

Safety Data Sheet



Cure & Seal WB 30

Version 1

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name (as labeled):	Cure & Seal WB 30
Synonyms:	N/A
CAS No:	Mixture
1.2 Product Use:	30% solids water-based cure & seal
1.3 Company Name:	SpecChem
Company Address:	1511 Baltimore Ave; Suite 600
Company Address Cont:	Kansas City, MO 64108
Business Phone:	(816) 968-5600
Website:	www.specchemllc.com
1.4 Emergency Telephone Number:	Chemtrec: (800) 424-9300
Date of Current Revision:	January 10, 2015
Date of Last Revision:	April 19, 2012

SECTION 2 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a milky white liquid with a characteristic hydrocarbon odor.

Health Hazards: May cause eye irritation.

Flammability Hazards: This product is not a flammable liquid with a flash point of >200°F (93°C).

Reactivity Hazards: None.

Environmental Hazards: The environmental effects of this product have not been investigated, however release may cause long term adverse environmental effects.

US DOT Symbols: Not Regulated

EU and GHS Symbols: Not Applicable

Signal Word: Danger

2.1 EU Labeling and Classification:

This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives

67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.

EU HAZARD CLASSIFICATION OF INGREDIENTS PER DIRECTIVE 1272/2008/EC:

Index Number:

212-22-7 is not listed in Annex I

Substances not listed either individually or in group entries must be self classified.

Components Contributing to Classification: Propylene glycol ether

2.2 Label Elements:

GHS Hazard Classifications:

Eye Irritation Category 2B

Hazard Statements:

H320 Causes eye irritation

Precautionary Statements:

P264 Wash thoroughly after handling

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Response Statements:

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.

P337+P313 If eye irritation persists: Get medical advice/ attention.

Storage Statements:

None applicable

Disposal Statements:

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Health Hazards or Risks From Exposure:

Symptoms of Overexposure by Route of Exposure:

The most significant routes of overexposure for this product are by contact with skin or eyes. The symptoms of overexposure are described in the following paragraphs.

Acute:

Inhalation: No serious effects anticipated under normal conditions.

Skin Contact: May cause mild irritation to skin.

Eye Contact: Contact with the eyes may be irritating.

Ingestion: May cause gastrointestinal irritation, nausea, and vomiting.

Chronic: Repeated exposure may cause skin dryness or cracking.

Target Organs:

Acute: Eyes, Skin

Chronic: Skin

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	WT%	CAS No.	EINECS No.	Hazard Classification
Propylene glycol ether	< 3%	770-35-4	212-22-7	Eye Irrit. 2
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).				

Note: All WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard JIS Z 7250:2000

SECTION 4 – FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye Contact:

If product enters the eyes, flush with plenty of water or eye wash solution for several minutes. Remove contacts if present and easy to do. Seek medical attention if irritation persists.

Skin Contact:

Wash skin thoroughly with soap and water after handling. Seek medical attention if irritation develops and persists.

Inhalation:

If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

Ingestion:

If product is swallowed, call physician or poison center if you feel unwell. If professional advice is not available, do not induce vomiting.

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Never induce vomiting or give dilutents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

**Medical Conditions
Generally Aggravated
By Exposure:**

Pre-existing skin, respiratory system or eye problems may be aggravated by prolonged contact.

4.2 Symptoms and Effects Both Acute and Delayed: Exposure to the eyes may cause irritation.

4.3 Recommendations to Physicians: Treat symptoms and eliminate overexposure.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Fire Extinguishing Materials:

Use the following fire extinguishing materials:

Water Spray:	Yes
Foam:	Yes
Halon:	Yes
Carbon Dioxide:	Yes
Dry Chemical:	Yes
Other:	Any "C" Class

5.2 Unusual Fire and Explosion Hazards:

Irritating and toxic fumes may be produced at high temperatures. Use of water may result if the formation of a toxic aqueous solution. Do not allow run-off from fire fighting to enter drains or water courses.

Explosive Sensitivity to Mechanical Impact:	No
Explosive Sensitivity to Static Discharge:	No

5.3 Special Fire-Fighting Procedures:

- Incipient fire responders should wear eye protection.
- Structural firefighters must wear Self-Contained Breathing Apparatus (SCBA) and full protective equipment.
- Isolate materials not yet involved in the fire and protect personnel.
- Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray.
- If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.

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NFPA RATING SYSTEM		HMIS RATING SYSTEM	
HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
		HEALTH HAZARD (BLUE)	1
		FLAMMABILITY HAZARD (RED)	0
		PHYSICAL HAZARD (YELLOW)	0
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	See Sect 8		See Sect 8
For Routine Industrial Use and Handling Applications			
Hazard Scale: 0 = Minimum 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic Hazard			

SECTION 6 – ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Use cautious judgment when cleaning up spill. Wear suitable protective clothing, gloves, and eye/face protection.

