Fighting Measures

Suitable extinguishing agents: Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Cartridge respirators do not provide adequate protection for fire fighters or exotherm mitigation. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
Unusual fire or explosion hazards: May liberate large quantities of dense, foul-smelling smoke which may contain unidentified toxic gasses.
Hazardous combustion products: Oxides of carbon and nitrogen, and undetermined organics.

6. Accidental Release Measures

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental protection: Do not allow product to enter sewers/surface or ground water. Wear appropriate protective equipment and clothing during clean-up. Prevent further leakage or spillage if safe to do so.
Clean-up methods: For large spills absorb onto inert absorbent material and place in sealed container for disposal. Dispose of according to Federal, State and local governmental regulations.

7. Handling and Storage

Handling: Ensure good ventilation/exhaustion at the workplace. Protect from heat. Empty containers retain product residue, so obey hazard warnings and handle empty containers as if they were full.

Storage: For safe storage, store at or below 72°F (22°C). Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials.

For information on product shelf life, please review Technical Data Sheet.

8. Exposure Controls and Personal Protection

Engineering Controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
Respiratory protection: If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.
Protection of hands: The glove material has to be impermeable and resistant to the product/substance/preparation.


Protective Gloves

Eye protection: Wear safety glasses; chemical goggles (if splashing is possible).

Safety Glasses

Body protection: Protective work clothing and boots.

9. Physical and Chemical Properties

General information:
Form: Paste
Color: Black
Odor: Slight
Change in condition:
Melting point/Melting range: Undetermined
Boiling point/boiling range: 430°F
Flash point: 215°F
Ignition temperature: Undetermined
Danger of explosion: Not applicable
Vapor pressure at 72°F: <1 mm Hg **Vapor Density (air=1):** >1
Density at 72°F: 11.21 lbs/gal **-** **Specific Gravity**: 1.34
Solubility in/miscibility with Water: Slight
Percent Solids: 100% **-** **Percent Volatiles:** 0%

10. Stability and Reactivity

Stability: Stable at normal conditions.

Hazardous reactions: Under normal conditions of storage and use, hazardous reactions should not occur.

Hazardous decomposition products: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons and undetermined organics.

Dangerous reactions: In normal storage hazardous reaction will not occur, reacts with amines.

Incompatible materials: Keep away from strong oxidizing agents, strong Lewis or mineral acids.

Reactivity: Not available.

Conditions to avoid: Avoid mixing resin (Part A) and curing agent (Part B) unless you plan to use immediately. Failure to observe this precaution may result in excessive heat build-up causing exotherm.

11. Toxicological Information

Relevant routes of exposure: Skin, Inhalation, Eyes and Ingestion

Potential Health Effects/Symptoms:

Inhalation: May cause respiratory tract irritation.
Skin contact: This product may cause irritation to the skin. This product may cause an allergic skin reaction.
Eye contact: This product may cause irritation to the eyes.
Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

12. Ecological Information

Aquatic or Other Organisms Toxicity: No Data Available.
Information about elimination (Persistence and Degradability): No Data Available.

13. Disposal Considerations

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazard waste number: Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA.

14. Transport Information

Land Transport (DOT): Non- Regulated

Marine Transport (IMDG): Non-Regulated

Air Transport (IATA): Non-Regulated

15. Regulations .

United States Regulatory Information

TSCA 8 (B) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: No reportable components

CERCLA/SARA Sec. 302 EHS: No reportable components

CERCLA/SARA Sec. 311/312: Immediate Health, Delayed Health

CERCLA/SAFA Sec. 313: No reportable components

California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information:

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Information source and references: No Data

Material Safety Data Sheet

Quick Identifier (In Plant Common Name)

Manufacturer's Name & Address HOSPECO
Cleveland, Ohio 44143

Telephone No. 800-321-9832

HMIS Symbol:

Health	**1**
Flammability	**3**
Reactivity	**0**

HMIS		NFPA
Minimal	0	Insignificant
Slight	1	Slight
Moderate	2	Moderate
Serious	3	High
Severe	4	Extreme

NFPA Symbol:

Date Prepared: March 21, 2013 **Prepared By:** V. Burnell **Supercedes:** NEW

SECTION 1 - IDENTITY

Common Name: (used on label) (Trade name & Synonyms) **HOSPECO HEALTH GARDS AIR FRESHENER VINEYARD, 7OZ.**

Chemical Name Mixture packaged in pressurized aerosol spray can.

SECTION 2 - HAZARDOUS INGREDIENTS

Principal Hazardous Component(s)	CAS No.	OSHA PEL	ACGIH TLV	Other Limits
2-Propanone	67-64-1	1000 ppm	500 ppm 750 ppm STEL	
Liquefied Petroleum Gas	68476-86-8	Unknown	1000 ppm	

***Section 313 Supplier Notification** - Indicates hazardous ingredients which are toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS

Boiling Point	>100°F	**Specific Gravity (H_20=1)(Conc)**	0.78 – 0.81g/ml	**Vapor Pressure (Propellant)**	No Data
% - VOC	20.0%	**Evaporation Rate (BuAc=1)**	>1.00	**pH**	N/A
Solubility In Water	Insoluble	**Appearance and Odor(Conc)**	Water white clear liquid with a characteristic odor		

SECTION 4 - FIRE & EXPLOSION DATA

Flammability (per flame projection)	**FLAMMABLE**	**Flammable Limits in Air (Propellants)**	**Lower** N/A	**Upper** N/A	**Extinguisher Media**	Dry chemical, CO_2, Alcohol-resistant foam

Special Fire Fighting Procedures Keep containers cool using water spray. Use proper equipment to protect personnel from bursting containers.

Unusual Fire and Explosion Hazards Contents under pressure. Do not expose to temperatures exceeding 120° F as containers may vent, rupture or burst.

SECTION 5 - PHYSICAL HAZARDS

Stability	Unstable □ Stable ■	**Conditions to Avoid**	Heat, sparks open flames; Temp. > 120°F.	**Hazardous Polymerization**	May Occur □ Will not Occur ■

Incompatibility (Materials to Avoid) Acids, alkalis, Reducing agents, Strong oxidizing agents

Hazardous Decomposition Products CO and CO_2

SECTION 6 - HEALTH HAZARDS

Routes of Entry	**Inhalation:** Yes		**Eyes / Skin:** Yes		**Ingestion:** Unlikely						
Signs and Symptoms of Exposure (Acute & Chronic)	**Eye contact:** Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes; **Skin contact:** May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use. **Ingestion:** Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This can result into lung inflammation and other lung injury; **Inhalation:** Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects.										
Medical Conditions Generally Aggravated by Exposure	Pre-existing skin and lung disorders										
Chemical Listed as Carcinogen or Potential Carcinogen	**National Toxicology Program**	Yes ☐ No ■	**I.A.R.C. Monographs**	Yes ☐ No ■	**OSHA**	Yes ☐ No ■					

Emergency and First Aid Procedures

1. Inhalation	Immediately move to fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.
2. Eyes	Immediately move to fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.
3. Skin	Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.
4. Ingestion	Seek medical attention. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting.

SECTION 7 – SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type)	None required for normal use.								
Ventilation	**Local Exhaust**	Maintain adequate ventilation.	**Mechanical (General)**	N/A	**Special**	N/A	**Other**	N/A	
Protective Gloves	Chemical Resistant				**Eye Protection**	Safety Glasses			
Other Protective Clothing or Equipment	Wash hands after use.								

SECTION 8 – SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken Handling and Storage	**WARNING: FLAMMABLE.** Contents under pressure. Keep away from heat, sparks and open flames. Excessive inhalation in confined areas may cause headaches or dizziness. Intentional misuse by deliberately concentrating or inhaling the contents may be harmful or fatal. Avoid contact with skin and eyes. Avoid contact with food and food handling surfaces. Avoid contact with painted, varnished or plastic surfaces. Do not store at temperatures above 120°F. Do not puncture or incinerate containers. Keep out of reach of children. Store in accordance with **NFPA 30B** for **Level 3 Aerosols.**
Other Precautions	Read label cautions carefully. Follow label directions to avoid injury.
Steps to be Taken in Case Material is Released or Spilled	Absorb spill with inert material then place in a chemical waste container. Dispose of spill material in accordance with regulations.
Waste Disposal Methods	Dispose of in accordance with local, state, and federal regulations.
Proposition 65	California Safe Drinking Water and Toxic Enforcement Act of 1986: This product is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to the proposition.
Transportation Info	**DOT Shipping Name:** Aerosols, Limited Quantity **Hazard Class:** Class 2.1(flammable gas) **UN/ID Number:** UN 1950

We believe all information given is accurate. It is offered in good faith, but without guarantee. Since conditions are beyond our control, user assumes all responsibility and risk.

1254354 / 9004354 / 9004117 132103

CANBERRA CORPORATION
SAFETY DATA SHEET

1. Identification

Product Identifier: HUSKY 1020 HIGH GLOSS PREMIUM FLOOR FINISH
Application or recommended use: Resilient tile floor finish
Restrictions on use: Do not use in any fashion not specified on the product label.
Manufacturer / supplier: Canberra Corporation
3610 N. Holland-Sylvania Rd.
Toledo, Ohio 43615 USA
Telephone: 419-841-6616 **Emergency phone:** 800-832-8992 **National Poison Center:** 800-222-1222

2. Hazards Identification

GHS Classification: Classification of this mixture in accordance with paragraph (d) of §1910.1200.
Not classified according to current models.

Label Elements:

Symbol: None
Signal word: **CAUTION**
Hazard statements: May cause eye irritation.
Precautionary statements: Wash hands, face and any skin contact thoroughly after handling.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Other Hazards: Prolonged contact with 2-(2-Ethoxyethoxy)-ethanol may cause central nervous system effects or effects to liver or kidney. In poorly ventilated areas, may cause respiratory tract irritation.

3. Composition / Information on Ingredients

Chemical characterization: Mixture of water, polymers, water soluble solvents and auxiliary agents.
Hazardous ingredients: The exact percentage of composition has been withheld as a trade secret.

3 - 7% *2-(2-Ethoxyethoxy)-ethanol	CAS 111-90-0, EINECS/ELINCS 203-919-7
1.5 - 4.5% Tris(2-butoxyethyl) phosphate	CAS 78-51-3, EINECS/ELINCS 201-122-9

Other ingredients (> 1%):

> 70% Water	CAS 7732-18-5, EINECS/ELINCS 231-791-2
10 - 25% Acrylic polymers	CAS Not available, EINECS/ELICS None
1 - 5% Oxidized polyethylene wax	CAS 68441-17-8, EINECS/ELICS None

4. First-Aid Measures

Symptoms: Irritation of affected areas. May cause eye irritation.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
Skin Contact: Remove contaminated clothing and wash before reuse. Wash contaminated area with soap and water for 15-20 minutes. If irritation occurs, get medical advice/attention.
Eye Contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. If eye irritation occurs, get medical advice/attention.
Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to a person who is unconscious or convulsing. If vomiting occurs, keep head below hips to reduce risk of aspiration.
Note to Physician: Treat exposed patients symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Not applicable. Product is not a fire hazard.
Unsuitable Extinguishing Media: High pressure water jet. **Specific hazards in case of fire:** None known.
Special Fire Fighting Precautions: Fire fighters should wear appropriate protective equipment, including self-contained breathing apparatus and impervious clothing.

6. Accidental Release Measures

Emergency Procedures: Depending on the extent of release, consider the need for restriction of access to spill area.
Personal Precautions: Do not eat, drink or smoke during clean up. Wear protective clothing, eye protection and impervious gloves (e.g. neoprene). Wash thoroughly after clean up.
Environmental Precautions: Prevent spills from entering storm sewers/drains or contact with soil.

6. Accidental Release Measures (cont.)

Clean up Methods: Small spills may be wiped up and rinsed with water. For larger spills, contain spill with inert material (sand, clay). Transfer material to labeled containers for recovery or proper disposal. After removal, flush area with water. Follow good industrial hygiene practices.

7. Handling and Storage

Precautions for Safe Handling: Read label before use. Avoid contact with skin or eyes. Wash hands, face and any skin contact thoroughly after handling. Wear protective gloves, eye protection, face protection. Use product only according to label directions. If unsure about safe use, contact your supervisor.
Conditions for Safe Storage: Keep out of reach of children. Do not contaminate water, food or feed by storage and disposal. Store in tightly closed, original container in a cool (10˚ - 30˚C), dry area.
Incompatibility: Acids, oxidizers, salts.

8. Exposure Controls / Personal Protection

Components with occupational exposure limits:

Component	Reference	WEEL TWA (8 hour)
2-(2-Ethoxyethoxy)-ethanol	AIHA	25 ppm

Engineering Controls: Proper ventilation in accordance with good industrial hygiene should be provided.
Personal Protective Equipment
Respiratory: Respiratory protection is not necessary under normal conditions of use.
Gloves: Recommended. **Eye Protection:** Recommended.
Other: Protective clothing (long sleeves, pants), eyewash, safety shower are always advisable when working with chemicals.

9. Physical and Chemical Properties

Physical State - Liquid
Color - White
Odor - Acrylic odor
Odor Threshold - No data available
Boiling Point - 212°F
Decomposition temperature - No data available
Freezing Point - 32°F
pH (Neat) - 8.0 - 9.5
Relative Density - 1.020 - 1.040
Evaporation Rate - Similar to water
Auto-ignition temperature - Not applicable
Flash Point - None
Flammability - Not applicable
Flammability Limits - Not applicable
Partition coefficient - Not applicable
Solubility (Water) - Complete
Vapor Density - No data available
Vapor Pressure - No data available
Viscosity - Slightly viscous
% VOC - < 1 (Excluding exempt material)

10. Stability and Reactivity

Reactivity: No specific reactivity test data is available for this mixture. Under normal conditions of storage and use, hazardous reactions are not expected. **Incompatible materials:** Acids, oxidizers, salts.
Chemical stability: This product is stable at ambient temperatures and pressures.
Conditions to avoid: Temperatures above 50°C or below 10°C.
Hazardous decomposition products: None known.

11. Toxicological Information

Acute Toxicity: Toxicity data is not available for this mixture. Data below are estimates based on summation methods.

Test	Results	Classification (A.0.4.1(c))	Basis (A.1.3.6.1)
Oral	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Dermal	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Inhalation	> 20 mg/L	Not applicable	Ingredient literature (Additive formula)
Eye Damage/Irritation	Not applicable	Not applicable	Ingredient literature
Skin Damage/Irritation	Not applicable	Not applicable	Ingredient literature

Summary: Skin and eye contact are most likely routes of exposure. May cause eye irritation

Subchronic/Chronic Toxicity:

Test	Results	Classification	Basis
Skin Sensitization	Not a sensitizer	Not applicable	Ingredient literature.

Summary: Repeated or prolonged contact causes skin or eye irritation, central nervous system, liver or kidney effects.

Carcinogens - Ingredients are not listed on the NTP Report on Carcinogens, IARC Monographs or by OSHA
Other data - No other toxicological information is available for this mixture.

12. Ecological Information

This material has not been tested for acute environmental effects.
Persistence and degradability: No data is available for persistence or degradability.
Bio-accumulative potential: No evidence to suggest bio-accumulation will occur.
Mobility: Accidental spillage may lead to penetration of soil and groundwater.

13. Disposal Considerations

Do not contaminate water, food or feed by disposal. If these materials cannot be disposed of by use according to label directions, contact your State Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance. Rinse container promptly after emptying. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill. If container is one gallon or less, wrap empty container in plastic bag and discard in trash.

14. Transport Information

Proper Shipping Name: Not regulated **RQ** - Not Applicable
Shipping emergency phone: 800-424-9300
Transport hazard class: Not Applicable **Hazard Label:** Not Applicable
Packing Group: Not Applicable **Emergency Guide No.:** Not Applicable **Marine Pollutant:** No

15. Regulatory Information

Inventory status: All components are listed on TSCA(US), EINECS/ELINCS(EU), DSL(Canada), AICS(Australia), ENCS(Japan).

OSHA Hazard Communication Standard: This product is not classified according to current models.

Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Sections 311 and 312

Immediate (Acute) Health Hazard	No	**Delayed (Chronic) Health Hazard**	No
Fire Hazard	No	**Reactive Hazard**	No
Sudden Release of Pressure Hazard	No		

Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Section 313
*****Chemicals marked with an asterisk in "**3. Composition/Information on Ingredients**" are subject to reporting requirements for Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40CFR Part 372.

Pennsylvania/New Jersey/Massachusetts Right to Know
See "**3. Composition/Information on Ingredients**" for hazardous and top five ingredients over 1% (w/w).

California Proposition 65: This product does not contain a listed substance known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

16. Other information

Date issued: 31. 12. 2014 F1020-001 Revision: N/A

Disclaimer: No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, is made with respect to information concerning the product referred to in this document. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present some degree of hazard and should be used with caution. The information and recommendations contained herein are presented in good faith. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. Furthermore, it is the direct responsibility of the user to comply with all applicable regulations governing the use and disposal of this material. **Prepared by:** R&D, Canberra Corporation

MATERIAL SAFETY DATA SHEET

SECTION I – IDENTITY AND RESPONSIBLE PARTY INFORMATION **300090165**

Responsible Party: **Canberra Corporation**

Product Name: **HUSKY 300 TOILET BOWL CLEANER**

Address: **3610 Holland-Sylvania Rd. Toledo, Ohio 43615**

Date Prepared: 6-1-10

Emergency Telephone No. And Other Information **1-419-841-6616**

Prepared By Regulatory Affairs Department

SECTION II – HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components Specific Chemical Identity: Common Name(s)	CAS #'s	OSHA PEL	ACGIH TLV	Other Limits Recommended	% Optional
Hydrochloric Acid	7647-01-0	5 ppm(c)	5 ppm(c)	N/A	9-10
Alcohol Ethoxylate	68131-39-5	N/A	N/A	N/A	1-5

***THIS CHEMICAL IS SUBJECT TO THE REPORTING REQUIREMENTS FOR SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372.**

HMIS RATING - HEALTH: 2 FLAMMABILITY: 0 REACTIVITY: 0 PERSONAL PROTECTION EQPT: B

SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 212° F

Specific Gravity (H_2O = 1): 1.047

Vapor Pressure (mm Hg): N/E

Percent Volatile By Weight (%): >95%

PH (conc.): <1

Evaporation Rate (H_2O=1): >1

Solubility in Water: Complete

Appearance and Fragrance: Blue Liquid / Sassafras Fragrance

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used) – None

Flammable Limits – LEL – N/A UEL – N/A

Extinguishing Media – Water, CO_2, Foam or media suitable for surrounding fire.

Special Fire Fighting Procedures – Standard fire fighting procedures may be followed, including full protective gear, NIOSH approved self-contained breathing apparatus. Unusual Fire and Explosion Hazards – None Known

SECTION V – PHYSICAL HAZARDS

Stability: Unstable / Stable **X**

Conditions to Avoid – None Known

Incompatibility (Materials to Avoid) – Do not mix with chlorine bleach or other chemicals.

Hazardous Decomposition Products or By-products – Thermal decomposition on burning may produce toxic vapors or gases, Chlorine gas, Hydrogen Gas.

Hazardous Polymerization: May Occur / Will not Occur **X**

Conditions to Avoid – None Known

SECTION VI – HEALTH HAZARDS

Route(s) of Entry: Inhalation? **X** Skin? **X** Ingestion? **X**

Health Hazards (1. Acute and 2. Chronic) – **1. ACUTE:** Harmful or fatal if swallowed. Eye and skin irritant. May cause permanent damage if not treated promptly. **2. CHRONIC:** None Known

Chemical Listed as Carcinogen or Potential Carcinogen: National Toxicology Program – No; I.A.R.C. Monographs – No; OSHA – No

Signs and Symptoms of Exposure – Irritation or burning sensation. Medical Conditions Generally Aggravated by Exposure – May aggravate skin disorders or respiratory ailments.

Emergency and First Aid Procedures – **EYE CONTACT:** Flush immediately with water for 15 minutes. Get medical attention. **SKIN CONTACT:** Flush with water for 15 minutes. Remove and wash contaminated clothing. **INHALATION:** Move to fresh air. Get medical attention. **INGESTION:** Rinse mouth with water. Then drink 1-2 glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled – Wear appropriate protective equipment. If possible, contain spill and collect in approved container. Rinse affected area thoroughly with water. Keep product out of storm sewers or waterways. Hold for disposal.

Waste Disposal Method – Dispose of in accordance with local, state and federal regulations. If possible, triple rinse container, and recycle.

Precautions to be Taken in Handling and Storing – Avoid contact with skin or eyes. Avoid breathing vapor, spray or mist. Store in original container, in cool dry place with adequate ventilation. Keep out of reach of children. Keep container tightly closed when not in use.

Other Precautions – Use only according to label directions. If unsure about safe use, contact your supervisor immediately.

SECTION VIII – CONTROL MEASURES

Respiratory Protection (Specify Type) – Not expected to be necessary under normal conditions of use. Ventilation – Local Exhaust – As Necessary Mechanical (General) – Adequate Special – N/A Other – N/A

Protective Gloves – Water Impervious (Latex, Neoprene) Eye Protection – Chemical Resistant Goggles or Face Shield Other Protective Clothing or Equipment - Not Required Eye wash recommended Work/Hygiene Practices – Follow OSHA mandated procedures. Never eat or smoke while working with chemicals. Good housekeeping practices apply. Wash thoroughly after handling.

NOTICE: NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE, ARE MADE WITH RESPECT TO INFORMATION CONCERNING THE PRODUCT REFERRED TO IN THIS MATERIAL SAFETY DATA SHEET.

The goal of defining precisely, in measurable terms, every possible health effect that may occur in the workplace as a result of chemical exposures cannot realistically be accomplished. The information and recommendation contained in this Material Safety Data Sheet are supplied pursuant to 29 C.F.R. 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. Canberra Corporation, however, makes no representations as to the completeness or accuracy thereof, and information is supplied upon the express condition that the persons receiving the same will be required to make their own determination as to its suitability for their purposes prior to use. In no event will Canberra Corporation be responsible for any damages of any nature whatsoever resulting from the use of, reliance upon, or the misuse of this information. The information as supplied herein is simply to be informative and intended solely to alert the user of the substance which is the subject matter of this Material Safety Data Sheet. The ultimate compliance with federal, state and local regulations concerning the use or disposal of this compound, or compliance with respect to products liability, rests solely upon the purchaser thereof.

N/A (Not Applicable/Not Available) N/E (Not Established)

CANBERRA CORPORATION
SAFETY DATA SHEET

1. Identification

Product Identifier: HUSKY 710 FLOOR CLEANER & NEUTRALIZER
Application or recommended use: Acidic tile floor cleaner/neutralizer
Restrictions on use: Do not use in any fashion not specified on the product label.
Manufacturer / supplier: Canberra Corporation
3610 N. Holland-Sylvania Rd.
Toledo, Ohio 43615 USA
Telephone: 419-841-6616 **Emergency phone:** 800-832-8992 **National Poison Center:** 800-222-1222

2. Hazards Identification

GHS Classification: Classification of this mixture in accordance with paragraph (d) of §1910.1200.
Skin Corrosion/Irritation - Category 2
Eye Damage/Irritation - Category 1

Label Elements:

Symbol:

Signal word: **DANGER**
Hazard statements: Causes skin irritation.
Causes serious eye damage.
Precautionary statements: Wash hands, face and any skin contact thoroughly after handling.
Wear protective gloves/eye protection/face protection.
IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
See 4. First-Aid Measures for specific treatment.
Other Hazards: Harmful if swallowed.

3. Composition / Information on Ingredients

Chemical characterization: Glycolic acid solution, blended with detergents, organic acids and auxiliary agents.
Hazardous ingredients: The exact percentage of composition has been withheld as a trade secret.

1 - 5%	Glycolic Acid,	CAS 79-14-1, EINECS/ELINCS 201-180-5
1 - 3%	C_{12-15} Fatty alcohol ethoxylate	CAS 68131-39-5, EINECS/ELINCS NLP500-195-7

Other ingredients (> 1%):

> 84%	Water	CAS 7732-18-5, EINECS/ELINCS 231-791-2

4. First-Aid Measures

Symptoms: Causes irritation or burning sensation. Causes skin irritation and serious eye damage.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
Inhalation: Move person to fresh air. If respiratory irritation or dizziness occurs, seek immediate medical assistance.
Skin Contact: Remove contaminated clothing and wash before reuse. Wash contaminated area with soap and water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Eye Contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to a person who is unconscious or convulsing. If vomiting occurs, keep head below hips to reduce risk of aspiration. Probable mucosal damage may contraindicate the use of gastric lavage.
Note to Physician: Treat exposed patients symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Use water spray, dry chemical, carbon dioxide or foam extinguishing agents. In case of fire, keep containers cooled with water spray. **Unsuitable Extinguishing Media:** High pressure water jet.
Specific hazards in case of fire: None known.
Special Fire Fighting Precautions: Fire fighters should wear appropriate protective equipment, including self-contained breathing apparatus and impervious clothing.

6. Accidental Release Measures

Emergency Procedures: Depending on the extent of release, consider the need for restriction of access to spill area.
Personal Precautions: Do not eat, drink or smoke during clean up. Wear protective clothing, eye protection and impervious gloves (e.g. neoprene). Wash thoroughly after clean up.
Environmental Precautions: Prevent spills from entering storm sewers/drains or contact with soil.
Clean up Methods: Small spills may be wiped up and rinsed with water. For larger spills, contain spill with inert material (sand, clay). Transfer material to labeled containers for recovery or proper disposal. After removal, flush area with water. Follow good industrial hygiene practices.

7. Handling and Storage

Precautions for Safe Handling: Do not use on any surface that can be damaged by acid materials. Wash hands, face and any skin contact thoroughly after handling. Wear protective gloves, eye protection, face protection. Use product only according to label directions. If unsure about safe use, contact your supervisor.
Conditions for Safe Storage: Keep out of reach of children. Do not contaminate water, food or feed by storage and disposal. Store in tightly closed, original container in a cool (10˚ - 30˚C), dry area.
Incompatibility: Alkali, oxidizers.

8. Exposure Controls / Personal Protection

Components with occupational exposure limits: None
Engineering Controls: Proper ventilation in accordance with good industrial hygiene should be provided.
Personal Protective Equipment
Respiratory: Respiratory protection is not necessary under normal conditions of use.
Gloves: Use water impervious gloves (latex or neoprene rubber). No breakthrough time has been established.
Eye Protection: Chemical resistant goggles and face protection.
Other: Protective clothing (long sleeves, pants), eyewash, safety shower are always advisable when working with chemicals.

9. Physical and Chemical Properties

Physical State - Liquid
Color - Green
Odor - Lime
Odor Threshold - No data available
Boiling Point - 212°F
Decomposition temperature - No data available
Freezing Point - 0°F
pH (Neat) - 2.5
pH (RTU) - 2.5 - 3.5
Relative Density - 1.025
Evaporation Rate - Similar to water
Auto-ignition temperature - Not applicable
Flash Point - None
Flammability - Not applicable
Flammability Limits - Not applicable
Partition coefficient - Not applicable
Solubility (Water) - Complete
Vapor Density - No data available
Vapor Pressure - No data available
Viscosity - Water thin
% VOC - < 1 (Excluding LVP material)

10. Stability and Reactivity

Reactivity: No specific reactivity test data is available. Under normal conditions of storage and use, hazardous reactions are not expected. **Incompatible materials:** Oxidizers, metal hydroxides.
Chemical stability: This product is stable at ambient temperatures and pressures.
Conditions to avoid: Temperatures above 50°C or below 10°C.
Hazardous decomposition products: None known.

11. Toxicological Information

Acute Toxicity: Toxicity data is not available for this mixture. Data below are estimates based on summation methods.

Test	Results	Classification (A.0.4.1(c))	Basis (A.1.3.6.1)
Oral	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Dermal	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Inhalation	> 20 mg/L	Not applicable	Ingredient literature (Additive formula)
Eye Damage/Irritation	Corrosion	Category 1	Ingredient literature
Skin Damage/Irritation	Corrosion	Category 2	Ingredient literature

Summary: Skin and eye contact are most likely routes of exposure. Exposure causes skin irritation and serious eye damage.

11. Toxicological Information (cont.)

Subchronic/Chronic Toxicity:

Test	Results	Classification	Basis
Skin Sensitization	Not a sensitizer	Not applicable	Ingredient literature.

Summary: Repeated or prolonged contact causes skin irritation and eye damage.

Carcinogens - Ingredients are not listed on the NTP Report on Carcinogens, IARC Monographs or by OSHA
Other data - No other toxicological information is available for this mixture.

12. Ecological Information

This material has not been tested for acute environmental effects.
Persistence and degradability: Material is not persistent. All organic components > 1% are readily biodegradable.
Bio-accumulative potential: No evidence to suggest bio-accumulation will occur.
Mobility: Accidental spillage may lead to penetration of soil and groundwater. However, due to degradability, no evidence suggests this would cause adverse ecological effects. Material will lower pH of affected area.

13. Disposal Considerations

Do not contaminate water, food or feed by disposal. If these materials cannot be disposed of by use according to label directions, contact your State Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance. Rinse container promptly after emptying. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill. If container is one gallon or less, wrap empty container in plastic bag and discard in trash.

14. Transport Information

Proper Shipping Name: Not regulated **RQ** - Not Applicable
Shipping emergency phone: 800-424-9300
Transport hazard class: Not Applicable **Hazard Label:** Not Applicable
Packing Group: Not Applicable **Emergency Guide No.:** Not Applicable **Marine Pollutant:** No

15. Regulatory Information

Inventory status: All components are listed on TSCA(US), EINECS/ELINCS(EU), DSL(Canada), AICS(Australia), ENCS(Japan).

OSHA Hazard Communication Standard: This product meets the §1910.1200 definition of a "Hazardous Chemical".

Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes	**Delayed (Chronic) Health Hazard**	No
Fire Hazard	No	**Reactive Hazard**	No
Sudden Release of Pressure Hazard	No		

Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Section 313
*****Chemicals marked with an asterisk in "**3. Composition/Information on Ingredients**" are subject to reporting requirements for Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40CFR Part 372.

Pennsylvania/New Jersey/Massachusetts Right to Know
See "**3. Composition/Information on Ingredients**" for hazardous and top five ingredients over 1% (w/w).

California Proposition 65: This product does not contain a listed substance known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

16. Other information

Date issued: 31. 12. 2014 F710-001 Revision: N/A

Disclaimer: No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, is made with respect to information concerning the product referred to in this document. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present some degree of hazard and should be used with caution. The information and recommendations contained herein are presented in good faith. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. Furthermore, it is the direct responsibility of the user to comply with all applicable regulations governing the use and disposal of this material. **Prepared by:** R&D, Canberra Corporation

Most Popular
in Hazard Marking
- Software - Markware
- RTK Label Blanks
- Diamond Panel Kits
- Do-It-Yourself Panels
- Panel Characters - Die-Cut

Material Safety Data Sheet
Name INDUSTRIAL MAINTENANCE LATEX TRAFFIC MARKING
Company ACE HARDWARE CORPORATION

MSDS cjnqd
FSC 0000

MSDS Safety Information

MSDS Date: 07/01/1997
MSDS Num: CJNQD
Product ID: INDUSTRIAL MAINTENANCE LATEX TRAFFIC MARKING PAINT, 106
UFN: 01
Responsible Party
Cage: ACEHA
Name: ACE HARDWARE CORPORATION
Address: 21901 SOUTH CENTRAL AVENUE
City: MATTESON IL 60443
Info Phone Number: 708-720-0600
Emergency Phone Number: 630-990-6600
Resp. Party Other MSDS No.: FORM # 2773 6/97-1
Proprietary Ind: Y
Review Ind: Y
Published: Y

Fast Find
- Confined Space Checklist
- Lockout Checklist
- CFR - 1910 L Fire Protection
- Asbestos Fact Sheet
- Traffic Signs
- Parking Signs
- Industrial Signs
- Tags

Contractor Summary

Cage: ACEHA
Name: ACE HARDWARE CORPORATION
Address: 21901 SOUTH CENTRAL AVENUE
City: MATTESON IL 60443
Phone: 708-720-0600

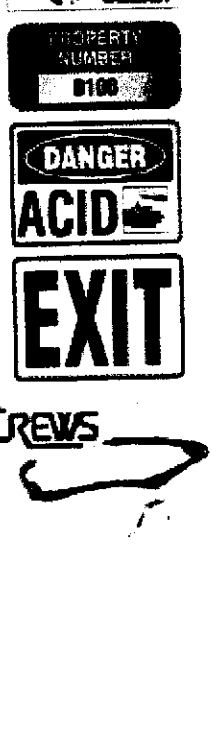
Ingredients

Name: *** PROPRIETARY ***

Health Hazards Data

Route Of Entry Inds - Inhalation: YES
Skin: YES
Ingestion: YES
Carcinogenicity Inds - NTP: NO
IARC: NO
OSHA: NO
Effects of Exposure: ACUTE: IN A CONFINED AREA VAPORS IN HIGH CONCENTRATION ARE ANESTHETIC. IRRITANT TO UPPER RESPIRATORY SYSTEM. CHRONIC PROBLEMS WITH RESPIRATORY SYSTEM MAY BE AGGRAVATED BY EXPOSURE TO VAPORS.
Signs And Symptions Of Overexposure: LIGHTHEADEDNESS AND STAGGERING GAIT.
Medical Cond Aggravated By Exposure: CHRONIC PROBLEMS WITH RESPIRATORY SYSTEM MAY BE AGGRAVATED BY EXPOSURE TO VAPORS.
First Aid: INHALATION: REMOVE FROM EXPOSURE. RESTORE BREATHING. KEEP WARM ANDamp; QUIET. SKIN: WASH FROM SKIN WITH SOAP ANDamp; WATER. LAUNDER CLOTHING BEFORE REUSE. EYES: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. INGESTION : CALL MD IMMEDIATELY (FP N).

Handling and Disposal



pill Release Procedures: REMOVE ALL SOURCES OF IGNITION. VENTILATE ANDamp;
REMOVE WITH INERT ABSORBENT.
laste Disposal Methods: INCINERATE IN APPROVED FACILITY. DO NOT INCINERATE
CLOSED CONTAINERS. DISPOSE OF I/A/W FEDERAL, STATE ANDamp; LOCAL REGULATIONS
REGARDING POLLUTION.
landling And Storage Precautions: DOL STORAGE CATEGORY: 3B. AVOID BREATHING
VAPOR OR SPRAY MIST. AVOID CONTACT WITH SKIN OR EYES.
ther Precautions: KEEP OUT OF REACH OF CHILDREN.

ire and Explosion Hazard Information

lash Point Method: PMCC
lash Point: =92.8C, 199.F
xtinguishing Media: NON-COMBUSTIBLE - FOR DRY SOLIDS USE WATER, FOAM, CO*2,
DRY CHEMICALS.
ire Fighting Procedures: USE NIOSH APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT
(FP N). WATER MAY BE USED TO COOL CLOSED CONTAINERS.
nusual Fire/Explosion Hazard: CLOSED CONTAINERS EXPOSED TO EXTREME HEAT MAY
RUPTURE DUE TO PRESSURE BUILD-UP. CONTENTS MAY SPATTER IF TEMPERATURE EXCEEDS
212F. RATING: HEALTH - 1; FLAMMABILITY - 1; REACTIVITY - 0.

ontrol Measures

espiratory Protection: NIOSH APPROVED RESPIRATORY DEVICE.
entilation: LOCAL EXHAUST: PREFERABLE. MECHANICAL (GENERAL): ACCEPTABLE.
rotective Gloves: IMPERVIOUS GLOVES (FP N).
ye Protection: ANSI APPROVED CHEMICAL WORKERS GOGGLES (FP N).
ther Protective Equipment: EYE WASH AND DELUGE SHOWER MEETING ANSI DESIGN
CRITERIA (FP N).

hysical/Chemical Properties

oiling Point: =100.C, 212.F
apor Density: HVR/AIR
pec Gravity: 1.37 (WATER=1)
vaporation Rate ANDamp; Reference: SLOWER THAN ETHER
olubility in Water: DILUTABLE
ppearance and Odor: COLORED PIGMENTED LIQUID WITH SLIGHT AMMONIA ODOR.

eactivity Data

tability Indicator: YES
laterials To Avoid: NO HAZARDOUS REACTIONS ARE EXPECTED UNDER NORMAL USE.
azardous Decomposition Products: CARBON DIOXIDE AND CARBON MONOXIDE.
azardous Polymerization Indicator: NO
onditions To Avoid Polymerization: WILL NOT OCCUR.

egulatory Information

ederal Regulatory Information: APPROVED BY U.S. DEPARTMENT OF LABOR,
"ESSENTIALLY SIMILAR" TO FORM C3HA1741.

AZCOM Label

roduct ID: INDUSTRIAL MAINTENANCE LATEX TRAFFIC MARKING PAINT, 106
age: ACEHA
ompany Name: ACE HARDWARE CORPORATION
treet: 21901 SOUTH CENTRAL AVENUE
ity: MATTESON IL
ipcode: 60443
ealth Emergency Phone: 630-990-6600
abel Required IND: Y
ate Of Label Review: 10/01/1999
tatus Code: A
rigination Code: F

:hronic Hazard IND: Y
:ye Protection IND: YES
:kin Protection IND: YES
:ignal Word: WARNING
:espiratory Protection IND: YES
:ealth Hazard: Slight
:ontact Hazard: Slight
:ire Hazard: Moderate
:eactivity Hazard: None
:azard And Precautions: ACUTE: IN A CONFINED AREA VAPORS IN HIGH CONCENTRATION ARE ANESTHETIC. IRRITANT TO UPPER RESPIRATORY SYSTEM. LIGHTHEADEDNESS AND STAGGERING GAIT. CHRONIC PROBLEMS WITH RESPIRATORY SYSTEM MAY BE AGGRA VATED BY EXPOSURE TO VAPORS.

)isclaimer

provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever expressly or implied warrants, states, or intends said information to have any application, use or viability by or to any person or persons outside the Department of Defense nor any person or persons contracting with any instrumentality of the United States of America and disclaims all liability for such use. Any person utilizing this instruction who is not a military or civilian employee of the United States of America should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation regardless of similarity to a corresponding Department of Defense or other government situation.

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Material Safety Data Sheet

Ingersoll Rand # 50 Oil

Section 1. Product and Company Identification

Product Name	: Ingersoll Rand # 50 Oil
Synonym	: Not Available
Product Use	: Lubricant
Validation Date	: 04/11/2011
In Case of Emergency	: **1-800-TOOL HLP** **1-800-866-5457**
MSDS authored by:	: Ingersoll Rand Industrial Technologies 800-A Beaty Street, P.O. Box 1600, Davidson, NC 28036

Section 2. Hazards identification

Hazardous Materials Identification System (HMIS) :

Health	Flammability	Reactivity
1	1	0

Chemical Name	: Not Applicable - Mixture
Chemical Family	: Petroleum Hydrocarbon
Product Appearance and Odor	: Amber Liquid, petroleum odor
Route of Exposure	: Inhalation and skin contact
Potential Health Effects	: Prolonged or repeated skin contact with this product tends to remove skin oils possibly leading to irritation and dermatitis. Product contacting the eye may cause irritation. Product has a low order of oral and dermal toxicity. Possible aspiration hazard. Induced vomiting may cause aspiration of product into the lungs.
Carcinogenicity	: None
OSHA Designation	: None
NTP Designation	: None
IARC Designation	: None
Signs/Symptoms	: Skin and eye irritation, defatting of skin, nausea and vomiting.

Section 3. Composition / Information on Ingredients

Chemical Name	**CAS #(s)**	**Percent**
Petroleum based lubricating oil	64742-54-7, 64742-65-0	>99%
OSHA PEL TWA	5 mg/m^3	
ACGIH TLV TWA	5 mg/m^3	
ACGIH STEL/Ceiling	Not provided	

Chemical Name	**CAS #(s)**	**Percent**
Butylated hydroxytoluene	128-39-2	<1%
OSHA PEL TWA	Not established	
ACGIH TLV TWA	Not established	
ACGIH STEL/Ceiling	Not provided	

Section 4. First Aid Measures

Eye Contact	: Flush with clear water for at least 15 minutes. If irritation persists, seek medical attention.
Skin contact	: Remove contaminated clothing and wash skin thoroughly with soap and water.
Inhalation	: Vapor pressure is very low. Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor from hot product, immediately remove to fresh air and call a physician. If breathing is irregular or has stopped, start resuscitation; administer oxygen if available. If overexposure to oil mist, remove from further exposure until excessive oil mist condition subsides.
Ingestion	: If ingested, do not induce vomiting. Call a physician immediately.

Section 5. Fire-Fighting Measures

Flash Point : 177 °C (350 °F)

Flash Point Method : COC

Auto-ignition Temperature : Not established

National Fire Protection Association (NFPA) :

Health	Flammability	Reactivity
1	1	0

Upper Flammable or Explosive Limits : Not established

Lower Flammable or Explosive Limits : Not established

Extinguishing Media : Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type product, depending on size or potential size of fire and circumstances related to the situation. Water froth may be used to flush spills away from exposure.

Fire Fighting Procedures : Minimize breathing gases, vapor, fumes, and smoke, or decomposing products. Do not enter any enclosed or confined area without proper protective equipment and breathing apparatus.

Section 6. Accidental Release Measures

Leak Response : Keep product out of sewers and watercourses by diking or impounding. Absorb with sand or inert material. Sweep or scoop up and remove. Prevent spread of spill. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas. Assure conformity with local regulations.

Disposal Methods : Assure conformity with applicable disposal regulations. Dispose of absorbed material at an approved waste site or facility. (Consult federal, state, or local authorities for proper disposal procedures.)

Section 7. Handling and Storage

Handling procedures : Keep containers closed when not in use. Do not handle near heat, sparks, flame, or strong oxidants.

Section 8. Exposure Controls / Personal Protection

Ventilation : Provide ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations or vapor in air. Use local exhaust to capture vapor, mist or fumes, if necessary. Workplace environment conditions vary widely. Therefore design criteria for ventilation cannot be specified in a MSDS.

Respiratory Protection : Use only NIOSH approved equipment. Normally not needed at ambient temperatures. Use supplied air respiratory protection in confined or enclosed spaces, if needed. Use filter, dust, fume, or vapor respirator type under misting conditions. Use can or cartridge, gas or vapor respirator type under conditions exceeding TWA standard.

OSHA PEL TWA : 5 mg/m^3

ACGIH TLV TWA : 5 mg/m^3

Protective Gloves : Use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact.

Eye Protection : Use splash goggles or face shield when eye contact may occur due to splashing or spraying of material.

Other Protective Equipment : Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing, which could result in prolonged or repeated skin contact.

Personal Hygiene : There are no known hazards associated with this material when used as recommended. The following general hygiene considerations are recognized as common good industrial hygiene practices. Minimize breathing vapor, mist, or fumes. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry-clean before reuse. Remove contaminated shoes and thoroughly clean before reuse; discard if oil-soaked. Cleanse skin thoroughly after contact, before breaks and meals, and at end of work period. Product is readily removed from skin by waterless hand cleaners, followed by washing thoroughly with soap and water.

Section 9. Physical and Chemical Properties

Physical State/Appearance	: Amber liquid, petroleum odor	**Flash Point**	: 177 °C (350 °F)
p/H	: Not rated	**Flash Point Method**	: COC
Decomposition Temperature	: Not available	**Solubility In Water**	: Nil
Vapor Pressure	: < .01 mmHg @ 20 °C	**Evaporation Point (n-Butyl Acetate = 1)**	: Not available
Vapor Density (Air = 1)	: > 5	**VOC Content**	: 0.11 lb/gal
Boiling Range	: Not available	**Viscosity**	: Unknown
Melting Point	: Not applicable	**Specific Gravity (25 °C/25 °C) (Water = 1)**	: < 1.0

Section 10. Stability and Reactivity

Chemical Stability : Yes

Conditions To Avoid : Open flames

Incompatibilities with Other Materials : Strong oxidizers, concentrated oxygen, sodium or calcium hypochlorite for explosion hazard

Hazardous Polymerization : No

Hazardous Decomposition Products : (Under fire conditions) Smoke, fumes, carbon monoxide, and other decomposition products in case of incomplete combustion.

Section 11. Toxicological Information

Oral (Acute) : Not established

Dermal (Acute) : Not established

Eye : Not established

Inhalation (Acute) : Not established

Chronic, Subchronic, Etc. : Not established

Medical Conditions Aggravated by Exposure : Not established

Toxicological Paragraph : This product does NOT contain any ingredients identified as carcinogenic by IARC, NTP, or OSHA

Section 12. Ecological Information

Ecological Paragraph : Not established

Section 13. Disposal Considerations

Waste Disposal : Consult federal, state, or local authorities for proper disposal procedures. Assure conformity with applicable disposal regulations. Dispose of absorbed material at an approved waste site or facility.

Section 14. Transport Information

Transportation Information : Not regulated by Department of Transportation (DOT)

Section 15. Regulatory Information

Applies to all ingredients :

SARA : This material is not known to contain any chemicals at a concentration of greater than 1.0 percent or carcinogenic chemicals at a concentration greater than .01 percent.

US Federal : Not provided

State : Not provided

Section 16. Other Information

Disclaimer : The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse use beyond our control, seller makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. User should satisfy himself that he has all current data relevant to his particular use.

Other Information : Not available

Safety Data Sheet
92166 Invisible Glass®

1. IDENTIFICATION

Stoner Incorporated
1070 Robert Fulton Hwy.
Quarryville, PA 17566
1-800-227-5538

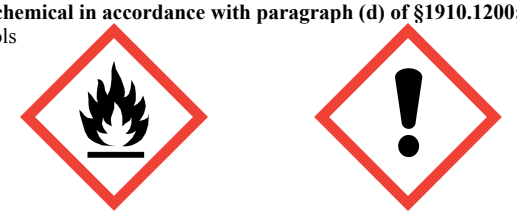
Product Name:	Invisible Glass®
Product Code:	92166
Product Use:	Glass Cleaner
24-hour emergency phone:	1-800-424-9300 [CHEMTREC]

2. HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

GHS Hazard Symbols



GHS Classification	Flammable Liquid Category 2 Serious Eye Damage/Eye Irritation Category 2A
Signal Word	Danger
Hazard Statements	Highly flammable liquid and vapour. Causes serious eye irritation.
Precautionary Statements	
Prevention	Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. P241 - Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. P264 - Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. P370+P378 - In case of fire: Use proper media to extinguish.
Storage	Keep container tightly closed. Store in a well-ventilated place. Keep cool.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulation for hazardous wastes.

3. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	Percent
Water	7732-18-5	80 - 100
Proprietary hydrocarbon blend	Mixture	1-20

HMIS® III* HAZARDOUS WARNINGS:

Health:	2	Flammability:	3	Physical:	0	Personal Protective Equipment:	See Section 8

* See www.paint.org/hmis or call the ACA at 1 (202) 462-6272 for more information on this current rating system.

4. FIRST AID MEASURES

Eyes:	Immediately flush eyes gently with plenty of water for at least 15 minutes while holding eyelids apart. If symptoms persist or there is visual difficulty, seek medical attention.
Skin Contact:	In case of contact, immediately wash contaminated area with plenty of water for at least 15 minutes. Seek medical attention if symptoms persist. Wash clothing before reuse.
Ingestion:	Contact a physician, medical facility, or poison control center immediately.
Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Continue your efforts until help arrives or the victim starts to breathe on his own. Do not leave victim alone. Seek immediate medical attention. Keep the victim warm and quiet.

NOTES TO PHYSICIAN:
No additional first aid information available. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin; lung (for example, asthma-like conditions); liver; kidney; blood forming system;

5. FIRE FIGHTING MEASURES

Fire and/or Explosion Hazards:	Product is water based material, containing minor amounts of flammable ingredients. This product contains a component(s) that is considered a flammable liquid, which has vapors that are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, pilot lights, or other flames and ignition sources at locations distant from the material's handling point.
Fire Fighting Instructions:	Use alcohol foam, water fog, dry chemical, or CO2. Fire fighters should wear normal protective equipment and positive-pressure self-contained breathing apparatus. Although this product has a flash point below 200 F, it is an aqueous solution and does not sustain combustion. Water is generally not effective and may spread fire; however, water spray may be used from a safe distance to cool closed containers and protect surrounding area.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Remove all sources of ignition. Wear appropriate personal protective equipment (PPE). Stop or reduce discharge if it can be done safely. Ventilate contaminated area. Avoid run-off into storm sewers and ditches which may lead to natural waterways. If runoff occurs, notify authorities as required. Clean up with absorbent material. Place absorbent materials into container and close it tightly. Dispose of container properly.

7. HANDLING AND STORAGE

Handling:	Do not use near ignition sources. If ventilation is not sufficient, wear proper respiratory equipment. Avoid prolonged or repeated contact with skin. Avoid prolonged or repeated breathing of vapor. Do not store containers in excessive heat or direct sunlight. Protect container against physical damage. Use with adequate ventilation. Do not use near ignition sources. Protect container against physical damage.
Storage:	Keep container tightly closed when not in use. Store in a cool, dry, well ventilated area away from all sources of ignition. Empty container may contain residues which are hazardous.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:	Ventilation should be adequate to prevent exposures above the limits indicated below in this section of the SDS (from known, suspected or apparent adverse effects). Local exhaust should be used in areas where exposure limits may be exceeded.
Eye Protection:	Wear chemically resistant safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid or airborne material. Have an eye wash station available.
Skin Protection:	The use of chemically resistant gloves is recommended if there is any possibility of prolonged or repeated liquid contact with skin.
Respiratory Protection:	A supplied air respirator should be used if ventilation is not sufficient to maintain exposure limits. Use NIOSH approved respirator where there is likelihood of inhalation of the product mist, spray or aerosol.

COMPONENT	CAS #	ACGIH TLV	OSHA PEL	OTHER
Water	7732-18-5	Not established	Not established	Not established
Proprietary hydrocarbon blend	Mixture	20 ppm	50 ppm	Not established

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Bulk trigger bottle	Lower Flammability Limit (%):	2.1
Appearance:	Clear Colorless	Upper Flammability Limit (%):	13
Odor:	Mild Alcohol	Vapor Pressure (PSIG @ 70°F):	No data available
Odor Threshold:	Sharp	Vapor Density [air = 1]:	> 1.0
pH:	Not applicable	Relative Density (H2O=1):	0.98
Melting/Freezing Point (°F):	No data available	Solubility in Water:	Complete; 100%
Boiling Point (°F):	No data available	Partial Coefficient: n-octanol/water:	No data available
Flash Point (°F PMCC):	None	Autoignition Temperature (°F):	869
Evaporation Rate:	Not determined	Decomposition Temperature (°F):	No data available
Flammability (solid, gas):	No data available	Viscosity, dynamic (cSt):	No data available
Percent VOCs (%):	1-20		

10. STABILITY AND REACTION

Chemical Stability: Stable.
Conditions to Avoid: Avoid contact with: Ignition sources such as open flames, sparks, static discharges or glowing metal surfaces. Acids. Strong oxidizing agents. Acetaldehyde. Chlorine. Ethylene oxide. Isocyanates. Strong alkalies.
Decomposition Products: Burning can produce the following combustion products: Carbon dioxide and carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Inhalation Toxicity: High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.
Reproductive & Developmental Toxicity: No data available.
IARC Carcinogen Designation: No data available

Ingredient	CAS #	Toxicological Data
Proprietary hydrocarbon blend	Mixture	DERMAL LD50 Rabbit 220 mg/kg ORAL LD50 GUINEA PIG 1200 mg/kg ORAL LD50 Rat 250 mg/kg INHALATION LC50 Rat 2900 MG/M3 INHALATION LC50 Mouse 700 ppm INHALATION LC50 Mouse 3380 MG/M3

12. ECOLOGICAL INFORMATION

Ecological Toxicity: No data available
Mobility: No data available This material (or one of its components), dissolves in water. If it enters the soil, it will be highly mobile and may contaminate ground water.
Degradability: No data available.

Ingredient	CAS #	Toxicological Data
Proprietary hydrocarbon blend	Mixture	Aquatic LC50 (96h) MINNOW = 72860 mg/L Aquatic LC50 (48h) Daphnia > 100 mg/L Aquatic LC50 (96h) Algae 6500 - 13000 mg/L

13. DISPOSAL CONSIDERATIONS

Disposal : Dispose according to Federal, State and local regulations.

14. TRANSPORTATION INFORMATION

Agency	UN Number	Proper Shipping name	Hazard Class	Packing Group
DOT	UN1993	Flammable Liquids, n.o.s.(contains ISOPROPANOL)†	3	II
IATA	UN1993	Flammable Liquids, n.o.s.(contains ISOPROPANOL)†	3	II
IMDG	UN1993	Flammable Liquids, n.o.s. (contains ISOPROPANOL)†	3	II

† "Limited Quantities" may be applicable for this transportation mode.

15. REGULATORY INFORMATION

Warning: This product contains the following chemicals that are subject to reporting requirements for the following regulatory bodies listed below:

COMPONENT	CAS #	% BY WEIGHT	Regulatory Body
No components listed in this section.			SARA Section 313

Toxic Substances Control Act
All components of this product are listed on the TSCA inventory.

California Prop 65
This product contains no California Proposition 65 ingredients that cause cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION

Other Information : SDS Prepared by L. Dean Swartz, SDS Coordinator

Version Date: 12/04/17

This information contained in this SDS is believed to be accurate as of the version date, but is not warranted to be. Since the use of this information and the conditions of use of this product are not within the control of Stoner Inc, it is the user's obligation to determine the conditions of safe use.

SAFETY DATA SHEET

A03904004

Section 1. Identification

Product name : KRYLON® Industrial QUIK-MARK™ Water-Based Inverted Marking Paint (APWA) Green

Product code : A03904004

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : Krylon Products Group
101 Prospect Avenue NW
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 247-3266

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 25.9%
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 35.8%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 21.4%

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes serious eye irritation.
Causes skin irritation.
Suspected of damaging the unborn child.
Suspected of causing cancer.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

Hazards not otherwise classified : DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Toluene	9.95	108-88-3
Propane	9.52	74-98-6
Light Aliphatic Hydrocarbon	9	64742-47-8
Butane	4.48	106-97-8
Calcium Carbonate	1.57	1317-65-3
Lt. Aliphatic Hydrocarbon Solvent	1.3	64742-89-8
Titanium Dioxide	0.32	13463-67-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put

Section 6. Accidental release measures

on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Toluene	**OSHA PEL Z2 (United States, 2/2013).** TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. **NIOSH REL (United States, 10/2016).** TWA: 100 ppm 10 hours. TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes. **ACGIH TLV (United States, 3/2016).** TWA: 20 ppm 8 hours.
Propane	**NIOSH REL (United States, 10/2016).** TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 6/2016).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.
Light Aliphatic Hydrocarbon	**OSHA PEL (United States, 6/2016).** TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.
Butane	**NIOSH REL (United States, 10/2016).** TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **ACGIH TLV (United States, 3/2016).** STEL: 1000 ppm 15 minutes.
Calcium Carbonate	**NIOSH REL (United States, 10/2016).** TWA: 5 mg/m³ 10 hours. Form: Respirable fraction TWA: 10 mg/m³ 10 hours. Form: Total **OSHA PEL (United States, 6/2016).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Lt. Aliphatic Hydrocarbon Solvent	None.
Titanium Dioxide	**ACGIH TLV (United States, 3/2016).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 6/2016).** TWA: 15 mg/m³ 8 hours. Form: Total dust

Occupational exposure limits (Canada)

Ingredient name	Exposure limits
toluene	**CA Alberta Provincial (Canada, 4/2009). Absorbed through skin.** 8 hrs OEL: 50 ppm 8 hours. 8 hrs OEL: 188 mg/m³ 8 hours. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 20 ppm 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 20 ppm 8 hours. **CA Québec Provincial (Canada, 1/2014). Absorbed through skin.** TWAEV: 50 ppm 8 hours. TWAEV: 188 mg/m³ 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.** STEL: 60 ppm 15 minutes. TWA: 50 ppm 8 hours.

Propane	**CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 1000 ppm 8 hours. **CA Québec Provincial (Canada, 1/2014).** TWAEV: 1000 ppm 8 hours. TWAEV: 1800 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 1000 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.
Solvent naphtha (petroleum), medium aliph.	**CA Québec Provincial (Canada, 1/2014).** TWAEV: 400 ppm 8 hours. TWAEV: 1590 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 525 mg/m³ 8 hours.
Butane	**CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 600 ppm 8 hours. STEL: 750 ppm 15 minutes. **CA Québec Provincial (Canada, 1/2014).** TWAEV: 800 ppm 8 hours. TWAEV: 1900 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 800 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.

Occupational exposure limits (Mexico)

Ingredient name	Exposure limits
toluene	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 20 ppm 8 hours.
Propane	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 1000 ppm 8 hours.
Butane	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 1000 ppm 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 7

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]

Evaporation rate : 2 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 0.9%
Upper: 9.5%

Vapor pressure : 101.3 kPa (760 mm Hg) [at 20°C]

Vapor density : 1 [Air = 1]

Relative density : 0.86

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): <0.205 cm^2/s (<20.5 cSt)

Molecular weight : Not applicable.

Section 9. Physical and chemical properties

Aerosol product

Type of aerosol : Spray

Heat of combustion : 13.726 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation Vapor	Rat	49 g/m³	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m³	4 hours

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Section 11. Toxicological information

Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Titanium Dioxide	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Light Aliphatic Hydrocarbon	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Calcium Carbonate	Category 3	Not applicable.	Respiratory tract irritation
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Light Aliphatic Hydrocarbon	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Toluene	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Light Aliphatic Hydrocarbon	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	4737.1 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Lt. Aliphatic Hydrocarbon Solvent	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Toluene	-	90	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS

Section 14. Transport information

Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	- **ERG No.** 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 13-2.17 (Class 2). **ERG No.** 126	- **ERG No.** 126	-	**Emergency schedules** F-D, S-U

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

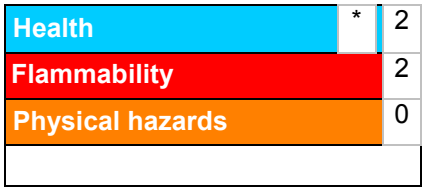
SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Section 16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

History

Date of printing : 12/22/2017

Date of issue/Date of revision : 12/22/2017

Date of previous issue : 12/1/2017

Version : 8.01

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

A03905004

Section 1. Identification

Product name : KRYLON® Industrial QUIK-MARK™ Water-Based Inverted Marking Paint (APWA) Orange

Product code : A03905004

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : Krylon Products Group
101 Prospect Avenue NW
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 247-3266

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 25.9%
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 35.8%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 21.4%

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes serious eye irritation.
Causes skin irritation.
Suspected of damaging the unborn child.
Suspected of causing cancer.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

Hazards not otherwise classified : DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Toluene	9.97	108-88-3
Propane	9.52	74-98-6
Light Aliphatic Hydrocarbon	9	64742-47-8
Butane	4.48	106-97-8
Calcium Carbonate	1.55	1317-65-3
Lt. Aliphatic Hydrocarbon Solvent	1.31	64742-89-8
Titanium Dioxide	0.38	13463-67-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put

Section 6. Accidental release measures

on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Toluene	**OSHA PEL Z2 (United States, 2/2013).** TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. **NIOSH REL (United States, 10/2016).** TWA: 100 ppm 10 hours. TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes. **ACGIH TLV (United States, 3/2016).** TWA: 20 ppm 8 hours.
Propane	**NIOSH REL (United States, 10/2016).** TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 6/2016).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.
Light Aliphatic Hydrocarbon	**OSHA PEL (United States, 6/2016).** TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.
Butane	**NIOSH REL (United States, 10/2016).** TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **ACGIH TLV (United States, 3/2016).** STEL: 1000 ppm 15 minutes.
Calcium Carbonate	**NIOSH REL (United States, 10/2016).** TWA: 5 mg/m³ 10 hours. Form: Respirable fraction TWA: 10 mg/m³ 10 hours. Form: Total **OSHA PEL (United States, 6/2016).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Lt. Aliphatic Hydrocarbon Solvent	None.
Titanium Dioxide	**ACGIH TLV (United States, 3/2016).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 6/2016).** TWA: 15 mg/m³ 8 hours. Form: Total dust

Occupational exposure limits (Canada)

Ingredient name	Exposure limits
toluene	**CA Alberta Provincial (Canada, 4/2009). Absorbed through skin.** 8 hrs OEL: 50 ppm 8 hours. 8 hrs OEL: 188 mg/m³ 8 hours. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 20 ppm 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 20 ppm 8 hours. **CA Québec Provincial (Canada, 1/2014). Absorbed through skin.** TWAEV: 50 ppm 8 hours. TWAEV: 188 mg/m³ 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.** STEL: 60 ppm 15 minutes. TWA: 50 ppm 8 hours.

Propane	**CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 1000 ppm 8 hours. **CA Québec Provincial (Canada, 1/2014).** TWAEV: 1000 ppm 8 hours. TWAEV: 1800 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 1000 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.
Solvent naphtha (petroleum), medium aliph.	**CA Québec Provincial (Canada, 1/2014).** TWAEV: 400 ppm 8 hours. TWAEV: 1590 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 525 mg/m³ 8 hours.
Butane	**CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 600 ppm 8 hours. STEL: 750 ppm 15 minutes. **CA Québec Provincial (Canada, 1/2014).** TWAEV: 800 ppm 8 hours. TWAEV: 1900 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 800 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.

Occupational exposure limits (Mexico)

Ingredient name	Exposure limits
toluene	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 20 ppm 8 hours.
Propane	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 1000 ppm 8 hours.
Butane	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 1000 ppm 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 7

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]

Evaporation rate : 2 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 0.9%
Upper: 9.5%

Vapor pressure : 101.3 kPa (760 mm Hg) [at 20°C]

Vapor density : 1 [Air = 1]

Relative density : 0.86

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): <0.205 cm^2/s (<20.5 cSt)

Molecular weight : Not applicable.

Section 9. Physical and chemical properties

Aerosol product

Type of aerosol : Spray

Heat of combustion : 13.737 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation Vapor	Rat	49 g/m³	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m³	4 hours

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Section 11. Toxicological information

Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Titanium Dioxide	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Light Aliphatic Hydrocarbon	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Calcium Carbonate	Category 3	Not applicable.	Respiratory tract irritation
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Light Aliphatic Hydrocarbon	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Toluene	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Light Aliphatic Hydrocarbon	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	4728.4 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Lt. Aliphatic Hydrocarbon Solvent	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Toluene	-	90	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS

Section 14. Transport information

Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	- **ERG No.** 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 13-2.17 (Class 2). **ERG No.** 126	- **ERG No.** 126	-	**Emergency schedules** F-D, S-U

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

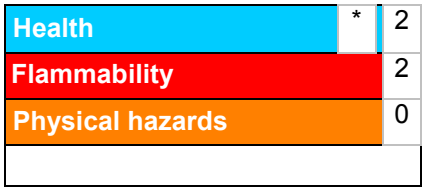
SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Section 16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

History

Date of printing : 1/15/2018

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Date of previous issue : 12/1/2017

Version : 8.01

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

A03801004

Section 1. Identification

Product name : KRYLON® Industrial QUIK-MARK™ Water-Based Inverted Marking Paint (APWA) Utility Yellow

Product code : A03801004

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : Krylon Products Group
101 Prospect Avenue NW
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 247-3266

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) - Category 1
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 26.3%
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 37.2%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 21.8%

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes serious eye irritation.
Causes skin irritation.
Suspected of damaging the unborn child.
Suspected of causing cancer.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Causes damage to organs through prolonged or repeated exposure. (lungs)

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

Hazards not otherwise classified : DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Toluene	10.87	108-88-3
Propane	9.52	74-98-6
Light Aliphatic Hydrocarbon	8	64742-47-8
Butane	4.48	106-97-8
Calcium Carbonate	2.33	1317-65-3
Lt. Aliphatic Hydrocarbon Solvent	1.99	64742-89-8
Talc	1.01	14807-96-6
Titanium Dioxide	0.69	13463-67-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put

Section 6. Accidental release measures

on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Toluene	**OSHA PEL Z2 (United States, 2/2013).** TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. **NIOSH REL (United States, 10/2016).** TWA: 100 ppm 10 hours. TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes. **ACGIH TLV (United States, 3/2016).** TWA: 20 ppm 8 hours.
Propane	**NIOSH REL (United States, 10/2016).** TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 6/2016).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.
Light Aliphatic Hydrocarbon	**OSHA PEL (United States, 6/2016).** TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.
Butane	**NIOSH REL (United States, 10/2016).** TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **ACGIH TLV (United States, 3/2016).** STEL: 1000 ppm 15 minutes.
Calcium Carbonate	**NIOSH REL (United States, 10/2016).** TWA: 5 mg/m³ 10 hours. Form: Respirable fraction TWA: 10 mg/m³ 10 hours. Form: Total **OSHA PEL (United States, 6/2016).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Lt. Aliphatic Hydrocarbon Solvent	None.
Talc	**NIOSH REL (United States, 10/2016).** TWA: 2 mg/m³ 10 hours. Form: Respirable fraction **ACGIH TLV (United States, 3/2016).** TWA: 2 mg/m³ 8 hours. Form: Respirable fraction
Titanium Dioxide	**ACGIH TLV (United States, 3/2016).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 6/2016).** TWA: 15 mg/m³ 8 hours. Form: Total dust

Occupational exposure limits (Canada)

Ingredient name	Exposure limits
toluene	**CA Alberta Provincial (Canada, 4/2009). Absorbed through skin.** 8 hrs OEL: 50 ppm 8 hours. 8 hrs OEL: 188 mg/m³ 8 hours. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 20 ppm 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 20 ppm 8 hours. **CA Québec Provincial (Canada, 1/2014). Absorbed through skin.**

	TWAEV: 50 ppm 8 hours. TWAEV: 188 mg/m³ 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.** STEL: 60 ppm 15 minutes. TWA: 50 ppm 8 hours.
Propane	**CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 1000 ppm 8 hours. **CA Québec Provincial (Canada, 1/2014).** TWAEV: 1000 ppm 8 hours. TWAEV: 1800 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 1000 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.
Solvent naphtha (petroleum), medium aliph.	**CA Québec Provincial (Canada, 1/2014).** TWAEV: 400 ppm 8 hours. TWAEV: 1590 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 525 mg/m³ 8 hours.
Butane	**CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 600 ppm 8 hours. STEL: 750 ppm 15 minutes. **CA Québec Provincial (Canada, 1/2014).** TWAEV: 800 ppm 8 hours. TWAEV: 1900 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 800 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.

Occupational exposure limits (Mexico)

Ingredient name	Exposure limits
toluene	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 20 ppm 8 hours.
Propane	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 1000 ppm 8 hours.
Butane	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 1000 ppm 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Section 8. Exposure controls/personal protection

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 7

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]

Evaporation rate : 2 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 0.9%
Upper: 9.5%

Vapor pressure : 101.3 kPa (760 mm Hg) [at 20°C]

Vapor density : 1 [Air = 1]

Relative density : 0.87

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): <0.205 cm^2/s (<20.5 cSt)

Section 9. Physical and chemical properties

Molecular weight : Not applicable.

Aerosol product

Type of aerosol : Spray

Heat of combustion : 13.913 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation Vapor	Rat	49 g/m³	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m³	4 hours

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
Talc	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-

Sensitization

Not available.