6.2 Environmental Precautions:

Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.

6.3 Spill and Leak Response:

Small Spills:

- Collect material via broom or mop. Place in tightly sealed containers for proper disposal.
- Approach spill areas with caution.
- If liquid was introduced, create a dike or trench to contain material.
- Soak up with absorbent material such as clay, sand or other suitable non-reactive material.

Large Spills:

- Place in leak-proof containers. Seal tightly for proper disposal.
- Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

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To prevent eye contact under the foreseeable conditions of use, wear appropriate safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling. Do not handle or store near heat, sparks, or flame.

7.2 Storage and Handling Practices:

Keep away from incompatible materials. Keep container closed when not in use and store in well ventilated area.

7.3 Specific Uses:

25% solids water-based cure & seal.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Parameters:

Ingredients	CAS No.	OSHA PEL	NIOSH PEL
Propylene glycol ether	770-35-4	Not listed	Not listed

8.2 Exposure Controls:

Ventilation and Engineering Controls:

Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132), or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory Protection:

Not required for properly ventilated areas. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Eye Protection:

Safety glasses or goggles are required. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

Hand Protection:

Chemical resistant gloves are required to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374,

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Body Protection:

the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards. Use body protect appropriate to task being performed. If necessary, refer to appropriate Standards of Canada, or appropriate standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

Appearance (Physical State and Color): Milky white colored liquid

Odor: Characteristic hydrocarbon

Odor Threshold: No data available

pH: No data available

Melting/Freezing Point: No data available

Boiling Point: 413°F (212°C)

Flash Point: >200°F (93°C)

Evaporation Rate: No data available

Flammability (Solid; Gas): Not applicable

Upper/Lower Flammability or Explosion Limits: Not data available

Vapor Pressure (mm Hg @ 20°C (68° F): < 17mm

Vapor Density: Heavier than air

Relative Density: No data available

Specific Gravity: 1.02

Solubility in Water: Fully miscible

Weight per Gallon: 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

9.2 Other Information: No data available

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity:

This product is not reactive.

10.2 Stability:

Stable under conditions of normal storage and use.

10.3 Possibility of Hazardous Reactions:

Will not occur.

10.4 Conditions to Avoid:

Avoid excessive temperatures.

10.5 Incompatible Substances:

Strong oxidizing agents.

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10.6 Hazardous Decomposition Products: Carbon monoxide and dioxide smoke.

SECTION 11 – TOXICOLOGY INFORMATION

11.1 Information on Toxicological Effects:

Toxicity Data:

Propylene glycol ether	770-35-4	LD50 Oral – Rat	2,830 mg/kg
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Suspected Cancer Agent:

Ingredients within this product are found on one or more of the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are considered to be cancer-causing agents by these agencies.

Irritancy:

Skin and respiratory irritant.

Sensitization to the Product:

This product is not expected to cause skin sensitization.

Germ Cell Mutagenicity:

This product contains ingredients that are suspected to be a germ cell mutagenic.

Reproductive Toxicity:

This product is not expected to be a human reproductive toxicant.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity:

Propylene glycol ether	770-35-4	LC50 – Fathead Minnow	280 mg/l – 96h
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12.2 Persistence and Degradability:

No specific data available on this product.

12.3 Bioaccumulative Potential:

No specific data available on this product.

12.4 Mobility in Soil:

No specific data available on this product.

12.5 Results of PBT and vPvB Assessment:

No specific data available on this product.

12.6 Other Adverse Effects:

No data available

12.7 Water Endangerment Class:

At present, there are no ecotoxicological assessments for this product.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:

Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Australia, EU Member States and Japan.

13.2 EU Waste Code:

Not determined

SECTION 14 - TRANSPORTATION INFORMATION

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14.1 U.S. Department of Transportation (DOT) Shipping Regulations:

This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.

UN Identification Number: Not applicable

Proper Shipping Name: Not regulated

Hazard Class Number and Description: Not applicable

Packing Group: Not applicable

DOT Label(s) Required: Not applicable

North American Emergency Response

Guidebook Number: Not applicable

14.2 Environmental Hazards:

Marine Pollutant: The components of this product are designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

14.3 Special Precaution for User: None

14.4 International Air Transport Association

Shipping Information (IATA): Not regulated.

14.5 International Maritime Organization

Shipping Information (IMO):

UN Identification Number: Not applicable

Proper Shipping Name: Not regulated

Hazard Class Number and Description: Not applicable

Packing Group: Not applicable

EMS-No: Not applicable

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations Specific for the Substance or Mixture:

United States Regulations:

U.S. SARA Reporting Requirements:

The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA 311/312:

Acute Health: Yes; Chronic Health: No; Fire: No; Reactivity: No

U.S. CERCLA Reportable Quantity:

None

U.S. TSCA Inventory Status:

The components of this product are listed on the TSCA Inventory or are exempted from listing.