Mutagenicity

Section 11. Toxicological information

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Talc	-	3	-
Titanium Dioxide	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Light Aliphatic Hydrocarbon	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Calcium Carbonate	Category 3	Not applicable.	Respiratory tract irritation
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Light Aliphatic Hydrocarbon	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Talc	Category 1	Inhalation	lungs

Aspiration hazard

Name	Result
Toluene	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Light Aliphatic Hydrocarbon	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Causes damage to organs through prolonged or repeated exposure.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	4309 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Lt. Aliphatic Hydrocarbon Solvent	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Toluene	-	90	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	- **ERG No.** 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 13-2.17 (Class 2). **ERG No.** 126	- **ERG No.** 126	-	**Emergency schedules** F-D, S-U

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

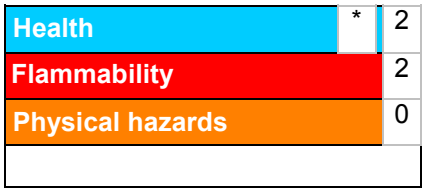
SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) - Category 1	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

History

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Date of issue/Date of revision : 12/1/2017

Date of previous issue : 9/5/2017

Version : 10

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to

Section 16. Other information

determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

A03405004

Section 1. Identification

Product name : KRYLON® QUIK-MARK™ Water-Based Inverted Marking Paint (Fluorescent) Fluorescent Pink

Product code : A03405004

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : Krylon Products Group
101 Prospect Avenue NW
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 247-3266

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 23.2%
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 32.9%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 18.7%

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Suspected of damaging the unborn child.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Pressurized container: Do not pierce or burn, even after use.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

Hazards not otherwise classified : DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Toluene	9.77	108-88-3
Propane	9.52	74-98-6
Light Aliphatic Hydrocarbon	8	64742-47-8
Butane	4.48	106-97-8
Lt. Aliphatic Hydrocarbon Solvent	1.17	64742-89-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Ingredient name	Exposure limits
Toluene	**OSHA PEL Z2 (United States, 2/2013).** TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. **NIOSH REL (United States, 10/2016).** TWA: 100 ppm 10 hours. TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes. **ACGIH TLV (United States, 3/2016).** TWA: 20 ppm 8 hours.

Propane	**NIOSH REL (United States, 10/2016).** TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 6/2016).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.
Light Aliphatic Hydrocarbon	**OSHA PEL (United States, 6/2016).** TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.
Butane	**NIOSH REL (United States, 10/2016).** TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **ACGIH TLV (United States, 3/2016).** STEL: 1000 ppm 15 minutes.
Lt. Aliphatic Hydrocarbon Solvent	None.

Occupational exposure limits (Canada)

Ingredient name	Exposure limits
toluene	**CA Alberta Provincial (Canada, 4/2009). Absorbed through skin.** 8 hrs OEL: 50 ppm 8 hours. 8 hrs OEL: 188 mg/m³ 8 hours. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 20 ppm 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 20 ppm 8 hours. **CA Québec Provincial (Canada, 1/2014). Absorbed through skin.** TWAEV: 50 ppm 8 hours. TWAEV: 188 mg/m³ 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.** STEL: 60 ppm 15 minutes. TWA: 50 ppm 8 hours.
Propane	**CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 1000 ppm 8 hours. **CA Québec Provincial (Canada, 1/2014).** TWAEV: 1000 ppm 8 hours. TWAEV: 1800 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 1000 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.
Solvent naphtha (petroleum), medium aliph.	**CA Québec Provincial (Canada, 1/2014).** TWAEV: 400 ppm 8 hours. TWAEV: 1590 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 525 mg/m³ 8 hours.
Butane	**CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 600 ppm 8 hours. STEL: 750 ppm 15 minutes.

	CA Québec Provincial (Canada, 1/2014). TWAEV: 800 ppm 8 hours. TWAEV: 1900 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 800 ppm 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.

Occupational exposure limits (Mexico)

Ingredient name	Exposure limits
toluene	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 20 ppm 8 hours.
Propane	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 1000 ppm 8 hours.
Butane	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 1000 ppm 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 7

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]

Evaporation rate : 2 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 0.9%
Upper: 9.5%

Vapor pressure : 101.3 kPa (760 mm Hg) [at 20°C]

Vapor density : 1 [Air = 1]

Relative density : 0.86

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): <0.205 cm^2/s (<20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Type of aerosol : Spray

Heat of combustion : 13.198 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation Vapor	Rat	49 g/m³	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m³	4 hours

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Light Aliphatic Hydrocarbon	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract

			irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Light Aliphatic Hydrocarbon	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Toluene	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Light Aliphatic Hydrocarbon	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	5002 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Lt. Aliphatic Hydrocarbon Solvent	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Toluene	-	90	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Section 12. Ecological information

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	- **ERG No.** 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 13-2.17 (Class 2). **ERG No.** 126	- **ERG No.** 126	-	**Emergency schedules** F-D, S-U

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

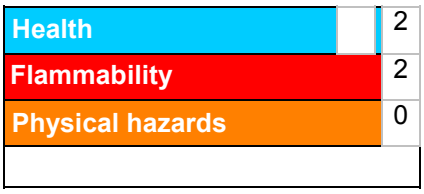
SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

History

Date of printing : 12/1/2017

Date of issue/Date of revision : 12/1/2017

Date of previous issue : 9/8/2017

Version : 7

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use

Section 16. Other information

or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

Conforms to USDOL OSHA 29CFR 1910.1200 HAZCOM

SAFETY DATA SHEET

Lysol Brand All Purpose Cleaner Lemon

HEALTH • HYGIENE • HOME

1. Product and company identification

Product name : Lysol Brand All Purpose Cleaner Lemon

Distributed by : Reckitt Benckiser LLC.
Morris Corporate Center IV
399 Interpace Parkway (P.O. Box 225)
Parsippany, New Jersey 07054-0225
+1 973 404 2600

Emergency telephone number (Medical) : 1-800-338-6167

Emergency telephone number (Transport) : 1-800-424-9300 (U.S. & Canada) CHEMTREC
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887

Website: : **http://www.rbnainfo.com**

Synonym : Lysol Brand Kills 99.9% of Viruses & Bacteria** All Purpose Cleaner
•Lemon Breeze Scent
•Fresh Mountain Scent
•Cherry Blossom & Pomegranate Scent
•Green Apple Scent
•Orange Scent
•Citrus Scent
•Country Scent

Product use : Multipurpose Cleaner

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

SDS # : D8212215 v5.0

Formulation #: : - 1955-003 / 8173996 (Lemon)
- 1967-019A / 8200249 (Fresh Energy)
- 1660-185 / 8200251 (Orange)
- 1660-184 / 8200252 (Green Apple)
- 1967-019B / 8200253 (Citrus)
- e0062-125 / 8200254 (Country Side)
- e0062-099 / 8200255 (Lemon)
- e0062-100 / 8200256 (Fresh Energy)
- e0062-101 / 8200257 (Orange)
- e0062-102 / 8200258 (Green Apple)
- e0062-103 / 8200259 (Cherry Blossom & Pomegranate)
- e0062-154 / 8200261 (Country Side)

EPA ID No. : 777-66

UPC Code / Sizes : 22 oz and 32 oz HDPE Trigger bottle / 1 gallon and 144 oz HDPE bottle

1. Product and company identification

2. Hazards identification

Classification of the substance or mixture : SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B
SKIN SENSITIZATION - Category 1

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Causes eye irritation.
May cause an allergic skin reaction.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear protective gloves. Wear eye or face protection. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response : IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : None known.

Hazards not otherwise classified : None known.

3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
dodecyldimethylamine oxide	1 - 2.5	1643-20-5
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	< 0.25	68424-85-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes eye irritation.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : May be irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

4. First aid measures

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

6. Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Control

Occupational exposure limits

Not applicable.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

8. Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

9. Physical and chemical properties

Appearance

Physical state : Liquid. [Clear.]

Color : turquoise

Odor : Characteristic.

Odor threshold : Not available.

pH : 10.5 to 11.3 [Conc. (% w/w): 100%]

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: >93.3°C (>199.9°F)

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.98 to 1.01

Solubility : Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Do not mix with household chemicals.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	LD50 Oral	Rat	344 mg/kg	-
*Lysol All Purpose Cleaner Trigger	LC50 Inhalation Vapor	Rat	>2.23 mg/l	4 hours
	LD50 Dermal	Rabbit	>5050 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary : Not classified Harmful
*Information is based on toxicity test result of a similar product.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	Skin - Severe irritant	Rabbit	-	25 milligrams	-
dodecyldimethylamine oxide	Eyes - Severe irritant	Rabbit	-	1 Percent	-
	Skin - Mild irritant	Human	-	48 hours 3.7 Percent	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
*Lysol All Purpose Cleaner Trigger	Eyes - Cornea opacity	Rabbit	>1	-	14 days
	Skin - Edema	Rabbit	0	4 hours	14 days

Conclusion/Summary

Skin : Non-irritant to skin. *Information is based on toxicity test result of a similar product.

Eyes : Irritating to eyes. *Information is based on toxicity test result of a similar product.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
*Lysol All Purpose Cleaner Trigger	skin	Mouse	Sensitizing

Conclusion/Summary

Skin : Skin sensitizer *Information is based on toxicity test result of a similar product.

Mutagenicity

11. Toxicological information

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes eye irritation.

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : May be irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

11. Toxicological information

Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	Acute EC50 0.016 mg/l	Daphnia	48 hours
	Acute LC50 64 ppb Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	-	-	Readily

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

Not a DOT controlled material (United States). Not a TDG-controlled material. This preparation is not classified as dangerous according to international transport regulations (ADR/RID, IMDG or ICAO/IATA).

15. Regulatory information

U.S. Federal regulations : **TSCA 4(a) proposed test rules**: Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

TSCA 8(a) PAIR: 1-phenoxypropan-2-ol; nonanal; octanal; decanal; 2-methylundecanal

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): Not determined.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
dodecyldimethylamine oxide	1 - 2.5	No.	No.	No.	Yes.	No.

15. Regulatory information

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

Label elements

Signal word: : WARNING

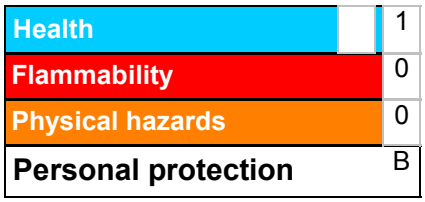
Hazard statements : Causes substantial but temporary eye injury

Precautionary measures : Keep out of reach of children.
Do not get in eyes, on skin, or on clothing.
Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Skin sensitizer: : Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals

16. Other information

Hazardous Material Information System (U.S.A.) :



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Date of issue : 22/06/2015.

Date of previous issue : 05/06/2015.

Version : 5

Prepared by : Reckitt Benckiser LLC.
Product Safety Department
1 Philips Parkway
Montvale, New Jersey 07646-1810 USA.
FAX: 201-476-7770

Revision comments : Updated formatting of variants for regulatory

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

CSPA Product Care®

RB is a member of the CSPA Product Care Product Stewardship Program.

MATERIAL SAFETY DATA SHEET

Date Prepared: 07/06/00
Date Printed: 08/25/04
MSDS No: 503.0171174-005.008

MAC'S ALL-PURPOSE PROTECTANT

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity
Product Name: MAC'S ALL-PURPOSE PROTECTANT
General or Generic ID: SILICONE EMULSIONS

Company
Ashland
Ashland Distribution Co. &
Ashland Specialty Chemical Co.
P. O. Box 2219
Columbus, OH 43216
614-790-3333

Emergency Telephone Number:
1-800-ASHLAND (1-800-274-5263)
24 hours everyday

Regulatory Information Number:
1-800-325-3751

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2. COMPOSITION/INFORMATION ON INGREDIENTS

No Hazardous Ingredients

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3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye
Unlikely to cause eye irritation or injury.

Skin
Unlikely to cause skin irritation or injury.

Swallowing
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Continued on next page

Inhalation
It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material is not likely to be harmful.

Symptoms of Exposure
stomach or intestinal upset (nausea, vomiting, diarrhea).

Target Organ Effects
No data

Developmental Information
No data

Cancer Information
No data

Other Health Effects
No data

Primary Route(s) of Entry
Skin contact.

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4. FIRST AID MEASURES

Eyes
If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin
Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Continued on next page

Swallowing
Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation
First aid is not applicable.

Note to Physicians
This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 3 - Swallowing) when deciding whether to induce vomiting.

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5. FIRE FIGHTING MEASURES

Flash Point
Not applicable

Explosive Limit
(for component) Lower 1.1 %

Autoignition Temperature
No data

Hazardous Products of Combustion
May form: carbon dioxide and carbon monoxide, silicon dioxide.

Fire and Explosion Hazards
Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

Extinguishing Media
alcohol foam, water fog.

Fire Fighting Instructions
Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

Continued on next page

NFPA Rating
Health - 1, Flammability - 0, Reactivity - 0

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6. ACCIDENTAL RELEASE MEASURES

Small Spill
Absorb liquid on vermiculite, floor absorbent or other absorbent material.

Large Spill
Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occured.

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7. HANDLING AND STORAGE

Handling
Not applicable

Storage
Not applicable

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection
Wear safety glasses in compliance with OSHA regulations. (Consult your safety representative.)

Skin Protection
Not normally required. Wear resistant gloves (consult your safety equipment supplier).

Respiratory Protections
Not required under normal conditions of use.

Continued on next page

Engineering Controls
Not required under normal conditions of use.

Exposure Guidelines
No exposure limits established

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9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point
(for component) 212.0 F (100.0 C) @ 760 mmHg

Vapor Pressure
(for component) 17.500 mmHg @ 68.00 F

Specific Vapor Density
> 1.000 @ AIR=1

Specific Gravity
1.013 @ 77.00 F

Liquid Density
8.430 lbs/gal @ 77.00 F
1.013 kg/l @ 25.00 C

Percent Volatiles (Including Water)
No data

Evaporation Rate
SLOWER THAN ETHYL ETHER

Appearance
No data

State
LIQUID

Physical Form
HOMO SOLN

Continued on next page

Color
WHITE

Odor
No data

pH
6.5 - 7.0

---

10. STABILITY AND REACTIVITY

Hazardous Polymerization
Product will not undergo hazardous polymerization.

Hazardous Decomposition
May form: carbon dioxide and carbon monoxide, silicon dioxide.

Chemical Stability
Stable.

Incompatibility
Avoid contact with: strong alkalies, strong mineral acids.

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11. TOXICOLOGICAL INFORMATION

No data

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12. ECOLOGICAL INFORMATION

No data

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13. DISPOSAL CONSIDERATION

Waste Management Information
Dispose of in accordance with all applicable local, state and federal regulations.

Continued on next page

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14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101
DOT Description:
Not Regulated

Container/Mode:
CASES/SURFACE - NO EXCEPTIONS

NOS Component:
None

RQ (Reportable Quantity) - 49 CFR 172.101
Not applicable

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15. REGULATORY INFORMATION

US Federal Regulations
TSCA (Toxic Substances Control Act) Status
TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4
None

SARA 302 Components - 40 CFR 355 Appendix A
None

Section 311/312 Hazard Class - 40 CFR 370.2
Immediate(X) Delayed( ) Fire( ) Reactive( ) Sudden Release of Pressure( )

SARA 313 Components - 40 CFR 372.65
None

International Regulations
Inventory Status
Not determined

Continued on next page

State and Local Regulations
California Proposition 65
None

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16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Last page

SOURCE:ASHLAND INC WTR, EASYWTR

Safety Data Sheet

Product identifier used on the label: MAG 1 ALL PURPOSE GLASS CLEANER
Stock Number: MG720419
Revision Date: 09-26-2016
Replaces:

1. Identification

Product identifier used on the label: **MAG 1 ALL PURPOSE GLASS CLEANER**
Stock Number: MG720419

Other means of identification:
Synonyms: No data available

Recommended use of the chemical and restrictions on use:
Recommended use: Lubricants and performance fluids for the automotive industry

Restrictions on use: Uses other than those described above

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:
Warren Distribution, Inc.
727 S. 13th Street
Omaha, NE 68102

Phone number: +01 (800) 825-1235 +01 (402) 341-9397

E-mail address: sds@wd-wpp.com

Emergency phone number: CHEMTREC: +1 (800) 424-9300 International: +01 (703) 527-3887

2. Hazard(s) identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200:

GHS Hazard Symbols:

GHS Classification:
Acute Toxicity - Inhalation Gas Category 3
Acute Toxicity - Dermal Category 3
Acute Toxicity - Oral Category 4

Signal Word: Danger

Hazard Statements: Harmful if swallowed; Toxic in contact with skin or if inhaled

Precautionary Statements:
Prevention: Avoid breathing dust/fume/gas/mist/ vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response: If swallowed: Call a poison center/doctor if you feel unwell. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and

	keep comfortable for breathing. Call a poison center/doctor. Specific treatment (see Sections 4 - 8 of Safety Data Sheet). Rinse mouth. Take off immediately all contaminated clothing and wash it before reuse.
Storage:	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal:	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazards not otherwise classified:	No data available
% unknown toxicity (Inhalation Vapor):	90 % of the mixture consists of ingredient(s) of unknown toxicity.
% unknown toxicity (Inhalation Dust):	90 % of the mixture consists of ingredient(s) of unknown toxicity.

3. Composition/information on ingredients

Chemical Name	Common name and synonyms	CAS #	%
Ethylene glycol mono-n-butyl ether	No data available	111-76-2	1 - 5
Isopropanol	No data available	67-63-0	1 - 5

One or more hazardous ingredient(s) is claimed as a trade secret under the OSHA Hazard Communication Standard. The hazards of this (these) ingredient(s) are given on this SDS.

4. First-aid measures

Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion:

Inhalation:	If inhaled: Remove person to fresh air and keep comfortable for breathing.
Eye Contact:	Immediately flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention and monitor the eye daily as advised by your physician.
Skin Contact:	If on skin: Wash with plenty of water. Take off immediately all contaminated clothing and wash it before reuse.
Ingestion:	If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth.
Most important symptoms/effects, acute and delayed:	Harmful if swallowed Toxic in contact with skin or if inhaled

Indication of immediate medical attention and special treatment needed, if necessary:	Specific treatment (see Sections 4 - 8 of Safety Data Sheet).

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media:

Suitable extinguishing media:	Use alcohol resistant foam, carbon dioxide, or dry chemical extinguishing agents. Water spray or fog may also be effective for extinguishing if swept across the base of the fire. Water can also be used to absorb heat and keep exposed material from being damaged by fire.
Unsuitable extinguishing media:	No data available
Specific hazards arising from the chemical:	No data available
Hazardous combustion products:	Carbon dioxide, Carbon monoxide
Special protective equipment and precautions for fire-fighters:	No data available

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Evaporation of volatile substances can lead to the displacement of air creating an environment that can cause asphyxiation.
Methods and materials for containment and cleaning up:	No special spill clean up considerations. Collect and discard in regular trash.

7. Handling and storage

Precautions for safe handling:	Toxic or severely irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. Empty containers may retain product residues/ vapors. Use proper bonding and grounding during bulk product transfer. Use spark-proof tools and explosion-proof

equipment

Conditions for safe storage, including any incompatibilities:

Safe storage conditions: Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Materials to Avoid/Chemical Incompatibility: Oxidizing materials

8. Exposure controls/personal protection

OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available:

Chemical component	OSHA PEL	ACGIH TLV	ACGIH STEL	IDLH
Isopropanol	400 ppm TWA; 980 mg/m3 TWA	200 ppm TWA	400 ppm STEL	2000 ppm IDLH (10% LEL)
Ethylene glycol mono-n-butyl ether	50 ppm TWA; 240 mg/m3 TWA	20 ppm TWA	No STEL	700 ppm IDLH

Appropriate engineering controls: Use only outdoors or in a well-ventilated area. Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Individual protection measures, such as personal protective equipment:

Respiratory Protection: Avoid breathing dust/fume/gas/mist/ vapors/spray.

Respirator Type(s): None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.

Eye protection: Wear chemically resistant safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Do not wear contact lenses. Have an eye wash station available.

Skin protection: Wear protective gloves. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: Wear appropriate protective gloves to prevent skin exposure.

General hygiene conditions:	Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling.

9. Physical and chemical properties

Appearance (physical state, color etc.):	
Physical state:	No data available
Color:	No data available
Odor:	Moderate
Odor Threshold:	Not determined
pH:	Not determined
Melting point/freezing point:	
Melting Point:	No data available
Freezing point:	No data available
Initial boiling point and boiling range (°C):	Not determined
Flash Point (°C):	Not determined
Evaporation Rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits:	
Upper flammability or explosive limits:	Not established
Lower flammability or explosive limits:	Not established
Vapor pressure:	No data available
Vapor density:	4.1 2.07
Relative density:	0.95
Solubility(ies):	Complete; 100%
Partition coefficient: n-octanol/water:	Not determined
Auto-ignition temperature:	No data available
Decomposition Temperature:	Not determined
Viscosity:	No data available
Volatile organic compound (VOC)	0.000000

content and percentage of volatiles:	0.0000000

10. Stability and reactivity

Reactivity:	No data available
Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	No data available
Conditions to avoid (e.g., static discharge, shock, or vibration):	Sparks, open flame, other ignition sources, and elevated temperatures. Elevated temperatures
Incompatible materials:	Oxidizing materials
Hazardous decomposition products:	No data available

11. Toxicological information

Description of the various toxicological (health) effects and the available data used to identify those effects:

Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact):	Ingestion
Symptoms related to the physical, chemical and toxicological characteristics:	Harmful if swallowed Toxic in contact with skin or if inhaled

Delayed and immediate effects and also chronic effects from short- and long-term exposure:

Ingestion Toxicity:	Harmful if swallowed
Skin Contact:	Toxic in contact with skin or if inhaled
Absorption:	Estimated to be 1.0 - 2.0 g/kg; slightly toxic
Inhalation Toxicity:	No hazard in normal industrial use. Estimated to be 2 - 20 mg/l; slightly toxic.
Eye Contact:	This material is likely to be non-irritating to eyes based on animal data.
Sensitization:	No data available
Mutagenicity:	No data available to indicate product or any components present at greater than 0.1% is mutagenic or genotoxic.
Carcinogenicity:	Contains a substance that is a possible cancer hazard based on high dose animal studies and/or a human study.
STOT-single exposure:	Non-hazardous under Specific Target Organ Systemic Toxicity Single

Exposure category.

STOT-repeated exposure: Non-hazardous under Specific Target Organ Systemic Toxicity Repeated Exposure category.

Aspiration hazard: Non-hazardous under Aspiration category.

Other information: No data available

Numerical measures of toxicity (such as acute toxicity estimates):

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethylene glycol mono-n-butyl ether	OLD50 Rat 470 mg/kg	Dermal LD50 Rabbit 220 mg/kg	Inhalation LC50 (4h) Rat 450 ppm
Isopropanol	OLD50 Rat = 4396 mg/kg	Dermal LD50 Rabbit = 12800 mg/kg	Inhalation LC50 (8h) Rat = 16000 ppm

Is the hazardous chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA:

Chemical Name	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen
There are no components that are known or reported to cause cancer.			

12. Ecological information

Ecotoxicity (aquatic and terrestrial, where available): No data available

Ecological Toxicity Data:

Chemical Name	CAS #	Aquatic EC50 Crustacea	Aquatic ERC50 Algae	Aquatic LC50 Fish
No data available				

Persistence and degradability: No data.

Bioaccumulative potential: Bioconcentration is not expected to occur.

Mobility in soil: This material is expected to have essentially no mobility in soil. It absorbs strongly to most soil types.

Other adverse effects (such as hazardous to the ozone layer): No data available

13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:	Dispose of contents and container in accordance with local/regional/national/international regulations.
Waste codes / waste designations:	D001
Contaminated packaging:	Empty containers may contain residues. Dispose of in the same way as waste product.

14. Transport information

Carriage of dangerous goods by road (DOT), rail or inland waterways:

No data available

International carriage of dangerous goods by sea (IMDG/IMO):

UN number:	UN1950
UN Proper shipping name:	AEROSOLS
Transport hazard class(es):	2.1
Packing group, if applicable:	No data available
Exception:	LTD QTY
EMS#:	F-D,S-U

International carriage of dangerous goods by air (IATA):

UN number:	UN1950
UN Proper shipping name:	AEROSOLS
Transport hazard class(es):	2.1
Packing group, if applicable:	No data available

Environmental hazards (e.g., Marine pollutant (Yes/No)):	None.
Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):	No data available
Special precautions which a user needs to be aware of or needs to comply with in connection with transport or	No data available

conveyance either within or outside their premises:

15. Regulatory information

Safety, health and environmental regulations specific for the product in question:

TSCA Status: All components of this material are on the US TSCA Inventory or are exempt.

Regulated Components:

Chemical Name	CAS #	CERCLA	Sara EHS	Sara 313	U.S. HAP
Isopropanol	67-63-0	N	N	Y	N
Butane	106-97-8	N	N	N	N
Ethylene glycol mono-n-butyl ether	111-76-2	N	N	N	N
Propane	74-98-6	N	N	N	N

Chemical Name	CAS #	California Prop 65 - Cancer	California Prop 65 - Dev. Toxicity	California Prop 65 - Reprod fem	California Prop 65 - Reprod male
Isopropanol	67-63-0	N	N	N	N
Butane	106-97-8	N	N	N	N
Ethylene glycol mono-n-butyl ether	111-76-2	N	N	N	N
Propane	74-98-6	N	N	N	N

Chemical Name	CAS #	Massachusetts RTK List	New Jersey RTK List	Pennsylvania RTK List	Rhode Island RTK List	Minnesota Hazardous Substance List
Isopropanol	67-63-0	Y	Y	Y	N	Y
Butane	106-97-8	Y	Y	Y	N	Y
Ethylene glycol mono-n-butyl ether	111-76-2	Y	Y	Y	N	Y
Propane	74-98-6	Y	Y	Y	N	Y

16. Other information, including date of preparation or last revision.

SDS Prepared by:	HAZADM
Revision Date:	09-26-2016
Revision Number:	18
Reason for revision:	Activated by Document Formulation Generation
References:	No data available
Other Info:	No data available
Disclaimer:	This safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in the data sheet which we have received from outside sources and we believe the information to be correct, but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product in a safe manner and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either expressed or implied.

MARVEL OIL CO., INC.
2250 W. Pinehurst Blvd., STE 150
Addison, IL 60101

SAFETY DATA SHEET

1. Product and Company Identification

1.1 Product Identifier

Product Name:	Marvel Air Tool Oil
Product Code (SKU):	MM85R1 (50100), MM080R (50093) - See Section 15 for discontinued SKU's

1.2 Relevant Identified Uses Of The Substance

Product Use:	Engine Oil Additive – Fuel additive (EPA Registered)

1.3 Details of the Supplier of the SDS

Company Name:	Marvel Oil Company, Inc.
Street Address:	2250 W. Pinehurst Blvd., Suite 150
City, State, Zip Code:	Addison, IL 60101

1.4 Emergency Telephone Numbers

Phone Number:	1(630)455-3700
Fax Number:	1(630)455-3868
Transportation:	1(800)424-9300 (CHEMTREC)
Medical Assistance:	Call your local Poison Control Center

2. Hazard Identification:

2.1 Classification of the Substance or Mixture

Hazard Classification:
Flammable liquid 3
Skin irritation 2
Reproductive Toxicity 2
Aspiration toxicity 1

2.2 Label Elements

Pictogram:

Signal Word: Danger

Hazard Statement: Flammable liquid and vapor. Causes skin irritation. Suspected of damaging fertility of the un-born child. May be fatal if swallowed and enters airways.

Precautionary Statement: Keep away from heat, sparks, open flames or hot surfaces. Do not smoke. Keep containers tightly closed. Ground all containers and receiving equipment. Use explosion proof electrical, ventilation, and lighting equipment. Use only non-sparking tools. Take precautionary measures against static

discharge. Wear protective gloves, clothing, eye glasses and face shield. Do not handle until all safety precautions have been read and understood. Wash hands thoroughly after handling. If exposed, get medical attention. If on skin or hair, remove immediately all contaminated clothing and launder before re-use. Wash skin with soap and water. If skin irritation occurs, get medical attention. If swallowed, immediately call a poison control center or doctor. Do NOT induce vomiting. Store in a well ventilated place. Dispose of contents and container in accordance with all local, state, national and international regulations.

2.3 Other Hazards

Description of additional HNOC: None

3. Information on Ingredients:

3.1 Substance not applicable

3.2 Mixture

Component	CAS Number	Concentration (wt%)
Petroleum Distillates (Hydrotreated Heavy Naphthenic)	64742-52-5	60-100%
Petroleum Distillates (Stoddard Solvent)	8052-41-3	10-30%
Tricresyl Phosphate	1330-78-5	0.1-1.0%
Ortho Dichlorobenzene	95-50-1	0.1-1.0%
Para Dichlorobenzene	106-46-7	<0.1%

4. First Aid Measures:

4.1 Description of First Aid Measures

Inhalation: Remove to fresh air and promote deep breathing. Get medical attention if effects persist or you feel un-well.
Skin: In case of skin contact, wash thoroughly with soap and water. Remove contaminated clothing and footwear. Launder clothing before re-use. Call a physician if irritation develops or persists.
Eyes: In case of eye contact, immediately flush eyes with plenty of water. Remove contact lenses if worn. If irritation persists, get medical attention
Ingestion: If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. Immediately call a poison control center or physician.

4.2 Most important symptoms and effects – acute and chronic

Inhalation: May cause respiratory tract irritation. Vapors may cause drowsiness or dizziness.
Skin: Cause skin irritation. Symptoms may include redness, edema, drying, defatting, and cracking of skin.
Eyes: May cause temporary eye irritation. Symptoms may include discomfort or pain, excess blinking and tearing, with redness and swelling.
Ingestion: May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea, and vomiting.

4.3 Indication of any immediate medical attention and special treatment

Symptoms may not appear immediately. Seek medical attention if effects develop or persist and you feel un-well.

5. Fire Fighting Measures:

5.1 Extinguishing media

Carbon dioxide, dry chemical, and alcohol foam

5.2 Special hazards arising from the substance or mixture

CO_2, CO, and hydrocarbons

5.3 Advice for Fire Fighters

Keep up wind of fire. Wear full firefighting turn out gear (full bunker gear) and respiratory protection (SCBA). Cool closed containers exposed to fire with water. See Section 8 for personal protection.

6. Accidental Release Measures:

6.1 Personal precautions, protective equipment, and emergency procedures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate all source of ignition.

6.2 Methods and materials for containment and clean up

For containment: Contain and absorb spill with inert material. Place in suitable container for disposal. Do not flush to sewer or allow to enter waterways. See section 8 for PPE.

For clean up: Take up material and place in a suitable container. Vapors may be heavier than air and may travel along the ground to a distant source of ignition. Provide adequate ventilation.

7. Handling and Storage

7.1 Precautions for safe handling

Keep away from source of ignition. Do not smoke. Take precaution to eliminate static discharge. Avoid contact with skin and eyes. Avoid breathing vapor or mist. Do not swallow. Do not eat or drink while handling. Wash hands with soap and water after handling. Use only non-sparking tools.

7.2 Conditions for safe storage including incompatibilities

Keep out of reach of children. Store in a well ventilated place. Do not store above 49°C (120°F).

7.3 Specific end uses

Shelf Life: Shelf life is considered to be 7 – 10 years when properly stored.

8. Exposure Control/Personal Protection:

8.1 Control parameters

Exposure Limits 8 hr TWA:	(OSHA PEL)	(ACGIH TWA)
Petroleum Distillates (Hydrotreated Heavy Naphthenic)	not applicable	not applicable
Petroleum Distillates (Stoddard Solvent)	500 ppm	100 ppm
Tricresyl Phosphate	not applicable	not applicable
Ortho Dichlorobenzene	50 ppm	25 ppm
Para Dichlorobenzene	75 ppm	10 ppm

8.2 Exposure controls

Use adequate ventilation to keep exposure below recommended limits. Ensure that eye wash station and safety shower are close to work station.

Hand Protection Equipment: Wear chemical resistant gloves to prevent skin contact.
Eye Protection Equipment: Wear safety glasses or splash goggles to prevent eye contact.
Skin and Body Protection: Wear suitable protective clothing.
Respiration/Ventilation Protection Requirements: Provide good ventilation.
Ingestion Protection Requirements: Do not eat, drink or smoke while handling. Wash hands with soap and water after handling. Launder all clothing and foot wear before re-use.

9. Physical And Chemical Properties:

9.1 Information of basic chemical and physical properties

Physical Form:	thin liquid
Color:	clear red
Odor:	typical oily
Odor Threshold:	not available
pH:	not applicable – oil based product
Melting Point/Freeze Point:	-51^0C (-60^0F)
Initial Boiling Point:	not available
Flash Point (Seta Closed Cup):	53^0C (128^0F)
Flammability Limits:	**Explosive Limits:** **Upper:** not available **Lower:** not available
Evaporation Rate:	not available
Flammability Solid/Gas:	not applicable
Vapor Pressure:	not available
Vapor Density:	not available
Specific Gravity:	0.876
Solubility in Water:	insoluble
Auto Ignition Temperature:	not available
Partition coefficient (n/octonol/water):	not available
Viscosity (Kinimatic @ 100^0C):	2.0 – 3.0 cSt

9. 2 Other information

% NVM by Weight:	75.0%
% VOC Content (California):	24.92%

10. Stability and Reactivity:

10.1 Reactivity
Does not react under normal conditions

10.2 Chemical stability
Stable

10.3 Possibility of hazardous reactions
Does not react under normal conditions

10.4 Conditions to avoid
Heat and incompatible materials

10.5 Incompatible materials
Strong oxidizers such as bleach and peroxides

10.6 Hazardous decomposition products
CO_2, CO and hydrocarbons

11. Toxicological Information:

11.1 Information on Toxicological effects

Marvel Mystery Oil

LD50 – Oral Rat	>2000 mg/Kg
LD50 – Dermal Rabbit	>2000 mg/Kg
LC50 – Inhalation Rat	>20 mg/L (4 hr)

Petroleum Distillates Hydrotreated Heavy Naphthenic (64742-52-5)

LD50 – Oral Rat	>5000 mg/Kg
LD50 – Dermal Rabbit	>5000 mg/Kg
LC50 – Inhalation Rat	>5 mg/L (4 hr)

Tricresyl Phosphate (1330-78-5)

LD50 – Oral Rat	3000 mg/Kg

o-Dichlorobenzene (95-50-1)

LD50 – Oral Rat	500 mg/Kg
LD50 – Dermal Rabbit	>10000 mg/Kg
LC50 – Inhalation Rat	8.15 mg/L (4 hr)

p-Dichlorobenzene (106-46-7)

LD50 – Oral Rat	>2000 mg/Kg
LD50 – Dermal Rabbit	>2000 mg/Kg

Skin corrosion/irritation	Causes skin irritation
Serious eye damage/irritation	Based on available data, classification data are not met
Respiratory or skin sensitization	Based on available data, classification data are not met
Germ cell mutagenicity	Based on available data, classification data are not met
Carcinogenicity	Based on available data, classification data are not met

o-Dichlorobenzene (95-50-1)	IARC Group 3 – Not Classified

p-dichlorobenzene (106-46-7)	IARC Group 2B – Possible carcinogen to humans. NTP 1-Evidence of Carcinogenicity 3, Reasonably anticipated to be a human Carcinogen
Reproductive toxicity	Suspected of damaging fertility of un-born child
Specific target organs – single exposure	Based on available data, classification data are not met
Specific target organs – repeated exposure	Based on available data, classification data are not met
Aspiration hazard	May be fatal if swallowed and enters air ways.
Symptoms/injuries after inhalation	May cause respiratory tract irritation. Vapors may cause drowsiness and dizziness.
Symptoms/injuries after skin contact	Cause skin irritation. Symptoms may include redness, edema, drying, defatting, and cracking of skin.
Symptoms/injuries after eye contact	May cause temporary eye irritation. Symptoms may include discomfort or pain, excess blinking and tearing, with redness and swelling.
Symptoms/injuries after ingestion	May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea, and vomiting.