Other U.S. Federal Regulations:

None known

California Safe Drinking Water and Toxic Enforcement Act (Proposition 66):

This product does not contain ingredients on the Proposition 65 Lists.

15.2 Canadian Regulations:

Canadian DSL/NDSL Inventory Status:

Components are DSL Listed, NDSL Listed and/or are exempt from listing

Other Canadian Regulations:

Not applicable

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists:

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

Canadian WHMIS Classification and Symbols:

This product is Class B2, Flammable Liquid, and D2B, Materials causing other toxic effects, per WHMIS Controlled Product Regulations.



15.3 European Economic Community Information:

This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives. See Section 2 for Details.

Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

15.4 Australian Information for Product:

Components of this product are listed on the International Chemical Inventory list.

15.5 Japanese Information for Product:

Japanese Minister of International Trade and Industry (MITI) Status: The components of this product are not listed as Class I specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

15.6 International Chemical Inventories:

Listing of the components on individual country Chemical Inventories is as follows:

Australian Inventory of Chemical Substances (AICS): Listed

Korean Existing Chemicals List (ECL): Listed

Japanese Existing National Inventory of Chemical Substances (ENCS): Listed

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed

U.S. TSCA: Listed

SECTION 16 – OTHER INFORMATION

Prepared By: Chris Eigbrett (MSDS to GHS Compliance)

Date of Printing: January 10, 2014

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. SpecChem assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, SpecChem assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

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END OF SDS SHEET



SAFETY DATA SHEET

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product:	DUOGARD®	Part Number: 3915000
Manufacturer:	W. R. MEADOWS, INC.	Address: 300 Industrial Drive Hampshire, Illinois 60140
Telephone:	(847) 214-2100	In case of emergency, dial (800) 424-9300 (CHEMTREC)
Revision Date:	5/17/2019	
Product Use:	Concrete Form Release Agent	

SECTION 2: HAZARDS IDENTIFICATION/EXPOSURE LIMITS

HMIS	HAZARD STATEMENTS
Health 1	WARNING!
Flammability 0	Causes skin irritation.
Reactivity 0	PRECAUTIONARY STATEMENTS
Personal Protection 1	Avoid direct contact.



SECTION 3: HAZARDS COMPONENTS

Chemical Name:	CAS Number	% by Weight	SARA 313	Vapor Pressure (mm Hg@20°C)	LEL (@25°C)
1. None					

Under the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1966 (SARA) and 40 CFR Part 372, chemicals listed on the 313 List (40 CFR Part 373.65) are identified under the heading "SARA 313."

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush eyes with water for fifteen (15) minutes. If symptoms persist, seek medical attention.

SKIN CONTACT: Wash affected areas with mild soap and water. Remove contaminated shoes/clothing. If symptoms persist, seek medical attention.

INHALATION: Not expected to be an exposure route as supplied. If respiratory symptoms develop, seek medical attention.

INGESTION: Dilute with liquid unless the victim is unconscious or very drowsy. Do not induce vomiting. If vomiting spontaneously occurs, prevent lung aspiration. Seek immediate medical attention.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND CHRONIC: See Section Eleven for Symptoms/Effects.

SECTION 5: FIRE AND EXPLOSIVES HAZARDS

FLASHPOINT: 329 °F (Minimum)

EXTINGUISHING MEDIA: Water fog, foam, dry chemical, carbon dioxide.

CHEMICAL/COMBUSTION HAZARDS: Carbon monoxide, carbon dioxide, and incomplete combustion products.

PRECAUTIONS/PERSONAL PROTECTIVE EQUIPMENT: Avoid smoke inhalation. Use appropriate personal protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Avoid direct contact. Dike and contain spilled material. Remove source of spill if safe to do so. Apply absorbent and place clean-up material in sealed/marked containers for proper disposal. Clean-up materials will be classified as non-hazardous waste.

SECTION 7: HANDLING AND STORAGE

SAFE HANDLING PROCEDURES: Avoid direct contact.

SAFE STORAGE: Keep containers closed when not in use.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name:	OSHA				ACGIH			
	PEL	PEL/CEILING	PEL/STEL	SKIN	TWA	TLV/CEILING	TLV/STEL	SKIN
1. None								

ENGINEERING CONTROLS: None required under normal use conditions.

PERSONAL PROTECTIVE EQUIPMENT: Safety glasses, chemical-resistant gloves.

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Date of Preparation: 5/17/19	Page 2 of 2	3915000
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES		
BOILING POINT: N/E EVAPORATION RATE: <1 (Ether=1) WEIGHT PER GALLON: 7.25 ODOR: Mild Organic FLASH POINT: See Section 5 VAPOR PRESSURE: N/D PARTITION COEFFICIENT: N/D VISCOSITY: N/D	VAPOR DENSITY: N/A pH LEVEL: N/A PRODUCT APPEARANCE: Amber Liquid ODOR THRESHOLD: N/D FLAMMABILITY: N/D RELATIVE DENSITY: N/D AUTOIGNITION TEMPERATURE: N/D	% VOLATILE BY VOLUME: N/E % VOLATILE BY WEIGHT: 100 VOC CONTENT: 82 g/L MELTING/FREEZING POINT: N/D UEL/LEL: N/D SOLUBILITY: N/D DECOMPOSITION TEMPERATURE: N/D <i>N/D: Not Determined</i>
SECTION 10: STABILITY/REACTIVITY		
STABILITY: Stable. HAZARDOUS POLYMERIZATION: Will not occur. CONDITIONS AND MATERIALS TO AVOID: Strong oxidizing agents. HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, and incomplete combustion products.		
SECTION 11: TOXICOLOGICAL INFORMATION		
EYE CONTACT: Direct contact may cause mild irritation. SKIN CONTACT: Direct contact may cause slight skin irritation. Prolonged/repeated contact may result in irritation. INHALATION: Not anticipated to be an exposure route. INGESTION: Not anticipated to be an exposure route. SIGNS AND SYMPTOMS: Symptoms of eye irritation include tearing, reddening, and swelling. Symptoms of skin irritation include redness and swelling. Gastrointestinal irritation symptoms include nausea, vomiting, and abdominal discomfort. Symptoms of respiratory irritation include runny nose, sore throat, coughing, chest discomfort, shortness of breath, and reduced lung function. AGGRAVATED MEDICAL CONDITIONS: Pre-existing skin, eye, and respiratory disorders may be aggravated by exposure to this product. OTHER HEALTH EFFECTS: None recognized.		
SECTION 12: ECOLOGICAL INFORMATION		
ECOTOXICITY: N/E DEGRADABILITY: N/E BIOACCUMULATIVE POTENTIAL: N/E SOIL MOBILITY: N/E OTHER ADVERSE EFFECTS: None Recognized		
SECTION 13: WASTE DISPOSAL INFORMATION		
WASTE DISPOSAL INFORMATION: Waste oil recycler or fuel recycling.		
SECTION 14: TRANSPORTATION INFORMATION		
HAZARDOUS/NON-HAZARDOUS MATERIAL: Not regulated by DOT. UN NUMBER: None. HAZARD CLASS: N/A PACKING GROUP: N/A UN PROPER SHIPPING NAME: N/A ENVIRONMENTAL HAZARDS: None recognized. BULK TRANSPORTATION INFORMATION: None. SPECIAL PRECAUTIONS: None recognized.		
SECTION 15: REGULATORY INFORMATION		
OTHER REGULATORY CONSIDERATIONS: None recognized.		
SECTION 16: OTHER INFORMATION		
PREPARATION DATE: 5/17/2019 PREPARED BY: Dave Carey		

The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for injury from the use of this product described herein.

HIT-HY 150 MAX

Safety information for 2-Component-products

Date of issue: 23/11/2015

Revision date: 23/11/2015

Supersedes: 09/03/2015

Version: 7.1

SECTION 1: Kit identification

1.1 Product identifier

Trade name

HIT-HY 150 MAX



Product code

BU Anchor

1.2 Details of the supplier of the Safety information for 2-Component-products

Hilti (Canada) Corp.
2360 Meadowpine Boulevard
L5N 6S2 Mississauga, Ontario - Canada
T +1905 8139200
1-800-363-4458 toll free - F +1 905 813 9009

SECTION 2: General information

Storage

Storage temperature: 5 - 25 °C

A SDS for each of these components is included. Please do not separate any component SDS from this cover page

This Kit should be handled in accordance with good laboratory practices and appropriate personal protective equipment should be used

SECTION 3: Kit contents

Classification of the Product

Classification (GHS-CA)

Eye Irrit. 2	H319
Skin Sens. 1	H317
Repr. 1B	H360
Aquatic Acute 1	H400

Label elements

GHS-CA labelling

Hazard pictograms (GHS-CA)



GHS07



GHS08



GHS09

Signal word (GHS-CA)

Danger

Hazardous ingredients

methacrylates, dibenzoyl peroxide, boric acid

Hazard statements (GHS-CA)

H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H360 - May damage fertility or the unborn child
H400 - Very toxic to aquatic life

Precautionary statements (GHS-CA)

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P264 - Wash ... thoroughly after handling

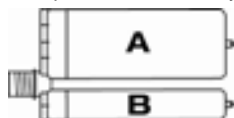
HIT-HY 150 MAX

Safety information for 2-Component-products

P272 - Contaminated work clothing should not be allowed out of the workplace
P273 - Avoid release to the environment

Additional information

2-Component-foilpack, contains:
Component A: Urethane methacrylate resin, inorganic filler
Component B: Dibenzoyl peroxide, phlegmatized