12. Ecological Information:

12.1 Toxicity
Not recommended for release into aquatic systems without treatment

12.2 Persistence and degradability
Not established

12.3 Bioaccumulative potential
Not established

12.4 Mobility in soil
Not established

12.5 Other adverse effects
None known

13. Disposal Considerations:

13.1 Waste treatment methods

RCRA Hazardous Waste:	Regulated as a hazardous waste (D-001 Ignitable).
Waste Disposal Method:	Dispose of in accordance with local, state and federal regulations
Waste Disposal Vessel:	Metal drums are recommended.

14. Transportation Information:

14.1 UN number
1268

14.2 UN Proper shipping name
Petroleum Distillate n.o.s.

14.3 Transport Hazard class
3

14.4 Packaging group
III

14.5 Marine Pollutant
No

14.6 Transportation in Bulk
Not applicable

14.7 Special precautions
Use limited quantities

15. Regulatory Information:

15.1 US Federal Regulations

TSCA Status: All ingredients are commercially available and listed by the manufacturer under TSCA.

15.2 Foreign Regulations

Canadian Status: All materials contained in this product are listed on the Canadian Domestic Substance List (DSL). Consult Turtle Wax, Inc. regarding status of ingredients.

European Union: All materials contained in this product are listed on EINECS.

AICS: All materials are registered for AICS (Australia)

15.3 State Regulations

State Regulatory Information:

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements, contact the appropriate agency in your state.

California Prop 65:

CAS Number	Concentration	State Code
p-Dichlorobenzene (106-46-7)	<0.1%	Cancer

15.4 HMIS & NFPA Classifications

HMIS Classification:	Health	2
	Flammability	2
	Reactivity	0
NFPA Classification:	Health	2
	Flammability	2

	Reactivity 0

15.5 Discontinued SKU's All discontinued SKU's used this same formula.

MM080, MM085, MM85R, MM086, MM088R, MM089

16. Other Information:

Reason For Issue	Address Update
Prepared By	James Heidel
Preparer's Title	Technical Director, R&D
SDS Administrator	Jean Mayszak - Technical Compliance Manager, R&D
Approval Date	January 26, 2017
Supersedes Date	March 10, 2015
Revision Number	#12

This information is, to the best of Turtle Wax, Inc.'s knowledge and belief, accurate and reliable. However, no representation, warranty, or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy oneself as to the suitableness and completeness of such information for their own particular use.

Material Safety Data Sheet

Revision Date: *13-Mar-2012* **Revision Number:** *4*

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **MOORGLO SOFT GLOSS FORTIFIED ACRYLIC HOUSE PAINT**
Product Code **N096**
Product Class WATER THINNED PAINT
Color All

Manufacturer
Benjamin Moore & Co.
101 Paragon Drive
Montvale, NJ 07645
Phone: 201-573-9600
www.benjaminmoore.com

Emergency Telephone Number(s)
CHEMTREC: 800-424-9300

2. COMPOSITION INFORMATION ON COMPONENTS

Hazardous Components

Chemical Name	CAS-No	Weight % (max)
Titanium dioxide	13463-67-7	25
Zinc oxide	1314-13-2	5
Nepheline syenite	37244-96-5	5
Carbon black	1333-86-4	5
Silica, amorphous	7631-86-9	5

3. HAZARDS IDENTIFICATION

Emergency Overview

Vapors may be irritating to eyes, nose, throat, and lungs. May cause skin irritation and/or dermatitis.

Appearance liquid **Odor** little or no odor

Potential Health Effects

Principal Routes of Exposure Eye contact, skin contact and inhalation.

Acute Effects

Eyes May cause slight irritation.
Skin Substance may cause slight skin irritation.
Inhalation May cause irritation of respiratory tract.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects Repeated contact may cause allergic reactions in very susceptible persons.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions None known

HMIS **Health:** 1* **Flammability:** 0 **Reactivity:** 0 **PPE:** -

HMIS Legend
0 - Minimal Hazard
1 - Slight Hazard
2 - Moderate Hazard
3 - Serious Hazard
4 - Severe Hazard
* - Chronic Hazard
X - Consult your supervisor or S.O.P. for "Special" handling instructions.

Note: The PPE rating has intentionally been left blank. Choose appropriate PPE that will protect employees from the hazards the material will present under the actual normal conditions of use.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer, has choosen to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS® training. HMIS® is a registered trade and service mark of the NPCA. HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

4. FIRST AID MEASURES

General Advice No hazards which require special first aid measures.

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin Contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Ingestion Clean mouth with water and afterwards drink plenty of water. Consult a physician if necessary.

Notes To Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective Equipment And Precautions For Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific Hazards Arising From The Chemical Closed containers may rupture if exposed to fire or extreme heat.

Sensitivity To Mechanical Impact	No
Sensitivity To Static Discharge	No
Flash Point Data	
Flash Point (°F)	Not applicable
Flash Point (°C)	Not applicable
Flash Point Method	Not applicable
Flammability Limits In Air	
Lower Explosion Limit	Not applicable
Upper Explosion Limit	Not applicable

NFPA **Health:** 1 **Flammability:** 0 **Instability:** 0 **Special:** Not Applicable

NFPA Legend
0 - Not Hazardous
1 - Slightly
2 - Moderate
3 - High
4 - Severe

The ratings assigned are only suggested ratings, the contractor/employer has ultimate responsibilities for NFPA ratings where this system is used.

Additional information regarding the NFPA rating system is available from the National Fire Protection Agency (NFPA) at www.nfpa.org.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

Environmental Precautions Prevent further leakage or spillage if safe to do so.

Methods For Clean-Up Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Other Information None known

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors, spray mists or sanding dust. In case of insufficient ventilation, wear suitable respiratory equipment.

Storage Keep container tightly closed. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits

Hazardous Components

Chemical Name	ACGIH	OSHA

Titanium dioxide	10 mg/m^3 - TWA	15 mg/m^3 - TWA total
Zinc oxide	2 mg/m^3 - TWA 10 mg/m^3 - STEL	15 mg/m^3 - TWA total 5 mg/m^3 - TWA
Nepheline syenite	N/E	5 mg/m^3 - TWA (nuisance dust)
Carbon black	3.5 mg/m^3 - TWA	3.5 mg/m^3 - TWA
Silica, amorphous	N/E	- (80)/(% SiO2) mg/m^3 TWA 20 mppcf - TWA

Legend
ACGIH - American Conference of Governmental Industrial Hygienists Exposure Limits
OSHA - Occupational Safety & Health Administration Exposure Limits
N/E - Not Established

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields.
Skin Protection Protective gloves and impervious clothing
Respiratory Protection In case of insufficient ventilation wear suitable respiratory equipment.

Hygiene Measures Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance liquid
Odor little or no odor
Density (lbs/gal) 8.7 - 11.2
Specific Gravity 1.04 - 1.35
pH Not available
Evaporation Rate Not available
Vapor Pressure Not available
Vapor Density Not available
Wt. % Solids 30 - 60
Vol. % Solids 25 - 45
Wt. % Volatiles 40 - 70
Vol. % Volatiles 55 - 75
VOC Regulatory Limit (g/L) < 50
Boiling Point (°F) 212
Boiling Point (°C) 100
Freezing Point (°F) 32
Freezing Point (°C) 0
Flash Point (°F) Not applicable
Flash Point (°C) Not applicable
Flash Point Method Not applicable
Upper Explosion Limit Not applicable
Lower Explosion Limit Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.

Conditions To Avoid	Prevent from freezing
Incompatible Materials	No materials to be especially mentioned.
Hazardous Decomposition Products	None under normal use.
Possibility Of Hazardous Reactions	None under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product
No information available

Component

Titanium dioxide
LD50 Oral: > 10000 mg/kg (Rat)
LD50 Dermal: > 10000 mg/m³ (Rabbit)
LC50 Inhalation (Dust): > 6.82 mg/L (Rat, 4 hr.)

Zinc oxide
LD50 Oral: > 8437 mg/kg (Rat)
LC50 Inhalation (Dust): > 5700 mg/m³ (Rat, 4 hr.)

Nepheline syenite
Sensitization: No sensitizing effects known.

Carbon black
LD50 Oral: > 15400 mg/kg (Rat)
LD50 Dermal: > 3000 mg/kg (Rabbit)

Silica, amorphous
LD50 Oral: > 5000 mg/kg (Rat)
LD50 Dermal: 2,000 mg/kg (Rabbit)
LC50 Inhalation (Dust): > 2 mg/L

Chronic Toxicity

Carcinogenicity
The information below indicates whether each agency has listed any ingredient as a carcinogen:

Chemical Name	ACGIH	IARC	NTP	OSHA Carcinogen
Titanium dioxide		2B - Possible Human Carcinogen		Listed

Chemical Name	ACGIH	IARC	NTP	OSHA Carcinogen
Carbon black		2B - Possible Human Carcinogen		Listed

- Although IARC has classified titanium dioxide as possibly carcinogenic to humans (2B), their summary concludes: "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as paint."

Legend
ACGIH - American Conference of Governmental Industrial Hygienists
IARC - International Agency for Research on Cancer
NTP - National Toxicity Program
OSHA - Occupational Safety & Health Administration

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

Product

Acute Toxicity to Fish
No information available

Acute Toxicity to Aquatic Invertebrates
No information available

Acute Toxicity to Aquatic Plants
No information available

Component

Acute Toxicity to Fish

Titanium dioxide
LC50: >1000 mg/L (Fathead Minnow - 96 hr.)

Acute Toxicity to Aquatic Invertebrates
No information available

Acute Toxicity to Aquatic Plants
No information available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of in accordance with federal, state, and local regulations. Dry, empty containers may be recycled in a can recycling program. Local requirements may vary, consult your sanitation department or state-designated environmental protection agency for more disposal options.

14. TRANSPORT INFORMATION

DOT Not regulated

ICAO / IATA Not regulated

IMDG / IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

United States TSCA Yes - All components are listed or exempt.
Canada DSL Yes - All components are listed or exempt.

Federal Regulations

SARA 311/312 hazardous categorization

Acute Health Hazard	No
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight % (max)
Zinc oxide	1314-13-2	5

This product may contain trace amounts of (other) SARA reportable chemicals. Contact the preparer for further information.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product contains the following HAPs:

This product may contain trace amounts of (other) HAPs chemicals. Contact the preparer for further information.

State Regulations

California Proposition 65

This product may contain small amounts of materials known to the state of California to cause cancer or reproductive harm.

State Right-to-Know

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Louisiana	Rhode Island
Titanium dioxide	X	X	X		X
Zinc oxide	X	X	X		X
Carbon black	X	X	X		X
Silica, amorphous	X	X	X		

Legend
X - Listed

16. OTHER INFORMATION

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Prepared By
Product Stewardship Department
Benjamin Moore & Co.
360 Route 206 - P.O. Box 4000
Flanders, NJ 07836
866-690-1961

Revision Date: 13-Mar-2012
Revision Summary Not available

Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, provincial, and local laws and regulations.

End of MSDS

Safety Data Sheet
acc. to OSHA HCS

Printing date 11/20/2015 Reviewed on 11/20/2015

1 Identification

· **Product identifier**

· **Product Name: Motor oil, SAE 30W**

· **Part Number:** S-030W-20K
· **Application of the substance / the mixture** Certified Reference Material

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
SPEX CertiPrep, LLC.
203 Norcross Ave, Metuchen,
NJ 08840 USA

· **Information department:** product safety department
· **Emergency telephone number:**
Emergency Phone Number (24 hours)
CHEMTREC (800-424-9300)
Outside US: 703-527-3887

2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07 GHS08

· **Signal word** Warning

· **Hazard-determining components of labeling:**
dichloromethane
· **Hazard statements**
Harmful if swallowed.
Suspected of causing cancer.
· **Precautionary statements**
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *1
Fire = 0
Reactivity = 0

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Product Name: Motor oil, SAE 30W

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· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**		
75-09-2	dichloromethane	80.0%
64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	20.0%

4 First-aid measures

· **Description of first aid measures**
· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** If symptoms persist consult doctor.
· **Information for Doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Not required.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** None.
· **Specific end use(s)** No further relevant information available.

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Product Name: Motor oil, SAE 30W

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8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
75-09-2 dichloromethane	
PEL	Short-term value: 125 ppm Long-term value: 25 ppm see 29 CFR 1910.1052
REL	See Pocket Guide App. A
TLV	Long-term value: 174 mg/m³, 50 ppm BEI

· **Ingredients with biological limit values:**	
75-09-2 dichloromethane	
BEI	0.3 mg/L Medium: urine Time: end of shift Parameter: Dichloromethane (semi-quantitative)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** Safety glasses

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	According to product specification
· **Odor:**	Characteristic
· **Odour Threshold:**	Not applicable.
· **pH-value:**	Not applicable.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	40 °C (104 °F)
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.

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Product Name: Motor oil, SAE 30W

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· **Ignition temperature:**	
Decomposition temperature:	Not applicable.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not applicable.
Upper:	Not applicable.
· **Vapor pressure:**	Not determined.
· **Density**	Not applicable.
· **Relative density**	Not applicable.
· **Vapour density**	Not applicable.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not applicable.
· **Viscosity:**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **Solvent content:**	
Organic solvents:	80.0 %
Solids content:	2.0 %
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
75-09-2 dichloromethane		
Oral	LD50	1600 mg/kg (rat)
Inhalative	LC50/4 h	88 mg/l (rat)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
75-09-2	dichloromethane	2B

· **NTP (National Toxicology Program)**		
75-09-2	dichloromethane	R

· **OSHA-Ca (Occupational Safety & Health Administration)**	
75-09-2	dichloromethane

US

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Product Name: Motor oil, SAE 30W

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12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	UN1593
· **UN proper shipping name**	
· **DOT**	Dichloromethane
· **ADR**	1593 Dichloromethane
· **IMDG, IATA**	DICHLOROMETHANE
· **Transport hazard class(es)**	
· **DOT**	
· **Class**	6.1 Toxic substances
· **Label**	6.1
· **ADR, IMDG, IATA**	
· **Class**	6.1 Toxic substances
· **Label**	6.1
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	III
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Toxic substances
· **Danger code (Kemler):**	60
· **EMS Number:**	F-A,S-A
· **Segregation groups**	Liquid halogenated hydrocarbons
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

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· **Transport/Additional information:**

· **ADR**
· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· **IMDG**
· **Limited quantities (LQ)** 5L
· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":** UN 1593 DICHLOROMETHANE, 6.1, III, (E)

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**
75-09-2 dichloromethane

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**
75-09-2 dichloromethane

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**
75-09-2 dichloromethane L

· **TLV (Threshold Limit Value established by ACGIH)**
75-09-2 dichloromethane A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
75-09-2 dichloromethane

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07 GHS08

· **Signal word** Warning

· **Hazard-determining components of labeling:**
dichloromethane
· **Hazard statements**
Harmful if swallowed.
Suspected of causing cancer.
· **Precautionary statements**
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
IF exposed or concerned: Get medical advice/attention.
Store locked up.

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Product Name: Motor oil, SAE 30W

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Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

16 Other information

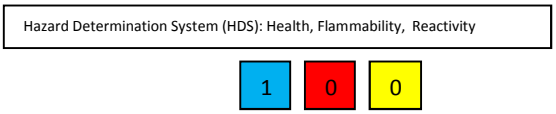
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** *product safety department*
· **Contact:**
SPEX CertiPrep, LLC.
1-732-549-7144
· **Date of preparation / last revision** *11/20/2015 / -*
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity, Hazard Category 4
Carc. 2: Carcinogenicity, Hazard Category 2

Section 1: Product and Company Identification:

Product Name: NAPA MAC'S Smooth Lotion Citrus Orange Hand Cleaner
Product Use: Heavy-Duty Hand Cleaner
Part's: 5015, 5025
Manufacture/Supplier: Aiken Chemical Company, Inc.
P.O. Box 27147, Greenville, SC 29616
12 Shelter Drive, Greer, SC 29650
Phone Number: (864) 968-1250
1-800-828-1860
Emergency Phone: 1-800-424-9300
Date of Preparation: November 6, 2015

Section 2: Hazards Identification:



Emergency Overview:
Warning: May Cause irritation to the eyes.
Potential Health Effects: See Section 11 for more information.
Likely Routes of Exposure: Eye contact, ingestion.
Eye: May irritate eyes. Can cause redness or tearing
Skin: May cause skin sensitization
Ingestion: Could irritate gastrointestinal tract
Inhalation: None.
Potential Environmental Effects: See Section 12 for more information.

Section 3: Composition / Information on Ingredients:

Ingredient	CAS#	Percent
D-Limonene	5989-27-5	0.1 – 1.0
Sodium Hydroxide	1310-73-2	0.1 – 1.0

Section 4: First Aid Measures:

Eye Contact: Remove contact lenses if present. Immediately flush eyes with large amounts of water for at least 15 minutes, lifting upper and lower eyelids periodically to insure complete flushing. Seek medical attention immediately
Skin Contact: Flush with water
Inhalation: Remove individual to fresh air.
Ingestion: DO NOT induce vomiting. If conscious, dilute by giving 2-3glasses of water. Seek medical attention immediately

Section 5: Fire Fighting Measures:

Flammability: Not Flammable by WHMIS/OSHA Criteria.
Means of Extinguishing:
Suitable extinguishing media: Use water fog, alcohol foam, carbon dioxide or dry chemical.
Unsuitable Extinguishing Media: Not Available.
Products of Combustion: Not Available.
Explosion Data:
Sensitivity to Mechanical Impact: Not Available.
Sensitivity to Static Discharge: Not Available.
Protection of Firefighters: Keep Upwind of fire. Wear full fire-fighting turn-out gear, (full Bunker gear), and respiratory protection (SCBA)

Section 6: Accidental Release Measures:

Personal Precautions: Use personal protection recommended in section 8.
Environmental Precautions: Not Available.
Methods for Containment: Contain and/or absorb spill with inert material, (e.g. sand, vermiculite), then place in a suitable container. Use appropriate Personal Protective Equipment, (PPE).
Methods for Clean-up: Dispose of in accordance with all local, state and federal regulations.

Other Information: Not Available.

Section 7: Handling and Storage:

Handling: Store above freezing and no more than 100 degrees F. If frozen, allow to thaw and mix thoroughly.

Storage: Avoid freezing if possible and temperatures more than 100°F

Section 8: Exposure Controls/Personal Protections:

Exposure Guidelines:

Ingredient	Exposure Limits			
	OSHA-PEL	**ACGIH-TLV**	**Other Limits**	**Percent**
Sodium Hydroxide:	2 mg/m^3 (TWA)	2 mg/m^3 (Ceiling)		0.1 - 1.0

Engineering Controls: NA

Personal Protective Equipment:

Eye/Face Protection: Not Required

Hand Protection: Not Required

Skin and Body Protection: Not Required

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: Physical and Chemical Properties:

Appearance and Odor: White translucent gel, Citrus odor
Physical State: Gel
pH: 6.0 – 7.0
Freezing Point: ~0°C (~32°F)
Boiling Point: ~100°C (~212°F)
Flash Point (Method Used): >215°F (PMCC)
Evaporation Rate (Butyl Acetate= 1) : Not Determined
LEL: Not Determined
UEL: Not Determined
Vapor Pressure (mm Hg.): Not Determined
Vapor Density (AIR=1): Not Determined
Specific Gravity: 1.03
Solubility in Water: Complete
Melting Point: NA
Auto-Ignition Temperature: Not Determined
Percent Volatile, wt%: < 1%
VOC content, wt. %: < 1%

Section 10: Stability and Reactivity:

Stability: Stable under normal storage conditions.
Conditions to Avoid: Freezing and Temperatures > 100°F
Incompatibility (Materials to Avoid): None Known.
Hazardous Decomposition or Byproducts: Oxides of Carbon
Hazardous Polymenzation: Will Not Occur.

Section 11: Toxicology Information:

Effects of Acute Exposure

Component Analysis: Not Available

Section 12: Ecological Information:

Ecotoxicity: Not Available
Persistence/Degradability: Not Available
Bioaccumulation/Accumulation: Not Available
Mobility in Environment: Not Available

Section 13: Disposal Considerations:

Disposal Instructions: This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Section 14: Transportation Information:

Proper Shipping Name:	Not D.O.T. Regulated
Hazard Class:	N/A
ID Number:	N/A
Packing Group	N/A
IATA:	N/A

Section 15: Regulatory Information:

Chemical Inventories:

TSCA: All components of this product are either on the TSCA 8(b) Inventory or otherwise exempt from listing.

SARA Section 311: Hazard Category: NA

SARA Section 313: Toxic Release Inventory Chemical: NA

California Safe Drinking Water Enforcement Act (Prop 65): NA

Pennsylvania (Worker and Community Right-to-Know act):

Pennsylvania Special Hazardous Substance List and/or Pennsylvania Environmental Hazardous Substance list: This material contains the following components that appear on the PA list:

Component	CAS#	Amount
Sodium Hydroxide	1310-73-2	0.1 – 1.0%

New Jersey Right-to-Know Hazardous Substance List:

This material contains the following components that appear on the NJ list:

Component	CAS#	Amount
Sodium Hydroxide	1310-73-2	0.1 – 1.0%

Massachusetts Substance List: This material contains the following components that appear on the MA list:

Component	CAS#	Amount
Sodium Hydroxide	1310-73-2	0.1 – 1.0%

Section 16: Other Information:

	Health Hazard	Flammability	Instability	Physical &Chemical Hazards
NFPA	1	0	0	NA
	Health Hazard	**Flammability**	**Physical Hazard**	**Personal Protection**
HMIS	1	0	0	NA

Prepared By: Aiken Chemical Company, Inc.
12 Shelter Drive
Greer, SC 29650

Preparation/Revision Date: November 6, 2015

Revision Date:

General Disclaimer: The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Safety Data Sheet

Issue Date: 08-Aug-2014 **Revision Date:** 28-May-2015 **Version** 1

1. IDENTIFICATION

Product Identifier

Product Name **NAPA Power Steering Fluid**

Other means of identification

SDS # NAP-001

Synonyms: N/A

Recommended use of the chemical and restrictions on use

Recommended Use Power Steering Fluid.

Details of the supplier of the safety data sheet

Supplier Address
Warren Oil Company
915 E. Jefferson Ave.
West Memphis, AR 72301

Emergency Telephone Number

Company Phone Number 1-870-400-3020
Emergency Telephone (24 hr) CHEMTREC 1-800-424-9300 (North America); 1-703-537-3887 (International)

2. HAZARDS IDENTIFICATION

Appearance Amber liquid **Physical State** Liquid at room temperature **Odor** Petroleum

Classification

This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Petroleum distillates, hydrotreated heavy paraffinic	64742-54-7	90-100

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention.

Skin Contact No treatment is necessary under ordinary circumstances. Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs and persists, seek medical attention. WARNING: Oil injected into the skin from high pressure leaking hydraulic systems can cause severe damage. Most damage occurs during the first few hours. Seek medical attention immediately. Surgical removal of oil may be necessary.

Inhalation Remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing is difficult give oxygen. Get medical attention.

Ingestion If swallowed, DO NOT induce vomiting because of danger of aspirating liquid into lungs. Seek medical attention.

Most important symptoms and effects

Symptoms This product is irritating to the eyes. This product may cause irritation to the skin. Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis. Inhalation of oil mists or fumes can cause irritation of the nose, throat and upper respiratory tract. Repeated and prolonged overexposure to oil mists may result in droplet deposition, oil granuloma formation, inflammation and increased incidence of infection. If this product is heated over 70 C (155 F) in the presence of water, hydrogen sulfide may be released. Hydrogen sulfide is irritating to the eyes and respiratory system. Continued overexposure may cause respiratory collapse, coma and death without necessarily any warning odor being sensed.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Dry chemical, foam, carbon dioxide, water fog.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical
Direct water spray or foam may cause frothing and spattering.

Hazardous Combustion Products Upon decomposition this product may yield oxides of boron, calcium, magnesium, phosphorous, zinc, sulfur including hydrogen sulfide and nitrogen as well as carbon monoxide, carbon dioxide and/or other low molecular weight hydrocarbons.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Use water to cool fire-exposed containers and to protect personnel.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Surfaces may become slippery after spillage. Wear appropriate protective equipment and clothing during clean-up. Do not allow the spilled product to enter public drainage systems or open water courses.

Environmental Precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Stop the flow of material, if this is without risk.

Methods for Clean-Up Absorb with non-flammable suitable absorbent such as sand or earth. Scoop up used absorbent into drums or other appropriate container.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Avoid getting this material into contact with your eyes. Avoid prolonged or repeated skin contact with this material. Avoid the generation of oil mists. Wash thoroughly after handling. Use this product with adequate ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions Do not store near heat, sparks, open flame or strong oxidizing agents. Do not store this material in open or unlabeled containers. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode.

Incompatible Materials This product may react with strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering Controls Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces. If product is heated above 70 C (155 F) in the presence of water, hydrogen sulfide vapors may be released. Ventilation should be sufficient to keep hydrogen sulfide levels below recommended exposure limits. Eye wash fountains are recommended.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses. Wear chemical goggles or face shield if splash or mist occurs.

Skin and Body Protection Use impervious gloves for prolonged contact. Wear oil-impervious garments if contact is unavoidable.

Respiratory Protection If mist is generated (heating, spraying) and engineering controls are not sufficient, wear approved organic vapor respirator suitable for oil mist.

General Hygiene Considerations Use good hygiene when handling petroleum product. Launder contaminated clothing before reuse. Excessive misting may cause slippery floors - wear appropriate footwear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid at room temperature		
Appearance	Amber liquid	**Odor**	Petroleum
Color	Amber	**Odor Threshold**	Not determined

Property	**Values**	**Remarks • Method**
pH	Not available	
Melting Point/Freezing Point	Not applicable	
Boiling Point/Boiling Range	Not available	
Flash Point	204 °C / 400 °F	Cleveland Open Cup
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Liquid-Not applicable	
Upper Flammability Limits	Not available	
Lower Flammability Limit	Not available	
Vapor Pressure	Not available	
Vapor Density	Not available	
Specific Gravity	0.86	at 15.6°C (60°F)
Water Solubility	Negligible	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not available	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not available	
Dynamic Viscosity	Not available	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to Avoid
Avoid formation of mists.

Incompatible Materials
This product may react with strong oxidizing agents.

Hazardous Decomposition Products
Decomposition of this product may yield oxides of boron, calcium, magnesium, nitrogen, phosphorus, sulfur including hydrogen sulfide and zinc as well as carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Avoid contact with eyes.

Skin Contact Avoid contact with skin.

Inhalation Do not inhale.

Ingestion Do not ingest.

Component Information

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Petroleum distillates, hydrotreated heavy paraffinic 64742-54-7		5000: 96 h Oncorhynchus mykiss mg/L LC50		1000: 48 h Daphnia magna mg/L EC50

Persistence/Degradability
Not determined.

Bioaccumulation
Not determined.

Mobility
Not determined

Other Adverse Effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Petroleum distillates, hydrotreated heavy paraffinic	Present	X		Present		Present	X	Present	X	X

Legend:

TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*

DSL/NDSL *- Canadian Domestic Substances List/Non-Domestic Substances List*

EINECS/ELINCS *- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

ENCS *- Japan Existing and New Chemical Substances*

IECSC *- China Inventory of Existing Chemical Substances*

KECL *- Korean Existing and Evaluated Chemical Substances*

PICCS *- Philippines Inventory of Chemicals and Chemical Substances*

AICS *- Australian Inventory of Chemical Substances*

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated under applicable state right-to-know regulations

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	0	1	0	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	1	1	0	Not determined

Issue Date: 08-Aug-2014
Revision Date: 28-May-2015
Revision Note: New format

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End of Safety Data Sheet

Latest revision date: 03/31/2016
Version: 1.6

United States

Safety Data Sheet

The Ortho Group
P.O. Box 190
Marysville, Ohio 43040
United States

24 h. EMERGENCY TELEPHONE NUMBER
CHEMTREC (U.S.) 1-800-424-9300
CHEMTREC (International) 1-703-527-3887
Non-Emergency Calls
1-937-644-0011

ORTHO HOME DEFENSE MAX ANT & ROACH KILLER

Section 1. Identification

GHS product identifier	:	ORTHO HOME DEFENSE MAX ANT & ROACH KILLER
Product type	:	Pesticide
SDS #	:	320000002531
EPA Registration Number:	:	239-2695

Relevant identified uses of the substance or mixture and uses advised against
Use only in accordance with label directions.

Section 2. Hazards identification

This product is regulated by the Environmental Protection Agency (EPA) for label precautionary text see Section 15.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 2
GASES UNDER PRESSURE - Liquefied gas

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Flammable aerosol.
Contains gas under pressure; may explode if heated.

Precautionary statements

General	:	Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.
Response	:	Not applicable.
Storage	:	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
Disposal	:	Not applicable.
Supplemental label elements	:	None known.
Hazards not otherwise classified	:	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	Mixture
Chemical name	:	Not available.
Other means of identification	:	Not available.

Ingredient name	%	CAS number
Distillates (petroleum), hydrotreated light	>= 1 - < 3	64742-47-8
2-Methyl-1,1'-biphenyl-3-ylmethyl (Z)-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate	>= 0.1 - < 0.3	82657-04-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.
Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Inhalation	:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical

attention immediately. Maintain an open airway.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.
Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media : None known.

Specific hazards arising from the : Flammable aerosol. In a fire or if heated, a pressure increase will

chemical		occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.
Hazardous thermal decomposition products	:	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Special protective actions for fire-fighters	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-

combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Exposure limits
Distillates (petroleum), hydrotreated light	None.
2-Methyl-1,1'-biphenyl-3-ylmethyl (Z)-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate	None.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust,

fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Protective eyewear is not required, but may be used in situations were contact is expected.

Skin protection

Hand protection : Protective gloves are not required, but may be used in situations were significant contact is expected.

Body protection : Wear long-sleeved shirt, long pants, shoes with socks., Remove and wash contaminated clothing before reuse.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : liquid [aerosol]

Color : Amber.

Odor : Not available.

Odor threshold : Not available.

pH : 7

Melting point	:	Not available.
Boiling point	:	Not available.
Flash point	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	**Lower:** Not available. **Upper:** Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	0.975
Solubility	:	Not available.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	**Dynamic:** Not available. **Kinematic:** Not available.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Avoid all possible sources of ignition (spark or flame).
Incompatible materials	:	No specific data.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
	LD50 Oral	Rat	> 5,000 mg/kg	-
	LC50 Inhalation	Rat	> 5 mg/l	-
	LD50 Dermal	Rat	> 5,000 mg/kg	-

Conclusion/Summary : No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
	Eyes - Redness of the conjunctivae 405 Acute Eye Irritation/Corrosion	Rabbit	1.0		-
	Skin - Erythema/Eschar 404 Acute Dermal Irritation/Corrosion	Rabbit	1.0		-

Conclusion/Summary

Skin : Mildly irritating

Eyes : Not available.

Respiratory : Not available.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
	Skin	Guinea pig	Not sensitizing

Conclusion/Summary

Skin : Not sensitizing

Respiratory : Not available.

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Name	Result
Distillates (petroleum), hydrotreated light	

Information on the likely routes of exposure : Not available.

Potential chronic health effects

Conclusion/Summary : No known significant effects or critical hazards.

General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Section 12. Ecological information

Toxicity

Conclusion/Summary : Not available.

Persistence and degradability

Conclusion/Summary : Not available.

Mobility in soil

Soil/water partition coefficient (KOC) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the

requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

Regulatory information	UN no.	Proper shipping name	Class	PG*	Note
DOT	1950	Aerosols non-flammable, (each not exceeding 1 L capacity)	2.2	(,)	Consumer commodity (ORM-D)
IATA (C)	1950	Aerosols, non-flammable	2.2	(,)	
IATA (P)	1950	Aerosols, non-flammable	2.2	(,)	
IMDG	1950	AEROSOLS	2.2	(,)	
TDG	1950	AEROSOLS non-flammable	2.2	(,)	Consumer commodity

PG* : Packing group

Section 15. Regulatory information

Precautionary statements

Signal word : CAUTION!

Emergency Overview : Keep out of reach of children.
Avoid contact with skin, eyes or clothing.
Wash throughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

U.S. Federal regulations : **United States inventory (TSCA 8b):**
All components are listed or exempted.

State regulations

California Prop. 65
Not available.

International lists

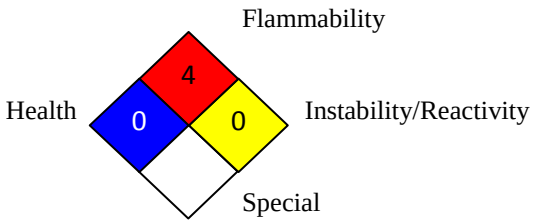
National inventory

Australia : At least one component is not listed.
Canada : At least one component is not listed.
China : At least one component is not listed.
Europe : At least one component is not listed.

Japan	:	At least one component is not listed.
Malaysia	:	Not determined.
New Zealand	:	At least one component is not listed.
Philippines	:	At least one component is not listed.
Republic of Korea	:	At least one component is not listed.
Taiwan	:	Not determined.

Section 16. Other information

National Fire Protection Association (U.S.A.):



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
Flam. Aerosol 2, H223	On basis of test data
Press. Gas Liq. Gas, H280	On basis of test data

History

Date of issue/Date of revision	:	Validity date***.
Version	:	1.6

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution.

Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Praxair Material Safety Data Sheet

1. Chemical Product and Company Identification

Product Name: Compressed gases, n.o.s. (argon, carbon dioxide, oxygen); Compressed gases, n.o.s. (argon, carbon dioxide, helium) (MSDS No. P-6290-B)	**Trade Name:** Robostar® CS, Robostar® SS
Chemical Name: Mixtures of argon, carbon dioxide, and helium or oxygen	**Synonyms:** Not applicable.
Chemical Family: Not applicable.	**Product Grades:** Not applicable.

Telephone: **Emergencies:** 1-800-645-4633* **CHEMTREC:** 1-800-424-9300* **Routine:** 1-800-PRAXAIR

Company Name: Praxair, Inc.
39 Old Ridgebury Road
Danbury, CT 06810-5113

**Call emergency numbers 24 hours a day only for spills, leaks, fire, exposure, or accidents involving this product. For routine information, contact your supplier, Praxair sales representative, or call 1-800-PRAXAIR (1-800-772-9247).*

2. Hazards Identification

EMERGENCY OVERVIEW

CAUTION! High-pressure gas.
Can cause rapid suffocation.
Can increase respiration and heart rate.
May cause dizziness and drowsiness.
Self-contained breathing apparatus may be required by rescue workers.
At normal temperature and pressure, this mixture is a colorless gas of unknown odor and taste, both of which may be sensed by some as slightly pungent.

OSHA REGULATORY STATUS: The components of this mixture are considered hazardous by the OSHA Hazard Communications Standard (29 CFR 1910.1200).

POTENTIAL HEALTH EFFECTS:

Effects of a Single (Acute) Overexposure

Inhalation. These mixtures are asphyxiants. Effects are due to lack of oxygen. Mixtures containing carbon dioxide are also physiologically active, affecting circulation and breathing. Moderate concentrations may cause headache, drowsiness, dizziness, stinging of the nose and throat, excitation, rapid breathing, excess salivation, vomiting, and unconsciousness. Lack of oxygen can kill.

Skin Contact. No harm expected.

Swallowing. An unlikely route of exposure. This product is a gas at normal temperature and pressure.

Eye Contact. May cause a stinging sensation.

A vertical line in the left margin indicates revised or new material.

Effects of Repeated (Chronic) Overexposure. No harm expected.

Other Effects of Overexposure. Damage to retinal or ganglion cells and central nervous system may occur (mixtures containing CO_2).

Medical Conditions Aggravated by Overexposure. The toxicology and the physical and chemical properties of the mixture components suggest that overexposure is unlikely to aggravate existing medical conditions.

CARCINOGENICITY: None of the components of these mixtures is listed by NTP, OSHA, or IARC.

POTENTIAL ENVIRONMENTAL EFFECTS: None known. For further information, see section 12, Ecological Information.

3. Composition/Information on Ingredients

See sections 8, 10, 11, and 16 for information on by-products generated during use in welding and cutting. See section 16 for important information about mixtures.

COMPONENT	CAS NUMBER	CONCENTRATION
Helium	7440-59-7	0-<40%*
Carbon Dioxide	124-38-9	<10%*
Oxygen	7782-44-7	0-<5%*
Argon	7440-37-1	>60%*

**The symbol > means "greater than"; the symbol <, "less than."*

Composition of RoboStar Mixtures

	RoboStar CS	RoboStar SS
Argon	>85%	>60%
Carbon Dioxide	<10%	<1%
Helium	---	<40%
Oxygen	<5%	---

4. First Aid Measures

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, qualified personnel may give oxygen. Call a physician.

SKIN CONTACT: Wash with soap and water. If irritation persists, seek medical attention.

SWALLOWING: An unlikely route of exposure. This product is a gas at normal temperature and pressure.

EYE CONTACT: Flush with water. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Get medical attention if discomfort persists.

NOTES TO PHYSICIAN: *There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.*

5. Fire Fighting Measures

FLAMMABLE PROPERTIES: These mixtures cannot catch fire.

SUITABLE EXTINGUISHING MEDIA: Use media appropriate for surrounding fire. Water (i.e., safety shower) is the preferred extinguishing media for clothing fires.

PRODUCTS OF COMBUSTION: Not applicable.

PROTECTION OF FIREFIGHTERS: CAUTION! High-pressure gas. Evacuate all personnel from danger area. Immediately deluge cylinders with water from maximum distance until cool; then move them away from fire area if without risk. Shut off leak if without risk. Self-contained breathing apparatus may be required by rescue workers. On-site fire brigades must comply with OSHA 29 CFR 1910.156.

Specific Physical and Chemical Hazards. Heat of fire can build pressure in cylinder and cause it to rupture. No part of cylinder should be subjected to a temperature higher than 125°F (52°C). Cylinders containing this mixture are equipped with a pressure relief device. (Exceptions may exist where authorized by DOT.)

Protective Equipment and Precautions for Firefighters. Firefighters should wear self-contained breathing apparatus and full fire-fighting turnout gear.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

CAUTION! High-pressure gas.

Personal Precautions. These mixtures are asphyxiants. Lack of oxygen can kill. Evacuate all personnel from danger area. Use self-contained breathing apparatus where needed. Shut off leak if you can do so without risk. Ventilate area or move cylinder to a well-ventilated area. Test for sufficient oxygen, especially in confined spaces, before allowing reentry.

Environmental Precautions. Prevent waste from contaminating the surrounding environment. Keep personnel away. Discard any product, residue, disposable container, or liner in an environmentally acceptable manner, in full compliance with federal, state, and local regulations. If necessary, call your local supplier for assistance.

7. Handling and Storage

PRECAUTIONS TO BE TAKEN IN HANDLING: Can cause rapid suffocation due to oxygen deficiency. Close cylinder valve after each use; keep closed even when empty. Protect cylinders from damage. Slowly open valve. If valve is hard to open, discontinue use and contact your supplier. Use a suitable hand truck to move cylinders; do not drag, roll, slide, or drop. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Keep away from heat, sparks, and open flame. Use only spark-proof tools and explosion-proof equipment. Arcs and sparks can ignite combustible materials. Prevent fires. For more information on fire prevention in welding and cutting, see NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hotwork,* published by the National Fire Protection Association. Do not strike an arc on the cylinder. The defect produced by an arc burn could lead to cylinder rupture.

PRECAUTIONS TO BE TAKEN IN STORAGE: Store and use with adequate ventilation. Firmly secure cylinders upright to keep them from falling or being knocked over. Screw valve protection cap firmly in place by hand. Store only where temperature will not exceed 125°F (52°C). Store full and empty cylinders separately. Use a first-in, first-out inventory system to prevent storing full cylinders for long periods. For other precautions in using these mixtures, see section 16.

RECOMMENDED PUBLICATIONS: For further information on storage, handling, and use, see Praxair publication P-14-153, *Guidelines for Handling Gas Cylinders and Containers*. Obtain from your local supplier.

8. Exposure Controls/Personal Protection

See section 16 for important information on by-products generated during use in welding and cutting.

COMPONENT	OSHA PEL	ACGIH TLV-TWA (2009)
Argon	Not established.	Simple asphyxiant
Carbon Dioxide	5000 ppm	5000 ppm; 30,000 ppm, 15 min STEL
Helium	Not established.	Simple asphyxiant
Oxygen	Not established.	Not established.

TLV-TWAs should be used as a guide in the control of health hazards and not as fine lines between safe and dangerous concentrations.

IDLH = 40,000 ppm (carbon dioxide)

ENGINEERING CONTROLS:

Local Exhaust. Use a local exhaust system, if necessary, to prevent oxygen deficiency and to keep hazardous fumes and gases in the worker's breathing zone below all applicable exposure limits.

Mechanical (General). General exhaust ventilation may be acceptable if it can maintain an adequate supply of air and keep hazardous fumes and gases in the worker's breathing zone below all applicable exposure limits.

Special. None

Other. None

PERSONAL PROTECTIVE EQUIPMENT:

Skin Protection. Wear work gloves for cylinder handling; welding gloves for welding and cutting.

Eye/Face Protection. Wear safety glasses when handling cylinders. For welding, see section 16.

Respiratory Protection. A respiratory protection program that meet OSHA 29 CFR 1910.134, ANSI Z88.2, or MSHA 30 CFR 72.710 (where applicable) requirements must be followed whenever workplace conditions warrant respirator use. Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge type respirators are used, the cartridge must be appropriate for the chemical exposure (e.g., an organic vapor cartridge). For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus. Adequate

ventilation must keep worker exposure below applicable exposure limits for fumes, gases, and other by products of welding.

9. Physical and Chemical Properties

APPEARANCE:	Colorless gas
ODOR:	Unknown. The carbon dioxide component is felt by some to have a slightly pungent odor and taste.
ODOR THRESHOLD:	Not available.
PHYSICAL STATE:	Gas at normal temperature and pressure
pH:	Not applicable.
MELTING POINT at 1 atm**:**	Not available.
BOILING POINT at 1 atm**:**	Not available.
FLASH POINT (test method)**:**	Not applicable.
EVAPORATION RATE (Butyl Acetate = 1)**:**	Gas
FLAMMABILITY:	Nonflammable
FLAMMABLE LIMITS IN AIR, % by volume**:**	**LOWER:** Not applicable. **UPPER:** Not applicable.
VAPOR PRESSURE:	Not applicable.
VAPOR DENSITY:	Not applicable.
SPECIFIC GRAVITY (H_2O = 1)**:**	Gas, not applicable.
SPECIFIC GRAVITY (Air = 1) at 70°F (21.1°C) and 1 atm**:**	0.88-1.38 (approximate range, calculated)
SOLUBILITY IN WATER 32°F (0°C)**:**	Negligible
PARTITION COEFFICIENT: n-octanol/water:	Not available.
AUTOIGNITION TEMPERATURE:	Not applicable.
DECOMPOSITION TEMPERATURE:	Not available.
PERCENT VOLATILES BY VOLUME:	Gas
MOLECULAR WEIGHT:	Not applicable.
MOLECULAR FORMULA:	Mixtures of Ar, CO_2, & He or O_2

10. Stability and Reactivity

CHEMICAL STABILITY: ☐ Unstable ☒ Stable

CONDITIONS TO AVOID: None known.

INCOMPATIBLE MATERIALS: Alkali metals, alkaline earth metals, metal acetylides, chromium, titanium above 1022°F (550°C), uranium above 1382°F (750°C), magnesium above 1427°F (775°C).

HAZARDOUS DECOMPOSITION PRODUCTS: The arc may form gaseous reaction products such as carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from the arc. See section 16. Other decomposition products of normal operation originate from the volatilization, reaction, or oxidation of the material being worked.

POSSIBILITY OF HAZARDOUS REACTIONS: ☐ May Occur ☒ Will Not Occur

11. Toxicological Information

ACUTE DOSE EFFECTS: Not available. The welding process may generate hazardous fumes and gases. (See sections 3, 10, 15, and 16.)

ACUTE INHALATION EFFECTS: Argon, carbon dioxide, and helium are asphyxiants. Carbon dioxide is physiologically active. It initially stimulates respiration and then causes respiratory depression. High concentrations result in narcosis. Symptoms in humans are as follows:

EFFECT:	CONCENTRATION:
Breathing rate increases slightly.	1%
Breathing rate increases to 50% above normal level. Prolonged exposure can cause headache, tiredness.	2%
Breathing increases to twice normal rate and becomes labored. Weak narcotic effect. Impaired hearing, headache, increased blood pressure and pulse rate.	3%
Breathing increases to approximately four times normal rate, symptoms of intoxication become evident, and slight choking may be felt.	4 - 5%
Characteristic sharp odor noticeable. Very labored breathing, headache, visual impairment, and ringing in the ears. Judgment may be impaired, followed within minutes by loss of consciousness.	5 - 10%
Unconsciousness occurs more rapidly above 10% level. Prolonged exposure to high concentrations may eventually result in death from asphyxiation.	10 - 100%

12. Ecological Information

ECOTOXICITY: No known effects.

OTHER ADVERSE EFFECTS: None known. These mixtures do not contain any Class I or Class II ozone-depleting chemicals.

13. Disposal Considerations

WASTE DISPOSAL METHOD: Do not attempt to dispose of residual or unused quantities. Return cylinder to supplier.

14. Transport Information

DOT/IMO SHIPPING NAME: Compressed gases, n.o.s. (argon, carbon dioxide, helium or oxygen)

HAZARD CLASS: 2.2	**PACKING GROUP/Zone:** Not applicable.	**IDENTIFICATION NUMBER:** UN1956	**PRODUCT RQ:** None

SHIPPING LABEL(s): NONFLAMMABLE GAS

PLACARD (when required): NONFLAMMABLE GAS

SPECIAL SHIPPING INFORMATION: Cylinders should be transported in a secure position, in a well-ventilated vehicle. Cylinders transported in an enclosed, nonventilated compartment of a vehicle can present serious safety hazards.

Shipment of compressed gas cylinders that have been filled without the owner's consent is a violation of federal law [49 CFR 173.301(b)].

MARINE POLLUTANTS: None of the components of this mixture is listed as a marine pollutant by DOT.

15. Regulatory Information

The following selected regulatory requirements may apply to this product. Not all such requirements are identified. Users of this product are solely responsible for compliance with all applicable federal, state, and local regulations.

U.S. FEDERAL REGULATIONS:

EPA (ENVIRONMENTAL PROTECTION AGENCY)

CERCLA: COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (40 CFR Parts 117 and 302):

Reportable Quantity (RQ): None

SARA: SUPERFUND AMENDMENT AND REAUTHORIZATION ACT:

SECTIONS 302/304: Require emergency planning based on Threshold Planning Quantity (TPQ) and release reporting based on Reportable Quantities (RQ) of Extremely Hazardous Substances (EHS) (40 CFR Part 355):

TPQ: None
EHS RQ (40 CFR 355): None

SECTIONS 311/312: Require submission of MSDSs and reporting of chemical inventories with identification of EPA hazard categories. The hazard categories for this product are as follows:

IMMEDIATE: Yes
DELAYED: No
PRESSURE: Yes
REACTIVITY: No
FIRE: No

SECTION 313: Requires submission of annual reports of release of toxic chemicals that appear in 40 CFR Part 372.

None of the components of these mixtures is subject to reporting under Section 313.

40 CFR 68: RISK MANAGEMENT PROGRAM FOR CHEMICAL ACCIDENTAL RELEASE PREVENTION: Requires development and implementation of risk management programs at facilities that manufacture, use, store, or otherwise handle regulated substances in quantities that exceed specified thresholds.

None of the components of these mixtures is listed as a regulated substance.

TSCA: TOXIC SUBSTANCES CONTROL ACT: The components of these mixtures are listed on the TSCA inventory.

OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION:

29 CFR 1910.119: PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS: Requires facilities to develop a process safety management program based on Threshold Quantities (TQ) of highly hazardous chemicals.

None of the components of these mixtures is listed in Appendix A as a highly hazardous chemical.

STATE REGULATIONS:

CALIFORNIA: None of the components of these mixtures is listed by California under the SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 (Proposition 65).

PENNSYLVANIA: The components of these mixtures are subject to the PENNSYLVANIA WORKER AND COMMUNITY RIGHT-TO-KNOW ACT (35 P.S. Sections 7301-7320).

16. Other Information

Read and understand all labels and instructions supplied with all containers of this product.

ADDITIONAL SAFETY AND HEALTH HAZARDS: Using this product in welding and cutting may create additional hazards:

Read and understand the manufacturer's instructions and the precautionary labels on the products used in welding and cutting. For other safe practices information and a more-detailed description of the health hazards of welding and their consequences, ask your welding products supplier for a copy of Praxair's free safety booklet, P-52-529, *Precautions and Safe Practices for Electric Welding and Cutting,* and for other manufacturers' safety publications. For a detailed treatment, get ANSI Z49.1, *Safety in Welding, Cutting, and Allied Processes*, published by the American Welding Society (AWS), 550 N.W. Le Jeune Rd., Miami, FL 33126, http://www.aws.org/, or see OSHA's Web site at http://www.osha-slc.gov/SLTC/weldingcuttingbrazing/. Order AWS documents from Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112-5710, http://global.ihs.com/.

FUMES AND GASES can be dangerous to your health and may cause serious lung disease.

- **Keep your head out of fumes. Do not breathe fumes and gases. Use enough ventilation, local exhaust, or both to keep fumes and gases from your breathing zone and the general area. Short-term overexposure to fumes may cause dizziness, nausea, and dryness or irritation of the nose, throat, and eyes or may cause other similar discomfort.**

Fumes and gases cannot be classified simply. The amount and type depend on the metal being worked and the process, procedure, equipment, and supplies used. Possible dangerous materials may be found in fluxes, electrodes, and other materials. Get an MSDS for every material you use.

Contaminants in the air may add to the hazard of fumes and gases. One such contaminant, chlorinated hydrocarbon vapors from cleaning and degreasing activities, poses a special risk.

- **Do not use electric arcs in the presence of chlorinated hydrocarbon vapors—highly toxic phosgene may be produced.**

Metal coatings such as paint, plating, or galvanizing may generate harmful fumes when heated. Residues from cleaning materials may also be harmful.

- **Avoid arc operations on parts with phosphate residues (anti-rust, cleaning preparations)—highly toxic phosphine may be produced.**

To find the quantity and content of fumes and gases, you can take air samples. By analyzing these samples, you can find out what respiratory protection you need. One recommended sampling method is to take air from inside the worker's helmet or from the worker's breathing zone. See AWS F1.1, *Methods for Sampling and Analyzing Gases for Welding and Allied Processes*, available from the American Welding Society, 550 N.W. Le Jeune Rd., Miami, FL 33126.

NOTES TO PHYSICIAN:

Acute: *Gases, fumes, and dusts may cause irritation to the eyes, lungs, nose, and throat. Some toxic gases associated with welding and related processes may cause pulmonary edema, asphyxiation, and death. Acute overexposure may include signs and symptoms such as watery eyes, nose and throat irritation, headache, dizziness, difficulty breathing, frequent coughing, or chest pains.*

Chronic: *Protracted inhalation of air contaminants may lead to their accumulation in the lungs, a condition that may be seen as dense areas on chest x-rays. The severity of change is proportional to the length of exposure. The changes seen are not necessarily associated with symptoms or signs of reduced lung function or disease. In addition, the changes on x-rays may be caused by non-work-related factors such as smoking, etc.*

PROTECTIVE CLOTHING AND EQUIPMENT FOR WELDING OPERATIONS:

PROTECTIVE GLOVES: Wear welding gloves.

EYE PROTECTION: Wear a helmet or use a face shield with a filter lens. Select lens per ANSI Z49.1. Provide protective screens and flash goggles if needed to protect others; select per OSHA 29 CFR 1910.133.

OTHER PROTECTIVE EQUIPMENT: Wear hand, head, and body protection. (See ANSI Z49.1.) Worn as needed, these help prevent injury from radiation, sparks, and electrical shock. Minimum protection includes welder's gloves and a face shield. For added protection, consider arm protectors, aprons, hats, shoulder protection, and dark, substantial clothing.

OTHER HAZARDOUS CONDITIONS OF HANDLING, STORAGE, AND USE: ***High-pressure gas.*** Use piping and equipment adequately designed to withstand pressures to be encountered. Use a backflow prevention device in any piping. In choosing tools and equipment, avoid materials incompatible with acetylene. Copper, silver, and mercury and their salts, compounds, and high-concentration alloys can form explosive compounds with acetylene. Brass containing less than 65 percent copper and certain nickel alloys are generally acceptable for use in acetylene service but may not be adequate if high corrosion or excess moisture is present. Can cause rapid suffocation due to oxygen deficiency. Store and use with adequate ventilation. Close cylinder valve after each use; keep closed even when empty. Never work on a pressurized system. If there is a leak, close the cylinder valve. Blow the system down in a safe and environmentally sound manner in compliance with all federal, state, and local laws; then repair the leak. Never place a compressed gas cylinder where it may become part of an electrical circuit. When using compressed gases in and around electric welding applications, never ground the cylinders. Grounding exposes the cylinders to damage by the electric welding arc.

Mixtures. When you mix two or more gases or liquefied gases, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Remember, gases and liquids have properties that can cause serious injury or death.

HAZARD RATING SYSTEMS:

NFPA RATINGS:		**HMIS RATINGS:**	
HEALTH	= 1	HEALTH	= 1
FLAMMABILITY	= 0	FLAMMABILITY	= 0
INSTABILITY	= 0	PHYSICAL HAZARD	= 3
SPECIAL	= None		

STANDARD VALVE CONNECTIONS FOR U.S. AND CANADA:

THREADED:	CGA-580
PIN-INDEXED YOKE:	Not applicable.
ULTRA-HIGH-INTEGRITY CONNECTION:	Not applicable.

Use the proper CGA connections. **DO NOT USE ADAPTERS.** Additional limited-standard connections may apply. See CGA pamphlet V-1 listed below. Ask your supplier about free Praxair safety literature as referred to in this MSDS and on the label for this product. Further information can be found in the following materials published by the Compressed Gas Association, Inc. (CGA), 4221 Walney Road, 5th Floor, Chantilly, VA 20151-2923, Telephone (703) 788-2700, http://www.cganet.com/Publication.asp.

AV-1	*Safe Handling and Storage of Compressed Gases*
G-6	*Carbon Dioxide*
P-1	*Safe Handling of Compressed Gases in Containers*
P-9	*Inert Gases—Argon, Nitrogen, and Helium*
SB-2	*Oxygen-Deficient Atmospheres*
V-1	*Compressed Gas Cylinder Valve Inlet and Outlet Connections*
V-7	*Standard Method of Determining Cylinder Valve Outlet Connections for Industrial Gas Mixtures*
—	*Handbook of Compressed Gases, Fourth Edition*

Praxair asks users of this product to study this MSDS and become aware of product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this MSDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.

The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Praxair, Inc., it is the user's obligation to determine the conditions of safe use of the product.

Praxair MSDSs are furnished on sale or delivery by Praxair or the independent distributors and suppliers who package and sell our products. To obtain current MSDSs for these products, contact your Praxair sales representative or local distributor or supplier, or download from www.praxair.com. If you have questions regarding Praxair MSDSs, would like the form number and date of the latest MSDS, or would like the names of the Praxair suppliers in your area, phone or write the Praxair Call Center (**Phone:** 1-800-PRAXAIR; **Address:** Praxair Call Center, Praxair, Inc., PO Box 44, Tonawanda, NY 14151-0044).

Praxair, Inc.
39 Old Ridgebury Road
Danbury, CT 06810-5113

Printed in USA

Safety Data Sheet

Chemical Name: Propane

Synonyms: Dimethylmethane, Liquefied Petroleum Gas (LPG), Sales Propane, Commercial Propane, Refinery Propane, Product Propane (non-odorized)

Section 1 - Chemical Product and Company Identification

Company Information

Ferrellgas (Blue Rhino)
One Liberty Plaza
Liberty, MO 64068
Emergency # 800-424-9300 (CHEMTREC)
General SDS assistance # 855-738-9178 (Ferrellgas Safety Department)

Product Information

Product: Propane (odorized)
Chemical Name: Propane
Chemical Family: Liquefied Petroleum Gas (Paraffinic Hydrocarbons)
Chemical Formula: C_3H_8

Section 2 - Hazards Identification

GHS Classification:

Flammable Gas - Category 1
Gases Under Pressure - Liquefied Gas

GHS LABEL ELEMENTS

Pictogram(s)

Signal Word

Danger

Hazard Statements

H220 - Extremely flammable gas.
H280 - Contains gas under pressure, may explode if heated.

Precautionary Statements

Prevention
P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
Response
P376 - Stop leak if safe to do so.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - Eliminate all ignition sources if safe to do so.
Storage
P403 - Store in a well-ventilated place.
P405 - Store locked up.
P410 - Protect from sunlight.
Disposal
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - Composition / Information on Ingredients

CAS #	Component	Percent
74-98-6	Propane	85 - 100
106-97-8	Butane and heavier	0 - 2.5
74-84-0	Ethane	0 - 5
115-07-1	Propylene	0 - 10
75-08-1	Ethyl Mercaptan	0 - 0.0025

Section 4 - First Aid Measures

First Aid: Eyes

Direct contact with liquid propane can result in eye burns.
In case of contact with eyes, hold eyelids open to allow liquid to evaporate and gently flush with lukewarm water. Cover eyes to protect from light. Seek immediate medical attention.

First Aid: Skin

Direct contact with liquid propane can result in skin burns (frostbite).
Remove contaminated clothing. In case of blistering, frostbite or freeze burns seek immediate medical attention.

First Aid: Ingestion

Risk of ingestion is extremely low. However, if oral exposure occurs, seek immediate medical assistance.

First Aid: Inhalation

This product is classified as a simple asphyxiant. High vapor concentrations may produce a reversible central nervous system depression (anesthesia) and asphyxiation.
Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

Section 5 - Fire Fighting Measures

General Fire Hazards

See Section 9 for Flammability Properties.
Liquid releases flammable vapors at well below ambient temperatures and readily forms a flammable mixture with air. Dangerous fire and explosion hazard when exposed to heat, sparks or flame. Vapors are heavier than air and may travel long distances to a point of ignition and flash back.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

Extinguishing Media

Use extinguishing media suitable for the surrounding material, preferably or, any extinguisher suitable for Class B fires, dry chemical, firefighting foam, CO2, and other gaseous agents. However, fire should not be extinguished unless flow of gas can be immediately stopped.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Gas fires should not be extinguished unless flow of gas can be immediately stopped. Shut off gas source and allow gas to burn out. If spill or leak has not ignited, determine if water spray may assist in dispersing gas or vapor to protect personnel attempting to stop leak. Use water to cool equipment, surfaces and containers exposed to fire and excessive heat. For large fire the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Isolate area, particularly around ends of storage vessels. Let vessel, tank car or container burn unless leak can be stopped. Withdraw immediately in the event of a rising sound from a venting safety device. Large fires typically require specially trained personnel and equipment to isolate and extinguish the fire.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH- approved pressure-demand self-contained breathing apparatus with full face piece and full protective clothing.

Section 6 - Accidental Release Measures

Recovery and Neutralization

Stop the source of the release, if safe to do so.

Materials and Methods for Clean-Up

Do not flush down sewer or drainage systems. Do not touch spilled liquid (frostbite/freeze burn hazard!). Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering.

Emergency Measures

Evacuate nonessential personnel and secure all ignition sources. No road flares, smoking or flames in hazard area. Consider wind direction, stay upwind and uphill, if possible. Evaluate the direction of product travel. Vapor cloud may be white, but color will dissipate as cloud disperses - fire and explosion hazard is still present!

Personal Precautions and Protective Equipment

Do not touch spilled liquid (frostbite/freeze burn hazard!).

Environmental Precautions

Do not flush down sewer or drainage systems.

Prevention of Secondary Hazards

None

Section 7 - Handling and Storage

Handling Procedures

Keep away from flame, sparks, ignition sources and excessive temperatures. Use only in well ventilated areas.

Storage Procedures

Store only in approved containers. Keep away from flame, sparks, excessive temperatures and open flame. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Incompatibilities

Keep away from strong oxidizers, ignition sources and heat. Explosion hazard when exposed to chlorine dioxide. Heating barium peroxide with propane causes violent exothermic reaction. Heated chlorine-propane mixtures are explosive under some conditions.

Section 8 - Exposure Controls / Personal Protection

Component Exposure Limits

Propane (74-98-6)

ACGIH: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4)
OSHA: 1000 ppm TWA; 1800 mg/m3 TWA
NIOSH: 1000 ppm TWA; 1800 mg/m3 TWA

Ethane (74-84-0)

ACGIH: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4)

Propylene (115-07-1)

ACGIH: 500 ppm TWA

Engineering Measures

Use adequate ventilation to keep gas and vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Use explosion-proof equipment and lighting in classified/controlled areas.

Personal Protective Equipment: Respiratory

Use a NIOSH approved positive-pressure, supplied air respirator with escape bottle or self-contained breathing apparatus (SCBA) for gas concentrations above occupational exposure limits, for potential for uncontrolled release, if exposure levels are not known, or in an oxygen-deficient atmosphere. CAUTION: Flammability limits (i.e., explosion hazard) should be considered when assessing the need to expose personnel to concentrations requiring respiratory protection.

Personal Protective Equipment: Hands

Use cold-impervious, insulating gloves where contact with liquid may occur.

Personal Protective Equipment: Eyes

Where there is a possibility of liquid contact, wear splash-proof safety glasses and face shield.

Personal Protective Equipment: Skin and Body

Where contact with liquid may occur, wear appropriate cold insulating protective clothing and face shield.

Section 9 - Physical & Chemical Properties

Appearance:	Colorless	Odor:	Odorless
Physical State:	Gas	pH:	ND
Max Vapor Pressure:	208 psig @ 100 °F (37.8 °C)	Vapor Density:	1.56 @ 32°F (0°C)
Boiling Point:	-43.8°F (-42.1°C)	Molecular Weight:	44.096
Solubility (H2O):	Slight (0.1 to 1.0%)	Specific Gravity:	1.52 (Air = 1)
Expansion Ratio:	1 to 270 (from liquid to gas @ 14.7 psia)	Burning Rate:	ND
Evaporation Rate:	ND	VOC:	ND
Octanol/H2O Coeff.:	ND	Flash Point:	-156°F (-104 °C)
Flash Point Method:	PMCC	Auto Ignition:	842°F (450°C)
Upper Flammability Limit (UFL):	9.6%		
Lower Flammability Limit (LFL):	2.15%		

Section 10 - Chemical Stability & Reactivity Information

Chemical Stability

This is a stable material.

Hazardous Polymerization

Will not occur.

Conditions to Avoid

Keep away from strong oxidizers, ignition sources and heat.

Incompatible Products

Explosion hazard when exposed to chlorine dioxide. Heating barium peroxide with propane causes violent exothermic reaction. Heated chlorine-propane mixtures are explosive under some conditions.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke) may be formed during combustion.

Section 11 - Toxicological Information

Acute Toxicity

A: General Product Information

Propane exhibits some degree of anesthetic action and is mildly irritating to the mucous membranes. At high concentrations propane acts as a simple asphyxiant without other significant physiological effects. High concentrations may cause death due to oxygen depletion.

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Vapors are not irritating. Direct contact to skin or mucous membranes with liquefied product or cold vapor may cause freeze burns and frostbite. Contact to mucous membranes with liquefied product may cause frostbite and freeze burns. Signs of frostbite include a change in the color of the skin to gray or white, possibly followed by blistering. Skin may become inflamed and painful.

Potential Health Effects: Eye Critical Damage/Stimulativeness

Vapors are not irritating. However, contact with liquid or cold vapor may cause frostbite, freeze burns, and permanent eye damage.

Potential Health Effects: Ingestion

Ingestion is unlikely. Contact with mucous membranes with liquefied product may cause frostbite and freeze burns.

Potential Health Effects: Inhalation

This product is considered to be non-toxic by inhalation. Inhalation of high concentrations may cause central nervous system depression such as dizziness, drowsiness, headache, and similar narcotic symptoms, but no long-term effects. Numbness, a "chilly" feeling, and vomiting have been reported from accidental exposures to high concentrations. This product is a simple asphyxiant. In high concentrations it will displace oxygen from the breathing atmosphere, particularly in confined spaces. Signs of asphyxiation will be noticed when oxygen is reduced to below 16%, and may occur in several stages. Symptoms may include rapid breathing and pulse rate, headache, dizziness, visual disturbances, mental confusion, incoordination, mood changes, muscular weakness, tremors, cyanosis, narcosis and numbness of the extremities. Unconsciousness leading to central nervous system injury and possibly death will occur when the atmospheric oxygen concentration is reduced to about 6% to 8% or less.

WARNING: The burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This product is not reported to have any mutagenic effects.

Carcinogenicity

A: General Product Information

This product is not reported to have any carcinogenic effects.

Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ repeat effects.

Aspiration Respiratory Organs Hazard

This product is not reported to have any aspiration hazard effects.

Section 12 - Ecological Information

Ecotoxicity

A: General Product Information

Liquid release is only expected to cause localized, non-persistent environmental damage, such as freezing. Biodegradation of this product may occur in soil and water. Volatilization is expected to be the most important removal process in soil and water. This product is expected to exist entirely in the vapor phase in ambient air.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

No ecotoxicity data is available for this product's components.

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Soil

No information available.

Section 13 - Disposal Considerations

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14 - Transportation Information

DOT Information

UN #: 1075 or 1978 Hazard Class: 2.1

Shipping Name: Petroleum Gases, Liquefied

Placard:

Section 15 - Regulatory Information

Regulatory Information

Component Analysis

TSCA Inventory Status

All components are either listed on the US TSCA Inventory, or are not required under TSCA.

SARA Section 302/304 (Extremely Hazardous Substances)

This material does not contain any chemicals subject to the reporting requirements.

SARA Section 311/312 (EPCRA) – Hazard Classes

Acute Health	Chronic Health	Fire	Sudden Release of Pressure	Reactive
--	--	X	X	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

INGREDIENT NAME (CAS NUMBER)	CONCENTRATION PERCENT BY VOLUME
Propylene (115-07-1)	30 max

NOTE: EPA's Petroleum Exclusion applies to this material (CERCLA 101(14)) and no reporting is required.

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Propane	74-98-6	No	Yes	Yes	Yes	Yes	Yes
Ethane	74-84-0	No	Yes	Yes	Yes	Yes	Yes
Propylene	115-07-1	Yes	Yes	Yes	Yes	Yes	Yes

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

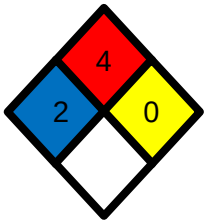
Additional Regulatory Information

Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EU
Propane	74-98-6	Yes	DSL	EINECS
Ethane	74-84-0	Yes	DSL	EINECS
Propylene	115-07-1	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

NFPA® Hazard Rating	Health	2	
	Fire	4	
	Reactivity	0	



HMIS® Hazard Rating	Health	2	Moderate
	Fire	4	Severe
	Physical	0	Minimal

Key/Legend

CERCLA= Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; EPCRA = Emergency Planning and Community Right-to-Know Act; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; NJTSR = New Jersey Trade Secret Registry; SARA = Superfund Amendments and Reauthorization Act (EPA); TSCA = Toxic Substance Control Act; EU = European Union; CAN = Canada

Literature References

None

Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

Issue Information

This Safety Data Sheet supersedes all previous editions.
Issued: March 20, 2017
Issued by: Ferrellgas Safety Department
Ferrellgas
One Liberty Plaza
Liberty, MO 64068

Davco Construction Materials Pty Limited
ABN 28 093 876 558
67 Elizabeth Street Wetherill Park NSW Australia 2164
Telephone: 61 2 9616 3000 Facsimile: 61 2 9725 5551

MATERIAL SAFETY DATA SHEET

1. Identification of Material and Supplier

Product Name	**Quickcrete**
Other Names	n.all.
Recommended Use	Quickcrete is a rapid hardening concrete mix.

Supplier Name	**Davco Construction Materials Pty Ltd**		
Address	**67 Elizabeth St, Wetherill Park, NSW, Australia 2164**		
Web Address	**www.davco.com.au**		
Telephone	**61 2 9616 3000**	**Facsimile**	**61 2 9725 5551**
Technical Support	**1800 653 347**	**Emergency: Spill, First Aid etc**	**1800 807 001**

2. Hazards Identification

Hazard Classification **This product is hazardous according to the criteria of the ASCC. All components are listed on the AICS. Not classed as a DG substance according to the ADG Code. Not a scheduled poison according to the SUSDP. Contains crystalline silica, a Category 1 carcinogen.**

Risk Phrases Hazardous. R 20 Harmful by inhalation, R 36/37/38 Irritating to eyes,respiratory system and skin, R 41 Risk of serious damage to eyes, R 48 Danger of serious damage to health by prolonged exposure (inhalation), R 66. Repeated exposure may cause skin dryness and cracking

Safety Phrases S 22 Do not breathe dusts, S 24/25 Avoid contact with skin or eyes, S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice, S 28 After contact with skin, wash immediately with plenty of soap-suds, S 38 In case of insufficient ventilation, wear suitable respiratory equipment, S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

3. Composition/Information on Ingredients

Chemical Identity	Proportion	CAS No
Crystalline Silica as Quartz	30 - 60 %	14808-60-7
Portland Cement	< 10 %	65997-15-1
Ingredients determined to be non-hazardous or below cut-off values	To 100 %	n.a.

4. First Aid Measures

4.1 Symptoms of Exposure by Route

SWALLOWED

Small amounts ingested incidental to normal handling will have little or no effect. Larger amounts ingested may cause stomach pains and discomfort. May cause superficial burns to mouth and lips.

EYE

Will cause moderate to severe irritation to the eye and must be promptly removed to prevent further damage.

SKIN

May irritate dry skin. May cause superficial burns to damp skin, especially if trapped against skin by clothing. Prolonged or repeated skin exposures may cause drying and cracking of the skin and possibly lead to dermatitis.

INHALED

Will cause coughing and a dry throat. Over several years prolonged or repeated exposures to high dust concentrations may lead to lung disorders. In severe cases these may include cancer.

4.2 First Aid Instructions

SWALLOWED

Do not induce vomiting. Rinse mouth clear with water and give two 250 ml glasses of water to drink. If patient involuntarily vomits encourage to lean forward to avoid aspirating. If symptoms persist seek prompt medical help.

EYE

Immediately: Hold eyes open and flush with clean water for at least 15 minutes. While flushing, gently pull upper and lower eyelids away from eyes and carefully flush. If burns may be present or if symptoms persist seek urgent medical attention.

SKIN

Remove contaminated clothing and footwear (while under safety shower if appropriate). Flush affected area with water for 3-5 minutes followed by washing gently with soap and water for a further 5 minutes. Rinse well and pat dry. If symptoms persist seek prompt medical assistance.

INHALED

Remove patient (while wearing SCBA if concentrations are high) to fresh air. Allow to rest. Rinse mouth and nose with water. Provide artificial respiration if breathing stops. Seek urgent medical attention unless recovery is virtually immediate.

FIRST AID FACILITIES

Provide normal industrial first aid facilities including eye-wash stations and safety showers as appropriate.

Notes to Physician (for symptoms of over-exposure to this product see above)

Possible symptoms of Chronic Health Effects

Prolonged or repeated inhalation of fine dusts may lead to congestive diseases of the lung or in extreme cases (after several years exposure) to lung cancer. Repeated skin exposures may lead to drying and cracking of the skin.

Possible aggravated pre-existing conditions

None reported.

Suggested treatment for acute symptoms, known antidotes

Provide supportive care and treatment based on the patient's reaction to the exposure. For further information contact the :

POISONS INFORMATION CENTRE 13 11 26 in all States (New Zealand Dial 0800 764 766)

5. Fire Fighting Measures

5.1 Flammability and Explosion Hazards
Product is non-combustible. No explosive effect expected.

5.2 Hazardous Combustion Products
None known to manufacturer.

5.3 Suitable Extinguishing Media
Select to suit surrounding fires, or use dry agents or water delivered as fog.

Hazchem Code: n.a.

5.4 Precautions for Fire Fighters and Special Equipment
Wear SCBA and full turn out clothing. Avoid bodily contact with substance or run-off.

6. Accidental Release Measures

6.1 Emergency Procedures – Spills and Leaks **(See Section 13 for disposal considerations)**
Prevent product entering drains or waterways. Wear dust mask or respirator. Without creating dust clouds sweep or shovel up and place in plastic drums or pails, fit lids, label and place in a safe area to await disposal or recovery. Thoroughly ventilate area before continuing normal work.

7. Handling and Storage

7.1 Handling Advice
Wear suitable protective clothing. Avoid inhaling dusts.

7.2 Storage Advice
Store in a cool, dry and well-ventilated area. Avoid generating or accumulating dusts during handling.

8. Exposure Controls/ Personal Protection

8.1 Exposure Standards
ASCC has not established an exposure standard for this product. The standard for some of the ingredients has been set: :

Substance	*TWA*	*STEL*
Crystalline Silica	0.1 mg/m³	n.est.
Portland Cement	10 mg/m³	n.est.

8.2 Engineering Control Methods
In outdoor use natural ventilation is usually adequate. If extremely dusty conditions prevail or if working in poorly ventilated enclosed areas provide adequate ventilation/dust extraction and exhausts to ensure that the work area is kept below the TWA set.

8.3 Personal Protective Equipment
Respiratory Protection

Use good quality dust mask in normal use or respirator with particulate filters to AS 1715 & 1716 in very dusty circumstances.

Eye Protection

Wear safety glasses or goggles to AS 1337.

Gloves

Use PVC or leather gloves to AS 2161.2

Clothing

Wear cotton or Tyvec coveralls fastened at the neck and wrists. Supplement with a PVC apron if required.

9. Physical and Chemical Properties

Appearance:	Dark-greyish powder	**Odour:**	cement-like
Freezing/ Melting Point:	n.d.	**Boiling Point:**	n.d.
Density:	1.3	**Vapour Pressure:**	n.d.
Solubility in water :	Insoluble (Miscible)	**Volatiles:**	n.d.
Flash Point:	n.a.	**Flammability Limits:**	n.a.
Auto Ignition Point:	n.a.	**AS 1940 Classification:**	n.a.

Other Properties Cement may contain varying proportions of crystalline silica, a Category 1 human carcinogen. Product is non-combustible. Contact with water may cause unintended curing of the product before use.

10. Stability and Reactivity

During all normal circumstances of use or handling the product is completely stable. Avoid unintended contact with moisture.

11. Toxicological Information

No product relevant data found.

12. Ecological Considerations

Will block drains or small waterways as product cures in contact with water. Not biodegradable.

13. Disposal Considerations

Disposal must be in accordance with local regulations for hazardous wastes. Product may be cured by the addition of water and disposed of as non-hazardous industrial waste.

14. Transport Information

Requirements under the ADG Code, the IMDG Code or the IATA DG Regulations do not apply to this product.

15. Regulatory Information

Label in accordance with the "National Code of Practice for the Labelling of Workplace Substance" [ASCC: 2012 (1994)] with the Risk and Safety Phrases given on page 1 of this MSDS and the word "Hazardous". Labelling under the SUSDP or the ADG Code is not required.

16. Other Information

Date of Issue: 10/10/2006 New MSDS (Version 1.1) to comply with National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition NOHSC: 2011 (2003).

Data Sources used: in the preparation of this MSDS include: "*Chempendium*" and *"MSDS plus Cheminfo"* published in CD format by CCOHS Canada 2005 - 4."*TOMES*" a CD database published by Micromedex, USA, "*Hazardous Properties of Industrial Materials*" Van Nostrand Rheinhold NY, USA . "*List of Designated Hazardous Substances"* NOHSC 10005:1999, *"National Exposure Standards"* NOHSC 1003:1995 . **Abbreviations used:** n.d = not determined, n.a = not applicable, n.all =not allocated, SUSDP=Standard for the Uniform Scheduling of Drugs and Poisons, ADG=Australian Dangerous Goods Code, IATA=International Air Transport Association, (Dangerous Goods Regulations), IMDG=International Maritime Dangerous Goods (Code), ASCC=Australian Safety and Compensation Council. IARC=International Agency(for) Research (of) Cancer.

Disclaimer

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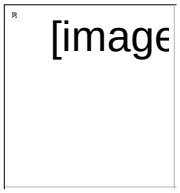


Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

CHEVRON DELO®EXTENDED LIFE PREDILUTED 50/50 COOLANT/ANTIFREEZE

Product Use: Antifreeze/Coolant

Product Number(s): CPS227811

Company Identification

Chevron Products Company

a division of Chevron U.S.A. Inc.

6001 Bollinger Canyon Rd.

San Ramon, CA 94583

United States of America

www.chevronlubricants.com

Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

Product Information

email : lubemsds@chevron.com

Product Information: (800) LUBE TEK

MSDS Requests: (800) 414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Ethylene Glycol	107-21-1	40 - 50 %weight
Diethylene glycol	111-46-6	1 - 5 %weight
Sodium 2-ethylhexanoate	19766-89-3	1 - 5 %weight

SECTION 3 HAZARDS IDENTIFICATION

****

EMERGENCY OVERVIEW

- HARMFUL OR FATAL IF SWALLOWED

- CONTAINS MATERIAL THAT MAY CAUSE ADVERSE REPRODUCTIVE EFFECTS BASED ON ANIMAL DATA

- POSSIBLE BIRTH DEFECT HAZARD - CONTAINS MATERIAL THAT MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA

- CAUSES DAMAGE TO:

- KIDNEY

****

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Toxic; may be harmful or fatal if swallowed.

Inhalation: The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. Breathing this material at concentrations above the recommended exposure limits may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

DELAYED OR OTHER HEALTH EFFECTS:

Reproduction and Birth Defects: Contains material that may cause adverse reproductive effects if swallowed based on animal data.Contains material that may cause birth defects based on animal data.

Target Organs: Contains material that causes damage to the following organ(s) if swallowed: Kidney

See Section 11 for additional information. Risk depends on duration and level of exposure.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue. Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue or if any other symptoms develop.

SECTION 5 FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 2 Flammability: 0 Reactivity: 0

FLAMMABLE PROPERTIES:

Flashpoint: Not Applicable

Autoignition: No Data Available

Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Dry Chemical, CO2, AFFF Foam or alcohol resistant foam.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will not burn.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapor or fumes. Wash thoroughly after handling.

General Handling Information: Do not taste or swallow antifreeze or solution. Keep out of the reach of children and animals.

General Storage Information: Do not store in open or unlabeled containers.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: Natural rubber, Neoprene, Nitrile Rubber, Polyvinyl Chloride (PVC or Vinyl).

Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors, Dusts and Mists.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Ethylene Glycol	ACGIH	--	--	100 mg/m3	--

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Red

Physical State: Liquid

Odor: Faint or Mild

pH: 8.1 - 8.5

Vapor Pressure: 0.12 mmHg (Typical) @ 20 ℃ (68 ℉)

Vapor Density (Air = 1): 2.1

Boiling Point: 108.9℃ (228℉)

Solubility: Miscible

Freezing Point: -36.7℃ (-34℉)

Specific Gravity: 1.08 @ 15.6℃ (60.1℉) / 15.6℃ (60.1℉)

Viscosity: No data available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Hazardous Decomposition Products: Ketones (Elevated temperatures), Aldehydes (Elevated temperatures)

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.

Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.

Skin Sensitization: No product toxicology data available.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains diethylene glycol (DEG). The estimated oral lethal dose is about 50 cc (1.6 oz) for an adult human. DEG has caused the following effects in laboratory animals: liver abnormalities, kidney damage and blood abnormalities. It has been suggested as a cause of the following effects in humans: liver abnormalities, kidney damage, lung damage and central nervous system damage.

This product contains ethylene glycol (EG). The toxicity of EG via inhalation or skin contact is expected to be slight at room temperature. The estimated oral lethal dose is about 100 cc (3.3 oz.) for an adult human. Ethylene glycol is oxidized to oxalic acid which results in the deposition of calcium oxalate crystals mainly in the brain and kidneys. Early signs and symptoms of EG poisoning may resemble those of alcohol intoxication. Later, the victim may experience nausea, vomiting, weakness, abdominal and muscle pain, difficulty in breathing and decreased urine output. When EG was heated above the boiling point of water, vapors formed which reportedly caused unconsciousness, increased lymphocyte count, and a rapid, jerky movement of the eyes in persons chronically exposed. When EG was administered orally to pregnant rats and mice, there was an increase in fetal deaths and birth defects. Some of these effects occurred at doses that had no toxic effects on the mothers. We are not aware of any reports that EG causes reproductive toxicity in human beings.

2-Ethylhexanoic acid (2-EXA) caused an increase in liver size and enzyme levels when repeatedly administered to rats via the diet. When administered to pregnant rats by gavage or in drinking water, 2-EXA caused teratogenicity (birth defects) and delayed postnatal development of the pups. Additionally, 2-EXA impaired female fertility in rats. Birth defects were seen in the offspring of mice who were administered sodium 2-ethylhexanoate via intraperitoneal injection during pregnancy.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

ENVIRONMENTAL FATE

This material is expected to be readily biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: Anti-freeze Preparations, Proprietary

Additional Information: Bulk shipments with a reportable quantity (5000 pounds) of ethylene glycol are a hazardous material. The Proper Shipping Name is: Environmentally Hazardous Substance, Liquid, N.O.S. (ethylene glycol), 9, UN3082, III, RQ (ethylene glycol).

IMO/IMDG Shipping Description: MAY BE REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER THE IMDG CODE

ICAO/IATA Shipping Description: Anti-freeze Preparations, Proprietary; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES: 1. Immediate (Acute) Health Effects: YES

2. Delayed (Chronic) Health Effects: YES

3. Fire Hazard: NO

4. Sudden Release of Pressure Hazard: NO

5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Diethylene glycol	07
Ethylene Glycol	03, 05, 06, 07

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

NEW JERSEY RTK CLASSIFICATION:

Refer to components listed in Section 2.

WHMIS CLASSIFICATION:

Class D, Division 1, Subdivision B: Toxic Material -

Acute Lethality

Class D, Division 2, Subdivision A: Very Toxic Material -

Teratogenicity and Embryotoxicity

Reproductive Toxicity

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 2 Flammability: 0 Reactivity: 0

HMIS RATINGS: Health: 2* Flammability: 0 Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:

Label Category : ANTIFREEZE/COOLANT 3 - AFC3

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: 12, 16

Revision Date: May 04, 2009

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Chevron Energy Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for

the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Sakrete Mortar/Stucco Mix Type S (Gray/White); Sakrete Surface Bonding Cement (Gray/White); Sakrete Non-Shrink Construction Grout; Sakrete Fast Setting Concrete Mix; Sakrete Stone Veneer Mortar; Sakrete Mortar Mix Type N; Sakrete Masonry Coating

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Date of issue: 01/20/2014 Revision date: 05/29/2015 Version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name & code : Sakrete Mortar/Stucco Mix Type S
Product code: 65300042 - 40lb, 65300024 - 60lb, 65302880 - 80lb (Gray); 65300043 - 40lb (White)

Sakrete Surface Bonding Cement
Product code: 65300845 - 50lb (Gray); 60200350 - 50lb bag (White)

Sakrete Non-Shrink Construction Grout
Product code: 65250560 - 50lb

Sakrete Fast Setting Concrete Mix
Product code: 65305535 - 50lb bag

Sakrete Stone Veneer Mortar
Product code: 65306213 - 50lb, 65303105 - 80lb

Sakrete Mortar Mix Type N
Product code: 65300039 - 40lb, 65306214 - 60lb, 65304270 - 80lb

Sakrete Masonry Coating
Product code: 65450014 - 50lb bag

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Various.

1.3. Details of the supplier of the safety data sheet

Oldcastle Architectural Inc.
900 Ashwood Parkway, Suite 600
30338 Atlanta, GA - USA
T 800-334-0784 Tech Service: Monday - Friday; 8:00am - 5:00pm EST

1.4. Emergency telephone number

Emergency number : CHEMTREC (800) 424-9300
CHEMTREC International +1 (703) 527-3887 24 hr

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute toxicity 4 (Oral)
Skin Irritation 2
Serious Eye Damage 1
Skin Sensitization 1
Carcinogenicity 1A
Specific Target Organ Toxicity After Single Exposure 3
Specific Target Organ Toxicity After Repeated Exposure 1

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer. May cause respiratory irritation. Causes damage to lungs through prolonged or repeated exposure.

Precautionary statements (GHS-US) : Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust. If exposed or concerned: Get medical advice/attention. If swallowed: Immediately call a poison center/doctor. Rinse mouth. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If inhaled: Remove person to fresh air and keep

comfortable for breathing. Call a poison center/doctor if you feel unwell. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3. Other hazards

Other hazards not contributing to the classification : Not applicable.

2.4. Unknown acute toxicity (GHS US)

Sakrete Masonry Coating: 34% of the mixture consists of ingredient(s) of unknown acute toxicity.
Sakrete Surface Bonding Cement (Gray/White): 25% of the mixture consists of ingredient(s) of unknown acute toxicity.
Sakrete Non-Shrink Construction Grout: 24% of the mixture consists of ingredient(s) of unknown acute toxicity.
Sakrete Stone Veneer Mortar: 18% of the mixture consists of ingredient(s) of unknown acute toxicity.
Sakrete Mortar-Stucco Mix Type S (Gray): 14% of the mixture consists of ingredient(s) of unknown acute toxicity.
Sakrete Mortar-Stucco Mix Type S (White): 12% of the mixture consists of ingredient(s) of unknown acute toxicity.
Sakrete Mortar Mix Type N: 13% of the mixture consists of ingredient(s) of unknown acute toxicity.
Sakrete Fast Setting Concrete Mix: 9% of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Quartz	(CAS No) 14808-60-7	30 - 85	Acute Tox. 4 (Oral), H302 Carc. 1A, H350 STOT RE 1, H372
Cement, portland, chemicals	(CAS No) 65997-15-1	5 - 55	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335
Limestone	(CAS No) 1317-65-3	0.5 - 17	Not classified
Calcium magnesium hydroxide (CaMg(OH)4)	(CAS No) 39445-23-3	1 - 5[1]	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
Calcium magnesium hydroxide oxide (CaMg(OH)2O)	(CAS No) 58398-71-3	1 - 5[1]	Not classified
Gypsum (Ca(SO4).2H2O)	(CAS No) 13397-24-5	0.5 - 5	Not classified
Calcium hydroxide	(CAS No) 1305-62-0	0.5 - 5[1]	Skin Corr. 1B, H314 Eye Dam. 1, H318
Calcium sulfate	(CAS No) 7778-18-9	0.5 - 5	Not classified
Calcium oxide	(CAS No) 1305-78-8	0.5 - 2	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
Cement, alumina, chemicals	(CAS No) 65997-16-2	1 - 5[2]	Skin Irrit. 2, H315 Eye Dam. 1, H318

[1]Sakrete Mortar/Stucco Mix Type S (White); Sakrete Masonry Coating
[2]Sakrete Fast Setting Concrete Mix; Sakrete Non-Shrink Construction Grout

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : May cause respiratory tract irritation.

Symptoms/injuries after skin contact : Causes skin irritation. May cause burns in the presence of moisture. Skin contact during hydration may slowly develop sufficient heat that may cause severe burns possibly resulting in permanent injury. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. Handling can cause dry skin. May cause sensitization by skin contact.

Symptoms/injuries after eye contact : Causes serious eye damage. May cause burns in the presence of moisture. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/injuries after ingestion : Harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Treat for surrounding material.

Unsuitable extinguishing media : Not available.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon.

5.3. Advice for firefighters

Firefighting instructions : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment : Contain spill, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Vacuum or sweep material and place in a disposal container.

6.3. Reference to other sections

No additional information available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid generating and breathing dust. Do not swallow. Good housekeeping is important to prevent accumulation of dust. The use of compressed air for cleaning clothing, equipment, etc, is not recommended. Handle and open container with care. When using do not eat, drink or smoke.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Store in dust-tight, dry, labelled containers. Keep container tightly closed when not in use. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area. Do not store in an area equipped with emergency water sprinklers.

7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Quartz (14808-60-7)		
USA ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m^3)	(30)/(%SiO_2 + 2) mg/m^3 TWA, total dust (250)/(%SiO_2 + 5) mppcf TWA, respirable fraction (10)/(%SiO_2 + 2) mg/m^3 TWA, respirable fraction

Cement, portland, chemicals (65997-15-1)		
USA ACGIH	ACGIH TWA (mg/m³)	1 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m^3)	5 mg/m³

Calcium sulfate (7778-18-9)		
USA ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³

Gypsum (Ca(SO4).2H2O) (13397-24-5)		
USA ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³

Limestone (1317-65-3)		
USA ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m^3)	5 mg/m³

Calcium oxide (1305-78-8)		
USA ACGIH	ACGIH TWA (mg/m³)	2 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m^3)	5 mg/m³

Calcium hydroxide (1305-62-0)		
USA ACGIH	ACGIH TWA (mg/m³)	5 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection : Wear suitable waterproof gloves.

Eye protection : Wear approved eye protection (properly fitted dust- or splash-proof chemical safety goggles) and face protection (face shield).

Skin and body protection : Wear suitable waterproof protective clothing.

Respiratory protection : A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

Other information : Handle according to established industrial hygiene and safety practices. Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Powder.

Colour : Various.

Odour : Characteristic.

Odour threshold : No data available.

pH : 10 - 12

Relative evaporation rate (butylacetate=1) : No data available.

Melting point : No data available.

Freezing point : No data available.

Boiling point : No data available.

Flash point : No data available.

Self ignition temperature : No data available.

Decomposition temperature : No data available.

Flammability (solid, gas) : Not Flammable.

Vapour pressure : No data available.

Relative vapour density at 20 °C : No data available.

Relative density : No data available.

Solubility : No data available.

Log Pow : No data available.

Log Kow : No data available.

Viscosity, kinematic : No data available.

Viscosity, dynamic : No data available.

Explosive properties : No data available.

Oxidising properties : No data available.

Explosive limits : No data available.

9.2. Other information

VOC content : 0%, Not applicable; 0 wt, Not applicable.

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. Keep dry in storage.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Incompatible materials. Moisture.

10.5. Incompatible materials

Wet cement is alkaline and incompatible with acid, ammonium salts and aluminum metal.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

Quartz (14808-60-7)	
LD50 oral rat	500 mg/kg

Calcium sulfate (7778-18-9)	
LD50 oral rat	> 3000 mg/kg

Calcium oxide (1305-78-8)	
LD50 oral rat	500 mg/kg

Calcium hydroxide (1305-62-0)	
LD50 oral rat	7340 mg/kg

Sakrete Mortar/Stucco Mix Type S (Gray/White); Sakrete Surface Bonding Cement (Gray/White); Sakrete Non-Shrink Construction Grout; Sakrete Fast Setting Concrete Mix ; Sakrete Stone Veneer Mortar; Sakrete Mortar Mix Type N; Sakrete Masonry Coating	
ATE (oral)	520 - 880 mg/kg, rat
ATE (dermal)	No data available.
ATE (inhalation)	No data available.

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : May cause cancer.

Quartz (14808-60-7)	
IARC group	1
National Toxicity Program (NTP) Status	2

Reproductive toxicity : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) : Causes damage to lungs through prolonged or repeated exposure. (Respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by the International Agency for Research on Cancer (IARC) and National Toxicology Program (NTP) as a lung carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of dust exposure and the length of time (usually years) of exposure.)

Aspiration hazard : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : May cause respiratory tract irritation.

Symptoms/injuries after skin contact	:	Causes skin irritation. May cause burns in the presence of moisture. Skin contact during hydration may slowly develop sufficient heat that may cause severe burns possibly resulting in permanent injury. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. Handling can cause dry skin. May cause sensitization by skin contact.
Symptoms/injuries after eye contact	:	Causes serious eye damage. May cause burns in the presence of moisture. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/injuries after ingestion	:	Harmful if swallowed. May cause stomach distress, nausea or vomiting.
Other information	:	Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No ecological consideration when used according to directions. Normal dilution of this product to drains, sewers, septic systems and treatment plants is not considered environmentally harmful.

Calcium sulfate (7778-18-9)	
LC50 fishes 1	2980 mg/l (96 h: Lepomis macrochirus [static])
LC50 fish 2	> 1970 mg/l (96 h: Pimephales promelas [static])

Calcium oxide (1305-78-8)	
LC50 fishes 1	1070 mg/l (96 h: Cyprinus carpio [static])

12.2. Persistence and degradability

Sakrete Mortar/Stucco Mix Type S (Gray/White); Sakrete Surface Bonding Cement (Gray/White); Sakrete Non-Shrink Construction Grout; Sakrete Fast Setting Concrete Mix ; Sakrete Stone Veneer Mortar; Sakrete Mortar Mix Type N; Sakrete Masonry Coating	
Persistence and degradability	No data available.

12.3. Bioaccumulative potential

Sakrete Mortar/Stucco Mix Type S (Gray/White); Sakrete Surface Bonding Cement (Gray/White); Sakrete Non-Shrink Construction Grout; Sakrete Fast Setting Concrete Mix ; Sakrete Stone Veneer Mortar; Sakrete Mortar Mix Type N; Sakrete Masonry Coating	
Bioaccumulative potential	No data available.

Calcium oxide (1305-78-8)	
BCF fish 1	(no bioaccumulation)

Calcium hydroxide (1305-62-0)	
BCF fish 1	(no bioaccumulation)

12.4. Mobility in soil

Sakrete Mortar/Stucco Mix Type S (Gray/White); Sakrete Surface Bonding Cement (Gray/White); Sakrete Non-Shrink Construction Grout; Sakrete Fast Setting Concrete Mix ; Sakrete Stone Veneer Mortar; Sakrete Mortar Mix Type N; Sakrete Masonry Coating	
Ecology - soil	No data available.

12.5. Other adverse effects

Other adverse effects : No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

SECTION 14: Transport information

In accordance with DOT.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Additional information

Other information : No supplementary information available.

SECTION 15: Regulatory information

15.1. US Federal regulations

Quartz (14808-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Cement, portland, chemicals (65997-15-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Calcium sulfate (7778-18-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Limestone (1317-65-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Calcium oxide (1305-78-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Cement, alumina, chemicals (65997-16-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Calcium magnesium hydroxide (CaMg(OH)4) (39445-23-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Calcium magnesium hydroxide oxide (CaMg(OH)2O) (58398-71-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Calcium hydroxide (1305-62-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State regulations

Sakrete Mortar/Stucco Mix Type S (Gray/White); Sakrete Surface Bonding Cement (Gray/White); Sakrete Non-Shrink Construction Grout; Sakrete Fast Setting Concrete Mix ; Sakrete Stone Veneer Mortar; Sakrete Mortar Mix Type N; Sakrete Masonry Coating	
State or local regulations	This product contains Crystalline Silica, Quartz and may also contain other chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

IARC (I)	**International Agency for Research on Cancer.**
	1 - Carcinogenic to humans; 2A - Probably carcinogenic to humans; 2B - Possibly carcinogenic to humans; 3 - Not classifiable; 4 - Probably not carcinogenic to humans.
NTP (N)	**National Toxicology Program.**
	1 - Evidence of Carcinogenicity; 2 - Known Human Carcinogens; 3 - Reasonably anticipated to be Human Carcinogen; 4 - Substances delisted from report on Carcinogens; 5 - Twelfth Report - Items under consideration.

SECTION 16: Other information

Data sources : SDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Date of Issue: 01/20/2014

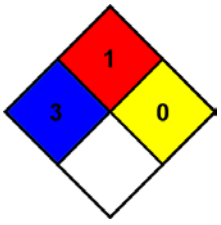
Revision Date: 05/29/2015

Version: 1.1

NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard : 1 - Must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

SAFETY DATA SHEET

1. Identification

Product identifier **SHEETROCK® Brand All Purpose Joint Compound, Ready-Mixed**

Other means of identification

SDS number 61000010001

Synonyms Joint Compound (Ready-Mixed) , Taping Compound, Mud, Finishing Compound

Recommended use Interior use.

Recommended restrictions Use in accordance with manufacturer's recommendations.

Manufacturer/Importer/Supplier/Distributor information

Company name United States Gypsum Company

Address 550 West Adams Street
Chicago, Illinois 60661-3637

Telephone 1-800-874-4968

Website www.usg.com

Emergency phone number 1-800-507-8899

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement None.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Get medical attention/advice if you feel unwell.

Storage Store as indicated in Section 7.

Disposal Dispose of in accordance with local, state, and federal regulations.

Hazard(s) not otherwise classified (HNOC) None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Limestone	1317-65-3	> 35
Attapulgite	12174-11-7	< 5
Mica	12001-26-2	< 5
Talc	14807-96-6	< 5

Composition comments All concentrations are in percent by weight unless ingredient is a gas.

Raw materials in this product contain respirable crystalline silica as an impurity. The weight percent of respirable crystalline silica found in this product is < 0.7%. The OSHA PEL for respirable crystalline silica has been lowered to 0.05 mg/m3, effective June 23, 2016 with compliance dates of June 23, 2017 for construction and June 23, 2018 for general industry. Testing of this product and its constituents suggests that under normal conditions the expected use of this product will not result in exposure to respirable crystalline silica that exceeds the OSHA PEL. However, actual exposures to respirable crystalline silica on a given jobsite must be determined by workplace hygiene testing.

4. First-aid measures

Inhalation	Dust irritates the respiratory system, and may cause coughing and difficulties in breathing. Move injured person into fresh air and keep person calm under observation. Get medical attention if symptoms persist.
Skin contact	Contact with dust: Rinse area with plenty of water. Get medical attention if irritation develops or persists.
Eye contact	Dust in the eyes: Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Dust may irritate eyes and mucous membranes of the nose, throat and upper respiratory system causing sneezing and/or coughing. May cause allergic skin disorders in sensitive individuals.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved.

5. Fire-fighting measures

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Not applicable.
Specific hazards arising from the chemical	Not a fire hazard.
Special protective equipment and precautions for firefighters	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials.
Specific methods	Cool material exposed to heat with water spray and remove it if no risk is involved.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	See Section 8 of the SDS for Personal Protective Equipment.
Methods and materials for containment and cleaning up	Large Spills: Scoop spilled materials and recover as much of the product as possible for use. If spillage is unrecoverable dispose according to local, state, and federal regulations. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions	Avoid discharge to drains, sewers, and other water systems.

7. Handling and storage

Precautions for safe handling	Avoid inhalation of dust and contact with skin and eyes. Minimize dust generation and accumulation. In case of insufficient ventilation, wear suitable respiratory equipment. Observe good industrial hygiene practices. Use proper lifting techniques.
Conditions for safe storage, including any incompatibilities	Store in a cool, dry, well-ventilated place. Store in a closed container away from incompatible materials. Protect from moisture. Keep away from heat. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Keep containers closed when not in use. Filled 4.5 gallon pails of joint compound may be stacked a maximum of 3 layers high on a standard 48 x 48 pallet (16 pails per layer, 3 layers high). Pallets may only be stacked a maximum of two high. Filled cartons of joint compound may be stacked a maximum of 3 layers high on a standard 42 x 42 or 42 x 48 pallet (16 pails per layer, 3 layers high). Pallets may only be stacked a maximum of two high.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Limestone (CAS 1317-65-3)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Mica (CAS 12001-26-2)	TWA	20 mppcf	
Talc (CAS 14807-96-6)	TWA	0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		20 mppcf	
		2.4 mppcf	Respirable.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Mica (CAS 12001-26-2)	TWA	3 mg/m3	Respirable fraction.
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Limestone (CAS 1317-65-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Mica (CAS 12001-26-2)	TWA	3 mg/m3	Respirable.
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable.

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Provide sufficient ventilation for operations causing dust formation. Observe occupational exposure limits and minimize the risk of exposure.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved safety goggles.

Skin protection

Hand protection It is a good industrial hygiene practice to minimize skin contact. For prolonged or repeated skin contact use suitable protective gloves.

Other Normal work clothing (long sleeved shirts and long pants) is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.

Thermal hazards None.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment separately from regular wash. Observe any medical surveillance requirements.

9. Physical and chemical properties

Appearance

Physical state Semi-solid.

Form Paste.

Color Off-white.

Odor Low to no odor.

Odor threshold Not applicable.

pH 7.5 - 9.9

Melting point/freezing point Not applicable.

Initial boiling point and boiling range	212 °F (100 °C)
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	1.4 - 1.8 (H2O=1)
Solubility(ies)	
Solubility (water)	Soluble in water.
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Viscosity	Not applicable.
Other information	
Bulk density	12 - 15 lb/gal
VOC (Weight %)	2 g/l (Calculated by EPA Method 24)

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	None known.
Incompatible materials	None known.
Hazardous decomposition products	Above 1472°F (800°C) limestone (CaCO3) can decompose to lime (CaO) and release carbon dioxide (CO2).

11. Toxicological information

Information on likely routes of exposure

Ingestion	May cause discomfort if swallowed.
Inhalation	Airborne dust may irritate throat and upper respiratory system causing coughing.
Skin contact	May cause allergic skin reactions especially in individuals with pre-existing skin disease such as eczema. (See Section 16).
Eye contact	Airborne dust may cause mechanical eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Dust may irritate eyes and mucous membranes of the nose, throat and upper respiratory system causing sneezing and/or coughing.

Information on toxicological effects

Acute toxicity	Not expected to be a hazard under normal conditions of intended use.
Skin corrosion/irritation	Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.