Name	General description	Quantity	Unit	Classification (GHS-CA)
HIT-HY 150 MAX, A		1	pcs (pieces)	Eye Irrit. 2, H319 Skin Sens. 1, H317 Repr. 1B, H360
HIT-HY 150 MAX, B		1	pcs (pieces)	Skin Sens. 1, H317 Aquatic Acute 1, H400

SECTION 4: General advice

General advice For professional users only

SECTION 5: Safe handling advice

Environmental precautions	Prevent entry to sewers and public waters Notify authorities if liquid enters sewers or public waters
Storage conditions	Keep cool. Protect from sunlight
Precautions for safe handling	Wear personal protective equipment Avoid contact with skin and eyes 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 vapour
Methods for cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation Store away from other materials Recover mechanically the product
For containment	Collect spillage
Incompatible materials	Sources of ignition Direct sunlight
Incompatible products	Strong bases Strong acids

SECTION 6: First aid measures

First-aid measures after eye contact	Rinse immediately with plenty of water Remove contact lenses, if present and easy to do. Continue rinsing Obtain medical attention if pain, blinking or redness persist
First-aid measures after ingestion	Rinse mouth Do NOT induce vomiting Obtain emergency medical attention
First-aid measures after inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing Allow breathing of fresh air Allow the victim to rest
First-aid measures after skin contact	Wash with plenty of soap and water Wash contaminated clothing before reuse If skin irritation or rash occurs: Get immediate medical advice/attention Get medical advice/attention
First-aid measures general	Never give anything by mouth to an unconscious person

HIT-HY 150 MAX

Safety information for 2-Component-products

Symptoms/injuries after eye contact	If you feel unwell, seek medical advice (show the label where possible)
Symptoms/injuries after skin contact	Causes serious eye irritation
	May cause an allergic skin reaction

SECTION 7: Fire fighting measures

Firefighting instructions	Use water spray or fog for cooling exposed containers Exercise caution when fighting any chemical fire Prevent fire-fighting water from entering environment
Protection during firefighting	Do not enter fire area without proper protective equipment, including respiratory protection
Hazardous decomposition products in case of fire	Thermal decomposition generates : Carbon dioxide Carbon monoxide

SECTION 8: Other information

No data available

HIT-HY 150 MAX, B

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Date of issue: 11/23/2015

Revision date: 11/23/2015

Supersedes: 03/09/2015

Version: 7.1

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

1.1. Product identifier

Product form	Mixture
Name	HIT-HY 150 MAX, B
Product code	BU Anchor

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

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Hilti (Canada) Corp.
2360 Meadowpine Boulevard
L5N 6S2 Mississauga, Ontario - Canada
T +1905 8139200
1-800-363-4458 toll free - F +1 905 813 9009

Department issuing data specification sheet

Hilti Entwicklungsgesellschaft mbH
Hiltistrasse 6
86916 Kaufering - Deutschland
T +49 8191 906310 - F +49 8191 90176310
anchor.hse@hilti.com

1.4. Emergency telephone number

Emergency number	Chem-Trec Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada) Tel.: 703 527 3887 (Other countries)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-CA)

Sensitisation — Skin, Category 1	H317
Full text of H-statements: see section 16	

2.2. Label elements

GHS-CA labelling

Hazard pictograms (GHS-CA)



GHS07

Signal word (GHS-CA)

Warning

Hazard statements (GHS-CA)

H317 - May cause an allergic skin reaction

Precautionary statements (GHS-CA)

P280 - Wear eye protection, protective clothing, protective gloves
P262 - Do not get in eyes, on skin, or on clothing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P302+P352 - IF ON SKIN: Wash with plenty of water

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

HIT-HY 150 MAX, B

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Name	Product identifier	%	Classification (GHS-CA)
Quartz	(CAS No) 14808-60-7	40 - 60	Not classified
dibenzoyl peroxide	(CAS No) 94-36-0	5 - 10	Organic Peroxides, Type B, H241 Serious eye damage/eye irritation, Category 2A, H319 Sensitisation — Skin, Category 1, H317

Full text of H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	Remove/Take off immediately all contaminated clothing. 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	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Allow breathing of fresh air. Allow the victim to rest.
First-aid measures after skin contact	Wash contaminated clothing before reuse. Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion	Rinse mouth. Drink plenty of water. Get medical advice/attention. Do not induce vomiting. Obtain emergency medical attention.

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

Symptoms/injuries after skin contact	May cause an allergic skin reaction.
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4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Water spray. Carbon dioxide. Dry powder. Foam. Sand.
Unsuitable extinguishing media	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	Self-contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	Use personal protective equipment as required. Equip cleanup crew with proper protection.
Emergency procedures	Ventilate area.