Skin sensitization	The product contains a small amount of sensitizing substance which may provoke an allergic reaction among sensitive individuals after repeated contact. For detailed information, see section 16.
Germ cell mutagenicity	Data does not suggest that this product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not expected to increase the risk of cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Attapulgite (CAS 12174-11-7)	2B Possibly carcinogenic to humans. 3 Not classifiable as to carcinogenicity to humans.
Talc (CAS 14807-96-6)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	Not expected to be a reproductive hazard.
Specific target organ toxicity - single exposure	No data available, but none expected.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged exposure may cause chronic effects. For detailed information, see section 16.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data available.
Bioaccumulative potential	Bioaccumulation is not expected.
Mobility in soil	No data available.
Other adverse effects	None expected.

13. Disposal considerations

Disposal instructions	Dispose in accordance with applicable federal, state, and local regulations. Recycle responsibly.
Local disposal regulations	Dispose of in accordance with local regulations.
Hazardous waste code	Not regulated.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of in accordance with local regulations.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US federal regulations	This product is not known to be a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Limestone (CAS 1317-65-3)
Mica (CAS 12001-26-2)
Talc (CAS 14807-96-6)

US. New Jersey Worker and Community Right-to-Know Act

Limestone (CAS 1317-65-3)
Mica (CAS 12001-26-2)
Talc (CAS 14807-96-6)

US. Pennsylvania Worker and Community Right-to-Know Law

Limestone (CAS 1317-65-3)
Mica (CAS 12001-26-2)
Talc (CAS 14807-96-6)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Attapulgite (CAS 12174-11-7)

International Inventories

All components of this product are in compliance with the listing Requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. Other information, including date of preparation or last revision

Issue date 07-August-2014
Revision date 02-March-2017
Version # 03

Further information

Attapulgite: Carcinogenic to experimental animals via a route of exposure not relevant to human exposure per ACGIH.

Skin Sensitization Potential: This product contains an amount of Triazinetriethanol (THT) (CAS No. 4719-04-4) that is within the approved EPA regulated limits. THT can act as a sensitizer. Numerous human studies with concentrations up to 1% yielded negative (no sensitization) results. However, some results showed positive reactions in concentrations <0.5% mostly in persons with eczema.

Crystalline silica: Raw materials in this product may contain respirable crystalline silica as an impurity. Exposures to respirable crystalline silica are not expected during the normal use of this product. However, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer.

Bucket NFPA Classification:
Health: 0
Flammability: 1
Physical hazard: 0

NFPA Ratings:
Health: 1
Flammability: 0
Physical hazard: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

NFPA ratings

List of abbreviations

NFPA: National Fire Protection Association.

References

Registry of Toxic Effects of Chemical Substances (RTECS)
HSDB® - Hazardous Substances Data Bank
Torben et al. (2001). Environmental and Health Assessment of Substances in Household Detergents and Cosmetic Products.

Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

Safety Data Sheet

Zep Inc.
1310 Seaboard Industrial Blvd.
Atlanta, GA 30318
1-877-793-7776

Section 1. Chemical Product and Company Identification

Product name **SMOKE & ODOR NEUTRALIZER**

Product use Aerosol Room Deodorizer/Odor Counteractant

Product code **R018**

Date of issue **03/08/13** **Supersedes 08/05/08**

Emergency Telephone Numbers

For MSDS Information:
Compliance Services 1-877-793-7776

For Medical Emergency
(877) 541-2016 Toll Free - All Calls Recorded

For Transportation Emergency
CHEMTREC: (800) 424-9300 - All Calls Recorded
In the District of Columbia (202) 483-7616

Prepared By
Compliance Services
1420 Seaboard Industrial Blvd.
Atlanta, GA 30318

Section 2. Hazards Identification

Emergency overview

*Hazard Determination System (HDS): Health, Flammability, Reactivity

1 1 0

DANGER!

CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION.
HARMFUL OR FATAL IF SWALLOWED.

CONTENTS UNDER PRESSURE.

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

Acute Effects **Routes of Entry** Dermal contact. Eye contact. Inhalation.

Eyes May cause eye irritation. Direct contact may cause irritation and redness. Inflammation of the eye is characterized by redness, watering and itching.

Skin May cause skin irritation. Skin inflammation is characterized by itching, scaling, or reddening.

Inhalation Avoid breathing vapors, spray or mists. Over-exposure by inhalation may cause respiratory irritation. Inhalation of spray mists or vapors may cause central nervous system depression characterized by headache, dizziness, nausea, and/or stupor.

Ingestion Harmful or fatal if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.

Chronic effects Contains material which may cause damage to the following organs: heart, skin, central nervous system (CNS). Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

Product/ingredient name

Not available.

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

Name of Hazardous Ingredients	CAS number	% by Weight
Alkanes, C12-14-iso-	68551-19-9	10 - 20
Butane	106-97-8	10 - 20
propane	74-98-6	1 - 10
2,2'-(ethylenedioxy)diethanol	112-27-6	1 - 10
Fragrance	proprietary mixture	1 - 5

Section 4. First Aid Measures

Eye Contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention immediately.

Skin Contact Flush affected skin with plenty of water. Get medical attention if irritation develops.

Inhalation Move exposed person to fresh air. If irritation persists, get medical attention.

Ingestion Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5. Fire Fighting Measures

National Fire Protection Association (U.S.A.)

Flash Point Not available.

Flammable Limits Not available.

Flammability Non-flammable. (CSMA Method)

Fire hazard CONTENTS UNDER PRESSURE. In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from a fire at high speed.

Fire-Fighting Procedures Use an extinguishing agent suitable for the surrounding fire. Cool closed containers exposed to fire with water. Fire-fighters should wear appropriate protective equipment.

Section 6. Accidental Release Measures

Spill Clean up Large spills are unlikely due to packaging.

Section 7. Handling and Storage

Handling Put on appropriate personal protective equipment (see section 8). Store and use away from heat, sparks, open flame or any other ignition source. Avoid contact with eyes, skin and clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Observe label precautions. Wash thoroughly after handling.

Storage CONTENTS UNDER PRESSURE. Do not puncture, incinerate or store the container at temperatures above 49°C (120°F) or in direct sunlight. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection

Product name	Exposure limits
Butane	**OSHA PEL 1989 (United States, 3/1989).** TWA: 800 ppm 8 hour(s). TWA: 1900 mg/m³ 8 hour(s). **NIOSH REL (United States, 6/2009).** TWA: 800 ppm 10 hour(s). TWA: 1900 mg/m³ 10 hour(s). **ACGIH TLV (United States, 2/2010).** TWA: 1000 ppm 8 hour(s).
propane	**OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hour(s). TWA: 1800 mg/m³ 8 hour(s). **NIOSH REL (United States, 6/2009).** TWA: 1000 ppm 10 hour(s). TWA: 1800 mg/m³ 10 hour(s). **OSHA PEL (United States, 6/2010).** TWA: 1000 ppm 8 hour(s). TWA: 1800 mg/m³ 8 hour(s). **ACGIH TLV (United States, 2/2010).** TWA: 1000 ppm 8 hour(s).

Personal Protective Equipment (PPE)

Eyes Safety glasses.

Body For prolonged or repeated handling, use the following type of gloves:
Neoprene gloves. Nitrile gloves. Rubber gloves.

Respiratory Use with adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

Section 9. Physical and Chemical Properties

Physical State Liquid. [Aerosol.]
pH Not available.
Boiling Point Not available.
Specific Gravity 0.92
Solubility Very slightly soluble in the following materials: cold water and hot water.

Color Opaque. Emulsion.
Odor Pleasant.
Vapor Pressure Not available.
Vapor Density Not available.
Evaporation Rate <1 (Water = 1)

VOC (Consumer) 19.2 % (w/w) 1.47 lbs/gal (176.5 g/l)

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.
Incompatibility Avoid contact with strong oxidizers, excessive heat, sparks or open flame.
Hazardous Polymerization Under normal conditions of storage and use, hazardous polymerization will not occur.
Hazardous Decomposition Products carbon oxides (CO, CO_2)

Section 11. Toxicological Information

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m3	4 hours
2,2'-(ethylenedioxy)diethanol	LD50 Oral	Rat	15000 mg/kg	-

Section 12. Ecological Information

Environmental Effects Not available.

Aquatic Ecotoxicity

2,2'-(ethylenedioxy)diethanol	-	Acute LC50 35000 ul/L Fresh water	Daphnia - Water flea - Daphnia magna - <=24 hours	48 hours
	-	Acute LC50 >10000000 ug/L Marine water	Fish - Inland silverside - Menidia beryllina - 40 to 100 mm	96 hours
	-	Chronic NOEC 7500 mg/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	21 days
	-	Chronic NOEC 100 ul/L Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus - Egg	28 days

Section 13. Disposal Considerations

Waste Information

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities for additional information.

Waste Stream Classification: Non-hazardous waste by Characteristic.
Origin: RCRA waste.

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label
DOT Classification	-	Consumer commodity or Limited quantity	ORM-D	-	
IMDG Class	UN1950	AEROSOLS, non-flammable	2.2	-	

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.
PG* : Packing group

Section 15. Regulatory Information

U.S. Federal Regulations

SARA 313 toxic chemical notification and release reporting:

No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

All Components of this product are listed or exempt from listing on TSCA Inventory.

State Regulations

California Prop 65 No products were found.

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

**NOTE: Hazard Determination System (HDS) ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although these ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HDS ratings are to be used with a fully implemented program to relay the meanings of this scale.*

klm

DRUMMOND AMERICAN

Material Safety Data Sheet

Revision Date *08-Jul-2013*

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product code DR8161
Product name STATUS
EPA Registration No. 11694-34-40208
Recommended Use Disinfectant

Supplier
Drummond, A Lawson Brand
Lawson Products, Inc.
8770 W.Bryn Mawr Ave.- Suite 900
Chicago, IL 60631
1-866-529-7664

Emergency telephone number (888) 426-4851

2. HAZARDS IDENTIFICATION

Emergency Overview
May be harmful if swallowed.

Aggravated Medical Conditions
Pre-existing lung disorders. Pre-existing skin conditions may be aggravated by exposure to this product.

Principal Routes of Exposure
Eyes. Skin. Inhalation. Ingestion.

Potential health effects

Eyes Direct contact will cause the following effects:. Redness. Tearing. Burning sensation.

Skin May be absorbed through the skin in harmful amounts. Chronic exposure causes drying effect on the skin . Burning sensation. Redness.

Inhalation Exposure to vapors may cause the following effects. Dizziness. Nausea. Loss of coordination.

Ingestion May be harmful if swallowed.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Water	7732-18-5	60-100
Isobutane	75-28-5	3-7
EDTA	64-02-8	3-7
Propane	74-98-6	1-5
2-Butoxyethanol	111-76-2	1-5
Diethylene glycol monobutyl ether	112-34-5	1-5

4. FIRST AID MEASURES

Eye contact Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical attention IMMEDIATELY.

Skin contact Remove and wash contaminated clothing before re-use. Flush area with water for 15 minutes. Seek medical attention if irritation persists.

Ingestion Do Not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

Inhalation Move to fresh air. Administer artificial respiration if not breathing. Call a physician or Poison Control Center immediately.

5. FIRE FIGHTING MEASURES

Flash point °C > 100
Flash point °F > 212
Method Pensky-Martens C.C.

Autoignition temperature °C No data available
Autoignition temperature °F No data available

Flammability Limits (% in Air)
Upper No data available
Lower No data available

Suitable extinguishing media
Carbon dioxide (CO2). Dry chemical powder. Foam. Water fog. Water spray.

Special protective equipment for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

Fire and Explosion Hazards
Material does not support combustion. Do not release run-off from fire control methods to sewers or waterways. Aerosol containers may vent, rupture or burst when heated to temperatures above 120°F. Water should be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat .

Sensitivity to shock
No information available.

Sensitivity to static discharge
No information available.

6. ACCIDENTAL RELEASE MEASURES

6. ACCIDENTAL RELEASE MEASURES

Methods for cleaning up
Evacuate area of unprotected and unnecessary personnel. Ventilate area to maintain exposure below permissible exposure limits. Eliminate all sources of ignition. Personnel should wear appropriate protective equipment. Follow all precautions for handling. Please refer to appropriate sections of MSDS for additional information. Dike or dam large spills. Wipe or scrape up and dispose of spill. Pick up and transfer to properly labelled containers.

7. HANDLING AND STORAGE

Handling
Avoid contact with skin, eyes and clothing. Direct spray away from face. Thoroughly wash hands and exposed skin after handling. Keep container closed when not in use. Contents under pressure. Keep away from open flames, hot surfaces and sources of ignition. Do not puncture or incinerate.

Storage
Follow all label directions. Store in temperatures below 120 degrees F (50 degrees C) . Keep containers tightly closed in a cool, well-ventilated place. Keep out of the reach of children.

NFPA Storage Code
Store as Level 1 Aerosol (NFPA 30B)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	OSHA PEL (TWA)	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
2-Butoxyethanol	50 ppm 240 mg/m^3	-	20 ppm	-
Diethylene glycol monobutyl ether	-	-	10 ppm	-
Isobutane	-	-	-	1000 ppm
Propane	1000 ppm 1800 mg/m^3	-	1000 ppm	-
Water	-	-	-	-
EDTA	-	-	-	-

Ventilation and Environmental Controls
Adequate ventilation should be provided to keep exposure levels below current acceptable exposure limits.

Hygiene measures
General industrial hygiene practice. Wash hands before eating or using the washroom.

Respiratory protection
None necessary under normal conditions. If the exposure limits are exceeded, a NIOSH/MSHA approved respirator is recommended.

Hand Protection
Protective gloves.

Eye protection
Use safety eyewear designed to protect against splash of liquids.

Skin and body protection
None necessary under normal conditions

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Aerosol
Color	Clear
Odor	Lemon
Odor Threshold	No information available
pH	11
Specific Gravity	1.02
Vapor pressure	70 mmHg @ 70°F
Vapor density	>1 (Air = 1)
Evaporation Rate	No data available
Water solubility	Soluble in water
VOC Content	7.9%; 77 g/l
Partition Coefficient (n-octanol/water)	No data available
Boiling point/range °C	100
Boiling point/range °F	212
Melting point/range °C	No data available
Melting point/range °F	No data available
Flash point °C	> 100
Flash point °F	> 212

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to avoid
Do not store above 120 degrees F.

Incompatability
Strong acids. Oxidizers.

Hazardous Decomposition Products
Carbon dioxide. Carbon monoxide. nitric acid. Hydrochloric acid. Nitrous oxide.

Polymerization
Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Component Information

Chemical Name	LD50 (oral,rat)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat)
2-Butoxyethanol 111-76-2	470 mg/kg	220 mg/kg	450 ppm
Diethylene glycol monobutyl ether 112-34-5	3384 mg/kg	2700 mg/kg	-
Isobutane 75-28-5	-	-	658 mg/L
Propane 74-98-6	-	-	658 mg/L
Water 7732-18-5	-	-	-
EDTA 64-02-8	-	-	-

Synergistic Products None known

Specific Hazards Misuse by deliberately concentrating vapors and inhaling contents can be harmful or fatal.

Potential health effects

Sensitization None known .

Chronic toxicity See Section 2 .

Mutagenic effects None known .

Teratogenic effects None known .

Reproductive toxicity None known .

Target Organ Effects None Known.

Carcinogenic effects See table below

Chemical Name	ACGIH OEL - Carcinogens	IARC	NTP - Known Carcinogens	NTP - Suspected Human Carcinogens	OSHA RTK Carcinogens
2-Butoxyethanol	A3	Not Listed	Not Listed	Not Listed	Not Listed
Diethylene glycol monobutyl ether	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Isobutane	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Propane	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Water	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
EDTA	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

EDTA

Water Flea Data

Daphnia magna EC50=610 mg/L (24 h)

2-Butoxyethanol

Water Flea Data

Daphnia magna EC501698 - 1940 mg/L (24 h)

Daphnia magna EC50>1000 mg/L (48 h)

Diethylene glycol monobutyl ether

Water Flea Data

Daphnia magna EC50=2850 mg/L (24 h)

Daphnia magna EC50>100 mg/L (48 h)

13. DISPOSAL CONSIDERATIONS

Disposal Information

As supplied, this product is a RCRA Hazardous Waste . Dispose in accordance with federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

DOT

UN1950 Aerosols, flammable, 2.1.

Exception: (Compressed Gas not more than 1.0L) Consumer Commodity ORM-D

TDG

Not Allowed

15. REGULATORY INFORMATION

Chemical Name	US EPA SARA 313 Emission Reporting
2-Butoxyethanol	Listed
Diethylene glycol monobutyl ether	Listed

State Regulations

Chemical Name	New Jersey - RTK	Pennsylvania - RTK	California Prop. 65
2-Butoxyethanol	Listed	Listed	Not Listed
Diethylene glycol monobutyl ether	Not Listed	Not Listed	Not Listed
Isobutane	Listed	Listed	Not Listed
Propane	Listed	Listed	Not Listed
Water	Not Listed	Not Listed	Not Listed
EDTA	Not Listed	Not Listed	Not Listed

International Inventories

Chemical Name	EINECS	DSL	NDSL	TSCA
2-Butoxyethanol	X	X	-	X
Diethylene glycol monobutyl ether	X	X	-	X
Isobutane	X	X	-	X
Propane	X	X	-	X
Water	X	X	-	X
EDTA	X	X	-	X

CPR
This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all of the information required by the Controlled Product Regulations

16. OTHER INFORMATION

NFPA

Health - 1
Flammability - 0
Reactivity - 0

HMIS

Health - 1
Flammability - 0
Physical Hazard - 0

Prepared By V. Shargorodsky, Regulatory Affairs Engineer

The information accumulated herein is believed to be accurate, but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Material Safety Data Sheet

NFPA

HMIS

Health Hazard	0
Fire Hazard	2
Reactivity	0

Issuing Date August 16, 2010 **Revision Date** November 18, 2013 **Revision Number** 4

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name STIHL 2-CYCLE HP ENGINE OIL

Product Code F-3A, 0781-319-8008, 0781-319-8009, 0781-319-8010, 0781-319-8044, 0781-319-8045, 0781-319-8051, 0781-319-8008, 7010-871-0177, 7010-871-0208

Recommended Use 2-cycle Engine Oil

Manufactured by:
Omni Specialty Packaging
10399 S. Hwy 1
Shreveport, LA 71115
Phone: 1 (318) 524-1100

Emergency Telephone Number
CHEMTREC
1 (800) 424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance Blue **Physical State** Liquid **Odor** Mild

Potential Health Effects

Principal Routes of Exposure Eye contact, Skin contact, Inhalation, Ingestion

Acute Toxicity

Eyes Practically non- irritating to the eye upon direct contact.
Skin Substance minimally irritating upon direct contact.
Inhalation Low hazard at standard temperatures and pressures. Inhalation of oil mist or fumes can cause irritation of the nose, throat and upper respiratory tract
Ingestion Do not ingest. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Other On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. This condition is usually asymptomatic as a result of repeated small aspirations.

Chronic Effects Prolonged exposure may cause chronic effects.

Aggravated Medical Conditions Personnel with pre-existing skin disorders should avoid contact with this product.

Environmental Hazard See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula Mixture

Chemical Name	CAS-No	Weight %
Petroleum Distillates, Hydrotreated Heavy Paraffinic	64742-54-7	10-20
Petroleum Distillates, Solvent Dewaxed heavy Paraffinic	64742-65-0	70-80
Additive Package	Mixture	5-10
Dye	Mixture	0-0.1

4. FIRST AID MEASURES

Eye Contact Flush with large amounts of water for 15 minutes. Get medical attention if eye irritation develops or persists. If material is hot, treat for thermal burns and take victim to the hospital immediately.

Skin Contact Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Get medical attention immediately if skin discoloration occurs.

Inhalation This material is not expected to present an inhalation exposure at ambient conditions

Ingestion Never give anything by mouth to an unconscious person. Do not induce vomiting. Get immediate medical attention or advice.

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties Not flammable.

Flash Point 170°F

Suitable Extinguishing Media Water Fog. Carbon dioxide (CO_2). Foam. Dry chemical.

Unsuitable Extinguishing Media Not Available

Hazardous Combustion Products Not Available

Explosion Data

Sensitivity to Mechanical Impact Not sensitive.
Sensitivity to Static Discharge Not sensitive.

Protective Equipment and Precautions for Firefighters Wear positive pressure self-contained breathing apparatus (SCBA). Use water to cool containers exposed to flames. Structural firefighters' protective clothing will only provide limited protection. Mist or sprays may be flammable below the product normal flash point.

NFPA **Health Hazard** 0 **Flammability** 2 **Stability** 0 **Physical and Chemical Hazards** -

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation. If spilled, take caution, as material can cause surfaces to become very slippery.

Methods for Containment Dike far ahead of liquid spill for later disposal.

Methods for Cleaning Up Pick up free liquid for recycle and/or disposal. Residual liquid and/or solid can be absorbed on inert material.

Evacuation Procedures

Large Spill
Fire Consider initial downwind evacuate for at least 300 meters (1000 feet).
If tank, rail car or tank car is involved in a fire, isolate for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions.

Reporting Requirements Spills that enter a water body must be reported immediately to the USEPA's National Response Center at (800)424-8802. Check with your local and state regulators regarding their reporting requirements.

7. HANDLING AND STORAGE

Handling Do not pressure, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode. See NFPA 30 and OSHA 1910.106 – flammable and combustible liquids.

Storage Store away from heat, sparks, open flame, or strong oxidizing agents in closed and properly labeled containers. Empty containers retain product residue (liquid, and/or vapor) and can be dangerous

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Petroleum Distillates, Hydrotreated Heavy Paraffinic 64742-54-7	5 mg/m3 8 hour(s). Form: Mist	5 mg/m3 8 hour(s). Form: Mist	2,500 mg/m3
Petroleum Distillates, Solvent Dewaxed heavy Paraffinic 64742-65-0	5 mg/m3 8 hour(s). Form: Mist	5 mg/m3 8 hour(s). Form: Mist	2,500 mg/m3

Engineering Measures Additional area ventilation or local exhaust may be required to maintain air concentrations below recommended limits.

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields. If splashes are likely to occur, wear goggles. Full face-shield to be worn during emergencies.

Skin and Body Protection As needed to prevent repeated skin contact. Solvent resistant gloves should be used if needed.

Respiratory Protection Not normally needed. During emergencies wear respirator.

Hygiene Measures Remove and wash contaminated clothing before re-use. Wash hands before

breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Blue	**Odor**	Mild Petroleum Oder
Physical State	Liquid	**pH**	N/A
Flash Point	170°F	**Autoignition Temperature**	N/A
Boiling Point/Range	N/A	**Freezing Point**	0°F
Explosion Limits	N/A	**Flammability Limits in Air**	N/A
Specific Gravity	0.87	**Solubility**	Negligible
Evaporation Rate	N/A	**Vapor Pressure**	<0.01
Vapor Density	Not Determined	**Density**	N/A

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Incompatible Products Open Flame and strong oxidizing agents.

Conditions to Avoid Heat, flames, and sparks.

Hazardous Decomposition Products Decomposition and combustion products may include smoke, carbon dioxide, carbon monoxide, and toxic fumes.

Hazardous Polymerization None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information Test on similar materials show a low order of acute oral and dermal toxicity.

Acute Oral Effects Test on similar materials indicates low order of acute toxicity.

Acute Inhalation Effects Low acute toxicity expected on inhalation.

Skin Effects Practically non-toxic if absorbed. Other similar highly refined products have not shown skin tumors in mouse skin painting studies.

Eye Irritation Minimal irritation on contact. Eye irritation slightly or practically non-irritating base on similar products.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Petroleum Distillates, Hydrotreated Heavy Paraffinic 64742-54-7	Rat >2000 mg/kg	Rabbit >2000 mg/kg	Rat > 2.18 mg/L 4 hours
Petroleum Distillates, Solvent Dewaxed heavy Paraffinic 64742-65-0	Rat >2000 mg/kg	Rabbit >2000 mg/kg	Rat > 2.18 mg/L 4 hours

Chronic Toxicity

Chronic Toxicity Prolonged exposure may cause chronic effects.

Carcinogenicity Not considered a potential carcinogen base on IP346 DMSO of less than 3.0 wt%

Target Organ Effects Respiratory system, Eyes, Skin, Central nervous system (CNS)

Genotoxicity This product is considered non-mutagenic and has negative potential for tumor development based on from Modified Ames Assay, with Mutagenic Index of less than 1.0.

12. ECOLOGICAL INFORMATION

Ecotoxicity If applied to leaves, this product may kill grasses and small plants by interfering with transpiration and respiration. This product is not toxic to fish but may coat gill structures resulting in suffocation if spilled in shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration. This product may cause gastrointestinal distress to birds and mammals through ingestion during pelage grooming.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of in accordance with local regulations. Keep this product out of sewers and waterways.

Contaminated Packaging Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Petroleum Distillates, Hydrotreated Heavy Paraffinic 64742-54-7	Present	X	265-157-1	X	X	X	X	X
Petroleum Distillates, Solvent Dewaxed heavy Paraffinic 64742-65-0	Present	X	265-169-7	X	X	X	X	X

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

If spilled into navigable waters it is reportable to National Response Center, 800-424-8802. Reportable Quantity = Oil Sheen present on navigable water surface. (40 CFR 116; 401.15)

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

CERCLA

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.
Florida
No listed ingredients are present
Massachusetts RTK
No listed ingredients are present
Minnesota RTK
No listed ingredients are present
New Jersey RTK
Lists petroleum oil, but this product does not contain hazardous ingredients.
Pennsylvania RTK
Lists petroleum oil, but this product does not contain hazardous ingredients greater than 3%.
Illinois DOL TSL
No listed ingredients are present

International Regulations

Mexico – Grade	No information available.
Canada	Not listed on the Canadian Controlled Product Ingredient Disclosure and is compliant with Controlled Products Regulation
CONEG Metals	Since cadmium, chromium, lead and mercury are not detectable and it does not exceed 100 ppm total in this product, it is compliant with CONEG Metals regulation.
EEC (Europe)	This product is not known to be a dangerous good internationally. No known R-Phrases or S-Phrases Hazard Label None Danger Symbol None

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
D2B Toxic materials

16. OTHER INFORMATION

Prepared By	Jim Prothro
Issuing Date	August 16, 2010
Revision Date	November 18, 2013
Revision Note	Updated product numbers

Disclaimer
The information provided on this MSDS is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

The End

Material Safety Data Sheet

NFPA

HMIS

Health Hazard	0
Fire Hazard	1
Reactivity	0

Issuing Date 12- August-2010 **Revision Date** 23-March-2012 **Revision Number** 4

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name
STIHL BAR AND CHAIN LUBRICANT
PART NUMBER; 0781-516-5001, 0781-516-5003, 0781-516-5005, 0781-516-5006, 0781-516-5007, 0781-516-5008, 7010-871-0181, 7010-871-0211

MSDS Number

Recommended Use

Manufactured by:
Omni Specialty Packaging
10399 S. Hwy 1
Shreveport, LA 71115
Phone: 1 (318) 524-1100

Emergency Telephone Number
CHEMTREC
1 (800) 424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance Straw Viscous Liquid **Physical State** Liquid **Odor** Petroleum odor

Potential Health Effects

Principal Routes of Exposure Eye contact, Skin contact, Inhalation, Ingestion

Acute Toxicity

Eyes Irritating, but will not permanently injure eye tissue.
Skin Substance minimally irritating upon direct contact. May cause irritation.
Inhalation Inhalation of oil mist or fumes can cause irritation of the nose, throat and upper respiratory tract
Ingestion Do not ingest. Ingestion may cause gastrointestinal irritation, nausea, vomiting

and diarrhea.

Other On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. This condition is usually asymptomatic as a result of repeated small aspirations.

Chronic Effects Prolonged exposure may cause chronic effects.

Aggravated Medical Conditions Personnel with pre-existing skin disorders should avoid contact with this product.

Environmental Hazard See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula Mixture

Chemical Name	CAS-No	Weight %
Naphthenic Petroleum Oil	64742-53-6	93-99
Petroleum Product Additive	mixture	1-7

4. FIRST AID MEASURES

Eye Contact Flush with large amounts of water for 15 minutes. Get medical attention if eye irritation develops or persists. If material is hot, treat for thermal burns and take victim to the hospital immediately.

Skin Contact Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Get medical attention immediately if skin discoloration occurs.

Inhalation If headache, nausea, irritation, or drowsiness occurs, remove to fresh air. Get medical attention if breathing becomes difficult or symptoms persist.

Ingestion If more that several mouthfuls have been swallowed, give two glasses of water (16 Oz.). Get immediate medical attention or advice.

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties Not flammable.

Flash Point 420°F

Suitable Extinguishing Media Water Fog. Carbon dioxide (CO_2). Foam. Dry chemical.

Unsuitable Extinguishing Media Not Available

Hazardous Combustion Products Not Available

Explosion Data
Sensitivity to Mechanical Impact Not sensitive.
Sensitivity to Static Discharge Not sensitive.

Protective Equipment and Precautions for Firefighters Wear positive pressure self-contained breathing apparatus (SCUBA). Use water to cool containers exposed to flames. Structural firefighters' protective clothing will only provide limited protection. Mist or sprays may be flammable below the product normal flash point.

NFPA **Health Hazard** 0 **Flammability** 1 **Stability** 0 **Physical and Chemical Hazards** -

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation. If spilled, take caution, as material can cause surfaces to become very slippery.

Methods for Containment Dike far ahead of liquid spill for later disposal.

Methods for Cleaning Up Pick up free liquid for recycle and/or disposal. Residual liquid and/or solid can be absorbed on inert material.

Evacuation Procedures

Large Spill Consider initial downwind evacuate for at least 300 meters (1000 feet).

Fire If tank, rail car or tank car is involved in a fire, isolate for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions.

Reporting Requirements Spills that enter a water body must be reported immediately to the USEPA's National Response Center at (800)424-8802. Check with your local and state regulators regarding their reporting requirements.

7. HANDLING AND STORAGE

Handling Do not pressure, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode. See NFPA 30 and OSHA 1910.106 – flammable and combustible liquids.

Storage Store away from heat, sparks, open flame, or strong oxidizing agents in closed and properly labeled containers. Empty containers retain product residue (liquid, and/or vapor) and can be dangerous

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Naphthenic Petroleum Oil 64742-53-6	5 mg/m3 8 hour(s). Form: Mist	5 mg/m3 8 hour(s). Form: Mist	2,500 mg/m3

Engineering Measures Additional area ventilation or local exhaust may be required to maintain air concentrations below recommended limits.

Personal Protective Equipment

Eye/Face Protection Safety glasses or face shield where splashing is possible. Full face-shield to be worn during emergencies.

Skin and Body Protection As needed to prevent repeated skin contact. Solvent resistant gloves should be used if needed.

Respiratory Protection Not normally needed. During emergencies wear respirator.

Hygiene Measures Remove and wash contaminated clothing before re-use. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Straw Viscous Liquid	**Odor**	Mild Petroleum Oder
Physical State	Liquid	**pH**	N/A
Flash Point	420°F	**Autoignition Temperature**	>315.6 °C / > 600°F
Boiling Point/Range	404°C	**Freezing Point**	<-34°C / <-29.2°F
Explosion Limits	N/A	**Flammability Limits in Air**	N/A
Specific Gravity	0.91	**Solubility**	Negligible
Evaporation Rate	N/A	**Vapor Pressure**	N/A
Vapor Density	1+	**Density**	N/A

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Incompatible Products Open Flame and strong oxidizing agents.

Conditions to Avoid Heat, flames, and sparks.

Hazardous Decomposition Products Decomposition and combustion products may include smoke, carbon dioxide, carbon monoxide, and toxic fumes.

Hazardous Polymerization None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information Test on similar materials show a low order of acute oral and dermal toxicity.

Acute Oral Effects Test on similar materials indicates low order of acute toxicity.

Acute Inhalation Effects Low acute toxicity expected on inhalation.

Skin Effects Practically non-toxic if absorbed. Other similar highly refined products have not shown skin tumors in mouse skin painting studies.

Eye Irritation Minimal irritation on contact. Eye irritation slightly or practically non-irritating base on similar products.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Naphthenic Petroleum Oil 64742-53-6	Rat >5000 mg/kg	Rabbit >5000 mg/kg	Rat > 2.18 mg/L 4 hours

Chronic Toxicity

Chronic Toxicity Prolonged exposure may cause chronic effects.

Carcinogenicity Not considered a potential carcinogen base on IP346 DMSO of less than 3.0 wt%

Target Organ Effects Respiratory system, Eyes, Skin,

Genotoxicity This product is considered non-mutagenic and has negative potential for tumor development based on from Modified Ames Assay, with Mutagenic Index of less than 1.0.

12. ECOLOGICAL INFORMATION

Ecotoxicity No Information Available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of in accordance with local regulations. Keep this product out of sewers and waterways.

Contaminated Packaging Dispose of in accordance with local regulations.

Chemical Name	RCRA – Halogenated Organic Compounds	RCRA – P Series Wastes	RCRA – F Series Wastes	RCRA – K Series Wastes
Naphthenic Petroleum Oil 64742-53-6	Does not meet hazardous waste criteria	Does not meet hazardous waste criteria	Does not meet hazardous waste criteria	Does not meet hazardous waste criteria

14. TRANSPORT INFORMATION

DOT Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Naphthenic Petroleum Oil 64742-53-6	Present	X	265-156-6	x	X	x	X	X

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
If spilled into navigable waters it is reportable to National Response Center, 800-424-8802. Reportable Quantity = Oil Sheen present on navigable water surface. (40 CFR 116; 401.15)

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

CERCLA

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.
Florida
No listed ingredients are present
Massachusetts RTK
No listed ingredients are present
Minnesota RTK
No listed ingredients are present
New Jersey RTK
Lists petroleum oil, but this product does not contain hazardous ingredients.
Pennsylvania RTK
Lists petroleum oil, but this product does not contain hazardous ingredients greater than 3%.
Illinois DOL TSL
No listed ingredients are present

International Regulations

Mexico – Grade	No information available.
Canada	Not listed on the Canadian Controlled Product Ingredient Disclosure and is compliant with Controlled Products Regulation
CONEG Metals	Since cadmium, chromium, lead and mercury are not detectable and it does not exceed 100ppm total in this product, it is compliant with CONEG Metals regulation.
EEC (Europe)	This product is not known to be a dangerous good internationally. R-Phrases: R45: May Cause Cancer S-Phrases: S45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S53 : Avoid exposure - obtain special instructions before use. Hazard Label: None Danger Symbol: None

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Prepared By	Juan Parker
Issuing Date	12-August-2010
Revision Date	23-March-2012
Revision Note	Not applicable

Disclaimer
The information provided on this MSDS is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS

SAFETY DATA SHEET

Issuing Date No data available **Revision Date** 22-Dec-2014 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Super Tech Automatic Transmission Fluid ATF+4**

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Transmission fluid

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Warren Distribution, Inc.
Supplier Address 727 S.13th Street
Omaha, NE, 68102
Supplier Phone Number 24 Hr Phone:800-424-9300
Fax:402-977-5857
Contact Phone: 402-341-9397
Supplier Email sds@wd-wpp.com
Emergency telephone number 800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS Label elements, including precautionary statements

Emergency Overview

Signal word	**None**

Hazard Statements
None

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Red **Physical State** Oil Liquid **Odor** Petroleum

Precautionary Statements - Prevention
Obtain special instructions before use

Precautionary Statements - Response
None

Precautionary Statements - Storage
None

Precautionary Statements - Disposal
None

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity
12.473% of the mixture consists of ingredient(s) of unknown toxicity

Other information
May cause eye irritation.
Prolonged or repeated contact may dry skin and cause irritation.

Interactions with Other Chemicals
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

.

Chemical Name	CAS No	Weight-%	Trade Secret
3rd Party %: 0.035, 3rd Party %: 0.66171	Proprietary	0.1 - 1	*
Third Party Formulation (TP # 1127032)	Proprietary	< 0.1	*

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin Contact Wash with soap and water. In the case of skin irritation or allergic reactions see a physician.

Inhalation Remove to fresh air. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention immediately if symptoms occur.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
No information available.

Hazardous Combustion Products
Carbon oxides.

Explosion Data
Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Avoid breathing vapors or mists.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental Precautions

Environmental Precautions Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

Incompatible Products None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
3rd Party %: 0.035, 3rd Party %: 0.66171	TWA: 5 mg/m^3, as oil mist, mineral STEL: TWA: 10 mg/m^3, as oil mist, mineral	TWA: 5 mg/m^3, as oil mist, mineral	
Third Party Formulation (TP # 1127032)	TWA: 10 mg/m^3	(vacated) TWA: 10 mg/m^3	TWA: 10 mg/m^3

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits Immediately Dangerous to Life or Health

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992)

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection If splashes are likely to occur:. Tight sealing safety goggles.

Skin and Body Protection Wear protective gloves and protective clothing.

Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Oil Liquid		
Appearance	Red	**Odor**	Petroleum
Color	No information available	**Odor Threshold**	No information available

Property	**Values**	**Remarks Method**
pH	7	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	195 C / 383 F	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	Negligible	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	35.22	None known
Explosive properties	No data available	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to avoid
Excessive heat.

Incompatible materials
None known based on information supplied.

Hazardous Decomposition Products
Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information .

Inhalation Specific test data for the substance or mixture is not available.

Eye Contact Specific test data for the substance or mixture is not available.

Skin Contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Third Party Formulation (TP # 1127032)	= 1165 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. The classification as a carcinogen does not apply as it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346.

Chemical Name	ACGIH	IARC	NTP	OSHA
3rd Party %: 0.035, 3rd Party %: 0.66171	A2	Group 1		X

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Chronic Toxicity No known effect based on information supplied.

Target Organ Effects Respiratory system. Eyes. Skin.

Aspiration Hazard No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document
Not applicable

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
3rd Party %: 0.035, 3rd Party %: 0.66171		96h LC50: > 5000 mg/L (Oncorhynchus mykiss)		48h EC50: > 1000 mg/L
Third Party Formulation (TP # 1127032)	72h EC50: = 1.5 mg/L (Scenedesmus subspicatus)	96h LC50: 3.47 - 4.14 mg/L (Pimephales promelas)	EC50 = 2.81 mg/L 5 min EC50 = 3.46 mg/L 15 min EC50 = 4.77 mg/L 30 min	48h EC50: 1.69 - 2.46 mg/L

Persistence and Degradability

No information available.

Bioaccumulation

No information available

Chemical Name	Log Pow
Third Party Formulation (TP # 1127032)	3.5

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Dispose of contents/containers in accordance with local regulations.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Third Party Formulation (TP # 1127032)		Included in waste streams: F039, K083, K104		

California Hazardous Waste Codes 331

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Third Party Formulation (TP # 1127032)	Toxic

14. TRANSPORT INFORMATION

DOT NOT REGULATED
Proper Shipping Name NON REGULATED
Hazard Class N/A

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA Not regulated
Proper Shipping Name NON REGULATED
Hazard Class N/A

IMDG/IMO Not regulated
Hazard Class N/A

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Third Party Formulation (TP # 1127032) -		< 0.1	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

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Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Third Party Formulation (TP # 1127032)		X			
Third Party Formulation (TP # 1127032)		X			

International Regulations

Component	Carcinogen Status	Exposure Limits
Third Party Formulation (TP # 1127032) (< 0.1)		Mexico: TWA 10 mg/m^3 Mexico: STEL 20 mg/m^3

Canada
WHMIS Hazard Class
Non-controlled

16. OTHER INFORMATION

NFPA	**Health Hazards**	1	**Flammability**	1	**Instability** 0	**Physical and Chemical Hazards**	-
HMIS	**Health Hazards**	1	**Flammability**	0	**Physical Hazard** 0	**Personal Protection**	X

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501
Revision Date 22-Dec-2014
Revision Note No information available

Disclaimer
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End of Safety Data Sheet

Material Safety Data Sheet
THE WORKS® DISINFECTANT TOILET BOWL CLEANER

Version: 1.2 | Revision Date: 01/01/2014 | Print Date: 05/15/2014

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: *THE WORKS® DISINFECTANT TOILET BOWL CLEANER*

Product Use Description: Home Care Product

Registration number: 5185-494-80306

Company: HomeCare Labs, Inc.
P.O. Box 491150
Lawrenceville, GA
30049-1002

Telephone: (800) 949-7946

Emergency telephone number: CHEMTREC: (24 hours) 800-424-9300, 703-527-3887
Poison Control Center (Medical) :: (877) 800-5553

For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Prepared by: Product Safety Department

01/01/2014

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Danger

Form: clear liquid Colour: blue Odour: pleasant

Hazard Summary :
Causes skin burns.
Corrosive - causes irreversible eye damage.
Harmful if swallowed.
Harmful if absorbed through skin.
May cause respiratory tract irritation.
Do not get in eyes, on skin, or on clothing.
Avoid breathing vapors.
Do not ingest.

OSHA Hazards :
THIS MATERIAL IS HAZARDOUS UNDER THE CRITERIA OF THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD 29CFR 1910.1200.

Potential Health Effects

Primary Routes of Entry : Skin contact
Inhalation
Ingestion

Eye contact

Inhalation	:	May cause irritation of respiratory tract.
Skin	:	Causes skin burns.
Eyes	:	Corrosive - causes irreversible eye damage.
Ingestion	:	Harmful if swallowed.
Chronic Exposure	:	None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Component / CAS-No.	Weight percent
hydrogen chloride 7647-01-0	20 %

SECTION 4. FIRST AID MEASURES

First aid procedures

Inhalation	:	Remove to fresh air. Give oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/ physician.
Skin contact	:	Remove contaminated clothing and shoes. Rinse immediately with plenty of water for at least 15 minutes. Call a POISON CENTER or doctor/ physician.
Eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a POISON CENTER or doctor/ physician.
Ingestion	:	Call a physician or poison control centre immediately. Do NOT induce vomiting. Have person sip a glass of water if able to swallow. Never give anything by mouth to an unconscious person.

Notes to physician

Treatment	:	Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES

Flammable properties

Flash point	:	Remarks: not applicable

Upper explosion limit : Remarks: no data available

Fire fighting

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective equipment and precautions for firefighters

Specific hazards during firefighting : Although not flammable, a latent fire or explosion hazard exists when product is in contact with certain metals or metallic surfaces, due to the formation of flammable hydrogen gas.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Thoroughly decontaminate fire fighting equipment including all fire fighting wearing apparel after the incident.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Methods for containment / Methods for cleaning up : Using appropriate protective clothing and safety equipment, contain spilled material.
Soak up with inert absorbent material.
Using clean dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place into clean dry containers for disposal.

Additional advice : Treat recovered material as described in the section "Disposal considerations".

SECTION 7. HANDLING AND STORAGE

Handling

Handling procedures : Avoid contact with skin, eyes and clothing.
Avoid breathing vapors.
Mix only with water.
Do not mix with other chemicals.
Wash thoroughly after handling.
Do not handle until all safety precautions have been read and understood.

Storage

Requirements for storage areas and containers : Store in original container.
Keep tightly closed in a dry, cool and well-ventilated place.
Keep out of reach of children.
Keep away from animals.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Components with workplace control parameters

Components / CAS-No.	Value / Basis / Update	Control parameters	Further information

hydrogen chloride 7647-01-0	C ACGIH 2007-01-01	2 ppm	
	C OSHA Z-1 2006-02-28	5 ppm 7 mg/m3	
	C OSHA P0 1989-01-19	5 ppm 7 mg/m3	
	C NIOSH REL 2005-09-01	5 ppm 7 mg/m3	

Engineering measures

Engineering measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Use with adequate ventilation.

Personal protective equipment

Eye protection : Goggles

Hand protection : Wear rubber gloves.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : Remove and wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form : clear liquid
Colour : blue

Odour : pleasant

Safety data

Flash point : Note: not applicable

Upper explosion limit : Note: no data available

pH : < 1

Freezing point	:	< -40 °F (-40 °C)
Boiling point/boiling range	:	> 214.9 °F (101.6 °C)
Vapour pressure	:	< 2.7 hPa
Specific Gravity	:	1.092 - 1.106 at 21 °C
Water solubility	:	Note: completely miscible
Partition coefficient: n-octanol/water	:	Note: no data available
Viscosity, kinematic	:	Note: no data available
Relative vapour density	:	Note: no data available
Evaporation rate	:	>1 Note: (Butyl acetate = 1)

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	:	Remarks: Poor ventilation. High temperatures. Contamination
Materials to avoid	:	Remarks: Although not flammable, a latent fire or explosion hazard exists when product is in contact with certain metals or metallic surfaces, due to the formation of flammable hydrogen gas. Do not mix with other chemicals. Do not mix with chlorine-type bleaches or other household chemicals.
Hazardous decomposition products	:	Note: Hydrogen, by reaction with metals Other hazardous decomposition products may be formed.
Hazardous reactions	:	Hazardous polymerisation does not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50: 900 mg/kg Species: rabbit Remarks: Information refers to the main component.
Acute inhalation toxicity	:	LC50: Exposure time: 1 h Species: rat Remarks: Information refers to the main component.
Skin irritation	:	Remarks: Causes skin burns.
Eye irritation	:	Remarks: Causes eye burns.

12. ECOLOGICAL INFORMATION

Further information on ecology

Additional ecological information : May be toxic to fish.
May be toxic to aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Further information : Dispose of waste material in compliance with all federal, state, and local regulations.

Contaminated packaging : Do not re-use empty containers.
Rinse thoroughly before discarding in trash.
Offer rinsed packaging material to local recycling facilities.

SECTION 14. TRANSPORT INFORMATION

DOT

UN number : 3264
Description of the goods : Corrosive liquid, acidic, inorganic, n.o.s.
: (Hydrochloric Acid Solution)
Class : 8
Packing group : II
ERG Code : 154

IATA

UN number : 3264
Description of the goods : Corrosive liquid, acidic, inorganic, n.o.s.
(Hydrochloric Acid Solution)
Class : 8
Packing group : II
Labels : 8
Environmentally hazardous : no

IMDG

UN number : 3264
Description of the goods : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(Hydrochloric Acid Solution)
Class : 8
Packing group : II
EmS Number 1 : F-A
EmS Number 2 : S-B

Marine pollutant : no
Environmentally hazardous : no

Not recommended for shipment by air
Limited Quantity exemption possible
ORM-D Consumer Commodity exemption possible

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

SARA 311/312 Hazards : Acute Health Hazard

EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO - KNOW

The components of this product are reported in the following inventories:

TSCA

Note: Listed

US.TSCA Not On TSCA Inventory

DSL This product contains one or several components that are not on the Canadian DSL nor NDSL lists.

AICS Not in compliance with the inventory

NZIoC Not in compliance with the inventory

ENCS Not in compliance with the inventory

KECI Not in compliance with the inventory

PICCS Not in compliance with the inventory

IECSC Not in compliance with the inventory

TSCA list Information US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
ZUS_T12B

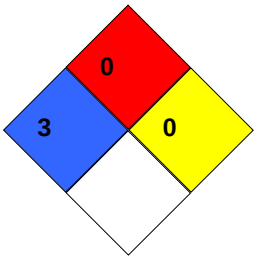
Not relevant

SECTION 16. OTHER INFORMATION

Further information

HMIS Classification : Health hazard: 3
Flammability: 0
Physical hazards: 0
PPI:Ask supervisor or safety specialist for handling instructions

NFPA Classification : Health hazard: 3
Fire Hazard: 0
Reactivity Hazard: 0



Other Emergency Phone Number

Latin America:	Brazil	+55 113 711 9144
	All other countries	+44 (0) 1235 239 670
Mexico:		+52 555 004 8763

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XEROX
MATERIAL SAFETY DATA SHEET

Manufacturer: Xerox Corporation, Office Group
P. O. Box 1000, Wilsonville, Oregon, 97070-1000

MSDS No.: OPB-6535
Date: January 15, 2001
Revision Date: January 17, 2013

SECTION 1- PRODUCT IDENTIFICATION

Product Names	Part Numbers
Black Toner Cartridge	016-1882-00, 016-1947-00
Cyan Toner Cartridge	016-1879-00, 016-1944-00
Magenta Toner Cartridge	016-1880-00, 016-1945-00
Yellow Toner Cartridge	016-1881-00, 016-1946-00
Black Developer Cartridge	116-1111-00
Cyan Developer Cartridge	116-1114-00
Magenta Developer Cartridge	116-1113-00
Yellow Developer Cartridge	116-1112-00

(Developer cartridges are replaced by Xerox Service Technicians only)

Product Use: XEROX Phaser ® 7700 color printers

SECTION 2 - INFORMATION ON INGREDIENTS

Ingredients (% by weight)	CAS number
Toner:	
Polyester resins (60-90%)	Trade secret
Carbon black or non-hazardous color pigments (2-35%)	Trade secret
Amorphous silicas (2-5%)	68611-44-9/67762-90-7
Developer:	
Frits, chemicals (>95%)	65997-18-4
Toner (<5%)	

SECTION 3 - HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE: Toner and developer powders are encased in a cartridge. Minimal exposure through inhalation or skin contact is expected when used as intended.

POTENTIAL HEALTH EFFECTS: Health effects from this product are expected to be negligible, when product is used as intended. See Section 11, Toxicology Information.
Immediate Effects:
Inhalation: Minimal irritation to respiratory tract, as for any non-toxic dust

Skin: Not expected to cause skin irritation
Eye: Not expected to cause eye irritation
Ingestion: Not an expected route of exposure
Chronic Effects: None known

SIGNS AND SYMPTOMS OF EXPOSURE: Minor irritation to respiratory tract.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

SECTION 4 - FIRST AID MEASURES

INHALATION: Remove person to fresh air. Seek medical attention if symptoms occur.
EYES: If particles get into eye, flush thoroughly with water. Seek medical attention if symptoms occur.
SKIN: Wash thoroughly with soap and water. Seek medical attention if symptoms occur.
INGESTION: Dilute stomach contents with several glasses of water. Seek medical attention if symptoms occur.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: Not applicable
FIRE & EXPLOSION HAZARDS: Toner is a combustible powder. Like most organic powders, it can form explosive mixtures when dispersed in air.
EXTINGUISHING MEDIA: Water, dry chemical, carbon dioxide, or foam.
FIRE FIGHTING INSTRUCTIONS: Avoid inhalation of smoke. As for any fire, wear protective clothing and self-contained breathing apparatus.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK: Sweep up or vacuum spilled materials and carefully transfer into sealable waste container. Sweep slowly to minimize generation of dust during clean up. If a vacuum is used, the motor must be rated as dust tight. A conductive hose bonded to the machine should be used to reduce static buildup. Clean up residue if necessary with soap and cold water. Wash or dry clean garments after removing loose toner.

SECTION 7 - HANDLING AND STORAGE

HANDLING: No special precautions, when used as intended.
STORAGE: Avoid high temperatures.

SECTION 8 - EXPOSURE CONTROL - PERSONAL PROTECTION

No special personal protection indicated, when used as intended in Xerox Phaser ® color printers.

THRESHOLD LIMIT VALUE (TLV): 10 mg/m^3 (total dust)
PERMISSIBLE EXPOSURE LIMIT (PEL): 15 mg/m^3 (total dust); 5 mg/m^3 (respirable dust)
SHORT TERM EXPOSURE LIMIT (STEL): None established
CEILING LIMIT: None established
XEROX EXPOSURE LIMIT (XEL): 2.5 mg/m^3 (total dust); 0.4 mg/m^3 (respirable dust)

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/ODOR: Black, blue, red, or yellow powders/faint odor
BOILING POINT: Not applicable
SOLUBILITY IN WATER: Insoluble
EVAPORATION RATE: Not applicable
VAPOR DENSITY (Air = 1): Not applicable
VOLATILE: Not applicable
SOFTENING RANGE: Not available
MELTING POINT: Not available
SPECIFIC GRAVITY (Water = 1): Approximately 1 (toner), 5 (developer)
VAPOR PRESSURE (mm Hg): Not applicable
pH: Not applicable

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable.
INCOMPATIBILITY WITH OTHER MATERIALS: Strong oxidizers
HAZARDOUS POLYMERIZATION: Will not occur
HAZARDOUS DECOMPOSITION PRODUCTS: During a fire, toxic gases may be generated by thermal decomposition or combustion.

SECTION 11 - TOXICOLOGICAL INFORMATION

This material has been evaluated by Xerox Corporation. The toxicity data noted below is based on test results of similar toners.

Oral LD_{50}: >5 g/kg (rats), practically non-toxic
Dermal LD_{50}: > 5 g/kg (rabbits), practically non-toxic
Inhalation LC_{50}: > 5 mg/l (rats; 4 hour exposure), practically non-toxic
Inhalation LC_{50}: > 20 mg/l (rats; calculated for 1 hour exposure), non-poisonous per DOT
Eye Irritation: Not an irritant
Skin sensitization: Not a sensitizer
Skin irritation: Not an irritant
Human Patch: Non-irritating, non-sensitizing
Mutagenicity: No mutagenicity detected in Ames assay
Carcinogens: None present

Additional Information: The results obtained from a Xerox sponsored Chronic Toner Inhalation Study demonstrated no lung changes in rats for the lowest (1 mg/m^3) exposure level (ie., the level most relevant to potential human exposure). A very slight degree of fibrosis was noted in 25% of the animals at the middle (4 mg/m^3) exposure level, while a slight degree of fibrosis was noted in all the animals at the highest (16 mg/m^3) exposure level. The findings are attributed to “lung overloading”, a generic response to excessive amounts of any dust retained in the lungs for a prolonged period. This study was conducted using a special test toner to comply with EPA testing protocol. The test toner was ten times more respirable than commercially available Xerox toner and would not be functionally suitable for Xerox equipment.

SECTION 12 - ECOLOGICAL INFORMATION

Aquatic LC_{50}: > 1000 mg/l (fathead minnows; rainbow trout) non-toxic

SECTION 13 - DISPOSAL CONSIDERATIONS

These materials are not RCRA hazardous wastes as specified in 40 CFR 261. State and local waste disposal requirements, however, may be more restrictive. Dispose in accordance with all federal, state, and local regulations. Incinerate only in a closed container.

SECTION 14 - TRANSPORTATION INFORMATION

DOT: Not regulated.

SECTION 15 - REGULATORY INFORMATION

TSCA: All components of these toners have been manufactured in compliance with TSCA.
RCRA: TCLP metals below hazardous waste levels set by EPA.
CANADIAN WHMIS: These toners are not regulated as controlled products under the Workplace Hazardous Material Information System (WHMIS).

SECTION 16 - OTHER INFORMATION

NFPA 704: Health-0, Fire-1, Reactivity-0 (All colors)

Xerox Corporation
Office Printing Business
Environmental, Health & Safety
P.O. Box 1000
Mail Stop 7063-512
Wilsonville, Oregon 97070
Safety Information: 800-828-6571
Health Emergency: 585-422-2177
Transportation Emergency (Chemtrec): 800-424-9300

Valucraft Windshield Wash -20 ºF

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 06/26/2017

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name : Valucraft Windshield Wash -20 ºF

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Windshield washer fluid

1.3. Details of the supplier of the safety data sheet

Old World Industries, LLC
4065 Commercial Ave.
Northbrook, IL 60062 - USA
T (847) 559-2000
www.oldworldind.com

1.4. Emergency telephone number

Emergency number : (800) 424-9300; (703) 527 3887 (International)
Chemtrec

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable liquids, Category 3	H226	Flammable liquid and vapor
Acute toxicity (oral), Category 4	H302	Harmful if swallowed
Acute toxicity (dermal), Category 3	H311	Toxic in contact with skin
Acute toxicity (inhalation:dust,mist) Category 4	H332	Harmful if inhaled
Specific target organ toxicity — single exposure, Category 1	H370	Causes damage to organs (May cause blindness if swallowed)

Full text of H statements : see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS02 GHS06 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H226 - Flammable liquid and vapor
H302+H332 - Harmful if swallowed or if inhaled
H311 - Toxic in contact with skin
H370 - Causes damage to organs (May cause blindness if swallowed)

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
P233 - Keep container tightly closed
P240 - Ground/Bond container and receiving equipment
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P260 - Do not breathe mist, spray, vapors
P264 - Wash affected areas thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area

P280 - Wear personal protective equipment as required
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P307+P311 - If exposed: Call a poison center/doctor
P301+P310 - If swallowed: Immediately call doctor/physician or poison center. Rinse Mouth
P312 - Call doctor/physician or poison center if you feel unwell
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse
P370+P378 - In case of fire: Use Carbon dioxide, Dry powder, foam, sand to extinguish
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up
P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with local/regional/national/international regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% by wt	GHS-US classification
water	(CAS-No.) 7732-18-5	>= 67	Not classified
methanol	(CAS-No.) 67-56-1	<= 33	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370

Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek immediate medical advice. Allow the victim to rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse immediately with plenty of water (for at least 15 minutes). If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately with plenty of water for 15 minutes, lifting lower and upper lids. Take victim to an ophthalmologist if irritation persists.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Rinse mouth. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : High concentrations may cause central nervous system characterized by severe headaches, dizziness, nausea and confusion. May cause irritation of the nose and throat.

Symptoms/effects after skin contact : Prolonged exposure to skin may cause skin irritation experienced as burning, dryness, cracking and redness.

Symptoms/effects after eye contact : May cause severe irritation.

Symptoms/effects after ingestion : May cause nausea, abdominal pain, headache, shortness of breath, visual impairment and blindness. Severe poisoning can lead to coma and death.

Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin, Dry skin, Skin rash/inflammation, Headache, Feeling of weakness, Disturbed tactile sensibility, Visual disturbances, Sleeplessness, Gastrointestinal complaints, Cardiac and blood circulation effects.

4.3. Indication of any immediate medical attention and special treatment needed

Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. This product contains/consists of methanol which can cause intoxication and depression of the central nervous system.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media : ABC powder. Foam. Dry powder. Carbon dioxide. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream. May spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapor. Vapors are heavier than air and may travel along the ground or may be moved by ventilation.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Special protective equipment for fire fighters : Wear positive pressure self-contained breathing apparatus (SCBA). Protective fire fighting clothing (includes fire-fighting helmet, coat, pants, boots and gloves).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Do not breathe mist, spray, vapors. In case of inadequate ventilation wear respiratory protection. Remove ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel. Keep upwind. Mark the danger area.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Dam up the liquid spill. Plug the leak, cut off the supply. Try to reduce evaporation. Take account of toxic/corrosive precipitation water. Dilute combustible/toxic gases/vapors with water spray.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : In use, may form flammable vapor-air mixture.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Hygiene measures : Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Use explosion-proof ventilating, lighting, electrical equipment. Ground/bond container and receiving equipment. Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources, hot surfaces, open flames, sparks. Keep container closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies. Do not cut, drill, weld, use a blowtorch on, etc. containers even when empty.

Incompatible products : Keep away from strong acids, strong bases and oxidizing agents.

Incompatible materials : Sources of ignition.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

methanol (67-56-1)		
ACGIH	ACGIH TWA (ppm)	200 ppm (Skin)
ACGIH	ACGIH STEL (ppm)	250 ppm (Skin)
ACGIH	Remark (ACGIH)	Headache; eye dam; dizziness; nausea
OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³ (Skin)
OSHA	OSHA PEL (TWA) (ppm)	200 ppm (Skin)

8.2. Appropriate engineering controls

No additional information available

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. Gloves. Safety glasses.

Hand protection:

Wear protective gloves

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of inadequate ventilation wear
respiratory protection. Wear appropriate mask

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : Blue

Odor : alcohol

Odor threshold : No data available

Relative evaporation rate (butylacetate=1) : Greater than n-butyl acetate

Freezing point : -28.9 °C (-20 ºF)

Boiling point : 81.7 °C (179 ºF)

Flash point : 33.3 °C (92 ºF)

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapor pressure	:	43 mm Hg @ 20 ºC
Relative vapor density at 20 °C	:	Heavier than air
Specific Gravity	:	0.96 @ 20 ºC
Solubility	:	Water: Complete
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosive limits	:	6 - 36 vol %

9.2. Other information

VOC content : < 33 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

Keep away from strong acids, strong bases and oxidizing agents.

10.6. Hazardous decomposition products

Fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Dermal: Toxic in contact with skin. Inhalation:dust,mist: Harmful if inhaled.

Valucraft Windshield Wash -20 ºF	
ATE US (oral)	303.03 mg/kg bodyweight
ATE US (dermal)	909.09 mg/kg bodyweight
ATE US (dust,mist)	1.52 mg/l/4h

methanol (67-56-1)	
LD50 oral rat	> 5,000.00 mg/kg (Rat; BASF test; Literature study; 1187-2769 mg/kg bodyweight; Rat; Weight of evidence)
LD50 dermal rabbit	15,800.00 mg/kg (Rabbit; Literature study)
LC50 inhalation rat (mg/l)	85.00 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	64,000.00 ppm/4h (Rat; Literature study)
ATE US (oral)	100.00 mg/kg bodyweight
ATE US (dermal)	300.00 mg/kg bodyweight
ATE US (gases)	700.00 ppmv/4h
ATE US (vapors)	3.00 mg/l/4h
ATE US (dust,mist)	0.50 mg/l/4h

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Causes damage to organs (May cause blindness if swallowed) .
Specific target organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified
Symptoms/effects after inhalation	:	High concentrations may cause central nervous system characterized by severe headaches, dizziness, nausea and confusion. May cause irritation of the nose and throat.
Symptoms/effects after skin contact	:	Prolonged exposure to skin may cause skin irritation experienced as burning, dryness, cracking and redness.
Symptoms/effects after eye contact	:	May cause severe irritation.
Symptoms/effects after ingestion	:	May cause nausea, abdominal pain, headache, shortness of breath, visual impairment and blindness. Severe poisoning can lead to coma and death.
Chronic symptoms	:	ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin, Dry skin, Skin rash/inflammation, Headache, Feeling of weakness, Disturbed tactile sensibility, Visual disturbances, Sleeplessness, Gastrointestinal complaints, Cardiac and blood circulation effects.

SECTION 12: Ecological information

12.1. Toxicity

methanol (67-56-1)	
LC50 fish 1	15,400.00 mg/l (LC50; EPA 660/3 - 75/009; 96 h; Lepomis macrochirus; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 1	> 10,000.00 mg/l (EC50; DIN 38412-11; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
LC50 fish 2	10,800.00 mg/l (LC50; 96 h; Salmo gairdneri)

12.2. Persistence and degradability

methanol (67-56-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil.
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O_2/g substance
Chemical oxygen demand (COD)	1.42 g O_2/g substance
ThOD	1.50 g O_2/g substance
BOD (% of ThOD)	0.80 (Literature study)

12.3. Bioaccumulative potential

methanol (67-56-1)	
BCF fish 1	< 10.00 (BCF; 72 h; Leuciscus idus)
Log Pow	-0.77 (Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

methanol (67-56-1)	
Surface tension	0.02 N/m (20 °C)
Log Koc	Koc,PCKOCWIN v1.66; 1; Calculated value

12.5. Other adverse effects

Effect on ozone layer	:	No known effect on the ozone layer
Effect on global warming	:	No known effects from this product.
Other information	:	Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	:	Dispose of contents/container to appropriate waste disposal facility, in accordance with local/regional/national/international regulations.
Ecology - waste materials	:	Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description	:	NA1993 Combustible liquid, n.o.s., 3, III
UN-No.(DOT)	:	NA1993
Proper Shipping Name (DOT)	:	Combustible liquid, n.o.s.
Class (DOT)	:	3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT)	:	III - Minor Danger
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	203
DOT Packaging Bulk (49 CFR 173.xxx)	:	241
DOT Symbols	:	D - Proper shipping name for domestic use only, or to and from Canada,G - Identifies PSN requiring a technical name
DOT Packaging Exceptions (49 CFR 173.xxx)	:	150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	220 L
DOT Vessel Stowage Location	:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.
Emergency Response Guide (ERG) Number	:	128
Other information	:	In inner packaging no more than 5.0 L: Proper Shipping Name: Limited Quantity of Class III Per 49 CFR Part 173.10 (PG III, inner packaging no more than 5.0L).

Transportation of Dangerous Goods

Refer to current TDG Canada for further Canadian regulations

Transport by sea

UN-No. (IMDG)	:	1992
Transport document description (IMDG)	:	UN 1992 Flammable Liquid, Toxic, n.o.s. (methanol) , 3, III
Class (IMDG)	:	3 - Flammable liquids
Packing group (IMDG)	:	III - substances presenting low danger
Limited quantities (IMDG)	:	5 L
Limited quantities (IMDG)	:	In Non-Bulk quantities with inner packaging no more than 5.0L: Proper Shipping Name: Dangerous Goods in Limited Class 3 (Windshield Wash Containing Methanol) Packages or pallets must be marked "Dangerous Goods in Limited Quantities of Class 3" Outer Package cannot weigh more than 30 kg.

Air transport

UN-No. (IATA)	:	1992
Transport document description (IATA)	:	UN 1992 Flammable Liquid, Toxic, n.o.s. (methanol), 3 (6.1), III
Class (IATA)	:	3 - Flammable Liquids
Packing group (IATA)	:	III - Minor Danger
Subsidiary risks (IATA)	:	6.1 - Toxic substances
Instruction "passenger" - Limited quantities (ICAO)	:	Y343 (Max qty. per package 2.0L) Special Provision A3

SECTION 15: Regulatory information

15.1. US Federal regulations

Valucraft Windshield Wash -20 ºF	
EPA TSCA Regulatory Flag	Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed
SARA Section 302 Threshold Planning Quantity (TPQ)	None
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Fire hazard Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	33 % (Methanol CAS # 67-56-1)

methanol (67-56-1)	
CERCLA RQ	5000 lb(s) (2270 kg)

water (7732-18-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Valucraft Windshield Wash -20 ºF	
WHMIS Classification	This SDS has been prepared according to the criteria of the Hazardous Products Regulations (HPR) (WHMIS 2015) and the SDS contains all of the information required by the HPR. Applicable GHS information is listed in section 2.2 of this SDS.

EU-Regulations

No additional information available

National regulations

Valucraft Windshield Wash -20 ºF
DSL (Canada): The intentional ingredients of this product are listed ECL (South Korea): The intentional ingredients of this product are listed. EINECS (Europe): The intentional ingredients of this product are listed ENCS (Japan): The intentional ingredients of this product are listed

15.3. US State regulations

California Proposition 65 - This product contains, or may contain, substance(s) known to the state of California to cause cancer, developmental toxicity and/or reproductive toxicity

methanol (67-56-1)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	Yes	No	No	

methanol (67-56-1)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Revision date : 06/26/2017

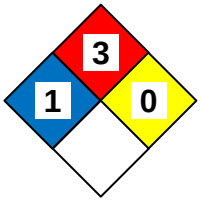
Full text of H-statements:

H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H331	Toxic if inhaled
H332	Harmful if inhaled
H370	Causes damage to organs

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 ºF (22 ºC) and boiling points above 100 ºF (37 ºC). as well as liquids with flash points between 73 ºF (22 ºC) and 100 ºF (37 ºC). (Classes IB & IC)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : A - Safety glasses

SDS GHS US (GHS HazCom 2012) OWI

MATERIAL SAFETY DATA SHEET

WL30600
15 00

DATE OF PREPARATION
Apr 13, 2015

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
WL30600
PRODUCT NAME
WHITE LIGHTNING® Window & Door Weather Seal Siliconized Acrylic Latex Caulk, White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS CO.
Consumer Group - Industrial
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 241-5295 www.wlcaulk.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
1	**64742-88-7**	**Med. Aliphatic Hydrocarbon Solvent**		
		ACGIH TLV	100 PPM	1.27 mm
		OSHA PEL	100 PPM	
56	**1317-65-3**	**Calcium Carbonate**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
0.6	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

HMIS Codes

Health	2*
Flammability	0
Reactivity	0

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam
UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.
SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY
Not Applicable
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).
Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.
VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.
RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.
PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section 2.
EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	13.61 lb/gal	1630 g/l
SPECIFIC GRAVITY	1.64	
BOILING POINT	212 - 395 °F	100 - 201 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	27%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	> 2.0, < 11.5	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.35 lb/gal	42 g/l	Less Water and Federally Exempt Solvents
0.27 lb/gal	32 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name			
64742-88-7	**Med. Aliphatic Hydrocarbon Solvent**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
1317-65-3	**Calcium Carbonate**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
13463-67-7	**Titanium Dioxide**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.
IATA/ICAO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.
CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.