HIT-HY 150 MAX, B

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

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	Collect spillage.
Methods for cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation. Recover mechanically the product. Store away from other materials.
Other information	Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	Wear personal protective equipment. Avoid contact with skin and eyes. 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 vapour.
Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the 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

Storage conditions	Keep cool. Protect from sunlight.
Incompatible products	Strong bases. Strong acids.
Incompatible materials	Sources of ignition. Direct sunlight.
Storage temperature	5 - 25 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional information	The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.
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8.2. Exposure controls

Personal protective equipment	Avoid all unnecessary exposure. Safety glasses. Gloves. Protective clothing.
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Hand protection	Wear protective gloves.
Eye protection	Chemical goggles or safety glasses.
Skin and body protection	Wear suitable protective clothing.
Environmental exposure controls	Avoid release to the environment.
Consumer exposure controls	Avoid contact during pregnancy/while nursing.
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	Solid
Appearance	Thixotropic paste.
Colour	white.

HIT-HY 150 MAX, B

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Odour	characteristic.
Odour threshold	Not determined
pH	≈ 6
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
Auto-ignition temperature	Not self-igniting
Decomposition temperature	65 °C SADT
Flammability (solid, gas)	Non flammable
Vapour pressure	No data available
Relative vapour density at 20 °C	No data available
Relative density	No data available
Density	2 g/ml DIN 66137-2
Solubility	Water: Not miscible
Log Pow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	70 Pa.s HN-0333
Explosive properties	Product is not explosive.
Oxidising properties	No data available
Explosive limits	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity Not classified

HIT-HY 150 MAX, B

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

dibenzoyl peroxide (94-36-0)	
LD50 oral rat	> 5000 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Weight of evidence)
Skin corrosion/irritation	Not classified pH: ≈ 6
Serious eye damage/irritation	Not classified pH: ≈ 6
Respiratory or skin sensitisation	May cause an allergic skin reaction.
Germ cell mutagenicity	Not classifiedBased on available data, the classification criteria are not met
Carcinogenicity	Not classified
dibenzoyl peroxide (94-36-0)	
IARC group	3
Reproductive toxicity	Not classifiedBased on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classifiedBased on available data, the classification criteria are not met
Aspiration hazard	Not classifiedBased on available data, the classification criteria are not met
HIT-HY 150 MAX, B	
Viscosity, kinematic	35000.00000000 mm²/s
Potential adverse human health effects and symptoms	Based on available data, the classification criteria are not met.
Symptoms/injuries after skin contact	May cause an allergic skin reaction.

SECTION 12: Ecological information

12.1. Toxicity

dibenzoyl peroxide (94-36-0)	
LC50 fish 1	2 mg/l (96 h; Poecilia reticulata)
EC50 Daphnia 1	0.07 mg/l
LC50 fish 2	0.0602 mg/l (96h; Oncorhynchus mykiss; ECHA)
NOEC (acute)	0.0316 mg/l (96h; Oncorhynchus mykiss; ECHA)

12.2. Persistence and degradability

HIT-HY 150 MAX, B	
Persistence and degradability	Not established.
dibenzoyl peroxide (94-36-0)	
Persistence and degradability	Readily biodegradable in water. No (test)data on mobility of the substance available.

12.3. Bioaccumulative potential

HIT-HY 150 MAX, B	
Bioaccumulative potential	Not established.
dibenzoyl peroxide (94-36-0)	
Log Pow	3.71 (QSAR; 3.2; Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information Avoid release to the environment.

HIT-HY 150 MAX, B

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	Disposal must be done according to official regulations.
Waste disposal recommendations	Refer to manufacturer/supplier for information on recovery/recycling. Dispose of contents/container to Avoid release to the environment, Refer to manufacturer/supplier for information on recovery/recycling.
Ecology - waste materials	Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	RID
14.1. UN number			
Not regulated for transport			
14.2. UN proper shipping name			
Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)			
Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
ADR 5.2.1.8.1 derogation applies (quantity of liquids \leq 5 litres or net mass of solids \leq 5 kg)			
No supplementary information available			

14.6. Special precautions for user

- Overland transport

- Transport by sea

No data available

- Air transport

No data available

- Rail transport

Carriage prohibited (RID) No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

National/international regulations

No additional information available

HIT-HY 150 MAX, B

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

SECTION 16: Other information

SDS Major/Minor None
Date of issue 23/11/2015
Revision date 23/11/2015
Supersedes 09/03/2015

Indication of changes:
Other information None.

Full text of H-statements:

H241	Heating may cause a fire or explosion
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

SDS_CA_Hilti

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

HIT-HY 150 MAX, A

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Date of issue: 11/23/2015

Revision date: 11/23/2015

Supersedes: 03/09/2015

Version: 07.1

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

1.1. Product identifier

Product form	Mixture
Name	HIT-HY 150 MAX, A
Product code	BU Anchor

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

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Hilti (Canada) Corp.
2360 Meadowpine Boulevard
L5N 6S2 Mississauga, Ontario - Canada
T +1905 8139200
1-800-363-4458 toll free - F +1 905 813 9009

Department issuing data specification sheet

Hilti Entwicklungsgesellschaft mbH
Hiltistrasse 6
86916 Kaufering - Deutschland
T +49 8191 906310 - F +49 8191 90176310
anchor.hse@hilti.com

1.4. Emergency telephone number

Emergency number	Chem-Trec Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada) Tel.: 703 527 3887 (Other countries)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-CA)

Serious eye damage/eye irritation, Category 2A	H319
Sensitisation — Skin, Category 1	H317
Reproductive toxicity, Category 1B	H360
Full text of H-statements: see section 16	

2.2. Label elements

GHS-CA labelling

Hazard pictograms (GHS-CA)



GHS07



GHS08

Signal word (GHS-CA)

Danger

Hazard statements (GHS-CA)

H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H360 - May damage fertility or the unborn child

Precautionary statements (GHS-CA)

P280 - Wear eye protection, protective clothing, protective gloves
P262 - Do not get in eyes, on skin, or on clothing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P302+P352 - IF ON SKIN: Wash with plenty of water

2.3. Other hazards

No additional information available

HIT-HY 150 MAX, A

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

SECTION 3: Composition/information on ingredients

Name	Product identifier	%	Classification (GHS-CA)
2-Hydroxypropyl methacrylate	(CAS No) 27813-02-1	5 - 10	Serious eye damage/eye irritation, Category 2A, H319 Sensitisation — Skin, Category 1, H317
1,4-Butanediol dimethacrylate	(CAS No) 2082-81-7	5 - 10	Sensitisation — Skin, category 1B, H317
1,1,1-Trimethylolpropane trimethacrylate	(CAS No) 3290-92-4	1 - 2.5	Not classified
1,1'-(p-tolylimino)dipropan-2-ol	(CAS No) 38668-48-3	1 - 2.5	Acute toxicity (oral), Category 2, H300 Serious eye damage/eye irritation, Category 2A, H319
boric acid	(CAS No) 10043-35-3	0.1 - 1	Reproductive toxicity, Category 1B, H360
4-tert-butylpyrocatechol	(CAS No) 98-29-3	0.1 - 1	Acute toxicity (oral), Category 4, H302 Acute toxicity (dermal), Category 4, H312 Skin corrosion/irritation, Category 1B, H314 Sensitisation — Skin, Category 1, H317

Full text of H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general

Remove/Take off immediately all contaminated clothing. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

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

Symptoms/injuries after skin contact

May cause an allergic skin reaction.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

No additional information available

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions

Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures

Evacuate unnecessary personnel.

HIT-HY 150 MAX, A

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Relative vapour density at 20 °C	No data available
Relative density	No data available
Density	1.74 g/cm ³ DIN 66137-2
Solubility	Water: Not miscible
Log Pow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	70 HN-0333
Explosive properties	Product is not explosive.
Oxidising properties	No data available
Explosive limits	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity Not classified

2-Hydroxypropyl methacrylate (27813-02-1)	
LD50 oral rat	> 5000 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature study; >=2000 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	>= 5000 mg/kg bodyweight (Rabbit; Experimental value)
1,4-Butanediol dimethacrylate (2082-81-7)	
LD50 oral rat	10066 mg/kg
LD50 dermal rat	> 3000 mg/kg
ATE US (oral)	10066.000 mg/kg bodyweight
1,1,1-Trimethylolpropane trimethacrylate (3290-92-4)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 3000 mg/kg
1,1'-(p-tolylimino)dipropen-2-ol (38668-48-3)	
LD50 oral rat	25 mg/kg
LD50 dermal rat	> 2000 mg/kg

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Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

ATE US (oral)	25.000 mg/kg bodyweight
boric acid (10043-35-3)	
LD50 oral rat	2660 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature study; >2600 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	> 2000 mg/kg Rabbit; Experimental value; FIFRA (40 CFR)
ATE US (oral)	2660.000 mg/kg bodyweight
4-tert-butylpyrocatechol (98-29-3)	
LD50 oral rat	815 mg/kg bodyweight (Rat; Lethal; ECHA)
LD50 dermal rat	1331 mg/kg bodyweight (Rat; Lethal; ECHA)
LD50 dermal rabbit	(Rabbit)
ATE US (oral)	815.000 mg/kg bodyweight
ATE US (dermal)	1331.000 mg/kg bodyweight
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	May cause an allergic skin reaction.
Germ cell mutagenicity	Not classifiedBased on available data, the classification criteria are not met
Carcinogenicity	Not classified
Reproductive toxicity	May damage fertility or the unborn child.Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classifiedBased on available data, the classification criteria are not met
Aspiration hazard	Not classifiedBased on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	Based on available data, the classification criteria are not met.
Symptoms/injuries after skin contact	May cause an allergic skin reaction.

SECTION 12: Ecological information

12.1. Toxicity

2-Hydroxypropyl methacrylate (27813-02-1)	
LC50 fish 1	493 mg/l (48 h; Leuciscus idus; GLP)
EC50 Daphnia 1	> 143 mg/l (48 h; Daphnia magna; GLP)
Threshold limit algae 1	> 97.2 mg/l (72 h; Pseudokirchneriella subcapitata; GLP)
Threshold limit algae 2	> 97.2 mg/l (72 h; Pseudokirchneriella subcapitata; GLP)
1,4-Butanediol dimethacrylate (2082-81-7)	
LC50 fish 1	32.5 mg/l
LC50 other aquatic organisms 1	9.79 mg/l
NOEC (acute)	7.51 mg/l
NOEC (chronic)	20 mg/l
1,1,1-Trimethylolpropane trimethacrylate (3290-92-4)	
LC50 fish 1	2 mg/l
ErC50 (algae)	3.88 mg/l
NOEC chronic fish	0.138 mg/l
NOEC chronic crustacea	0.177 mg/l
1,1'-(p-tolylimino)diprop-2-ol (38668-48-3)	
LC50 fish 1	≈ 17 mg/l
LC50 other aquatic organisms 1	245 mg/l
EC50 Daphnia 1	28.8 mg/l
NOEC (acute)	57.8 mg/l
boric acid (10043-35-3)	
LC50 fish 1	447 mg/l
EC50 Daphnia 1	658 - 875 mg/l (48 h; Daphnia magna)
LC50 fish 2	79 ppm (96 h; Salmo gairdneri (Oncorhynchus mykiss); Hard water)
EC50 Daphnia 2	19.7 mg/l (336 h; Daphnia magna)
TLM fish 1	1800 ppm (24 h; Gambusia affinis)
Threshold limit algae 1	5 mg/l (672 h; Elodea sp.)

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according to the Hazardous Products Regulation (February 11, 2015)

Threshold limit algae 2	0.4 - 0.8, 336 h; Chlorella sp.; Growth
4-tert-butylpyrocatechol (98-29-3)	
LC50 fish 1	0.12 mg/l (96 h, Danio rerio, Lethal, ECHA)
EC50 Daphnia 1	> µg/l

12.2. Persistence and degradability

HIT-HY 150 MAX, A	
Persistence and degradability	Not established.
2-Hydroxypropyl methacrylate (27813-02-1)	
Persistence and degradability	Readily biodegradable in water. No (test) data on mobility of the substance available.
1,4-Butanediol dimethacrylate (2082-81-7)	
Biodegradation	84 %
boric acid (10043-35-3)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. No (test) data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
4-tert-butylpyrocatechol (98-29-3)	
ThOD	2.4 g O ₂ /g substance

12.3. Bioaccumulative potential

HIT-HY 150 MAX, A	
Bioaccumulative potential	Not established.
2-Hydroxypropyl methacrylate (27813-02-1)	
BCF fish 1	≤ 100 (Pisces)
BCF fish 2	3.2 (Pisces; QSAR)
Log Pow	0.97 (OECD 102: Melting Point/Melting Range)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
1,4-Butanediol dimethacrylate (2082-81-7)	
Log Pow	3.1
1,1,1-Trimethylolpropane trimethacrylate (3290-92-4)	
BCF fish 2	366 l/kg
Log Pow	3.53
Log Kow	4.39
1,1'-(p-tolylimino)diprop-2-ol (38668-48-3)	
BCF fish 1	≈
Log Kow	2.1
boric acid (10043-35-3)	
BCF fish 1	0 (Salmo gairdneri (Oncorhynchus mykiss); Chronic)
BCF fish 2	< 0.1 (60 days; Oncorhynchus tshawytscha; Fresh weight)
Log Pow	-1.09 (Experimental value; EU Method A.8: Partition Coefficient; 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
4-tert-butylpyrocatechol (98-29-3)	
Log Pow	2.94 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

boric acid (10043-35-3)	
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

12.5. Other adverse effects

Other information Avoid release to the environment.

HIT-HY 150 MAX, A

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

SECTION 13: Disposal considerations

13.1. Waste treatment methods

No additional information available

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated for transport				
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

- Overland transport

- Transport by sea

No data available

- Air transport

No data available

- Inland waterway transport

Carriage prohibited (ADN) No

Not subject to ADN No

- Rail transport

Carriage prohibited (RID) No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

National/international regulations

No additional information available

SECTION 16: Other information

HIT-HY 150 MAX, A

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

SDS Major/Minor None
Date of issue 23/11/2015
Revision date 23/11/2015
Supersedes 09/03/2015

Indication of changes:
Other information None.

Full text of H-statements:

H300	Fatal if swallowed
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H360	May damage fertility or the unborn child

SDS_CA_Hilti

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 Name:	PRO LSPR 6PK MARK FLUORESCENT ORANGE	Revision Date:	5/12/2017
Product Identifier:	2554838	Supersedes Date:	6/5/2015
Product Use/Class:	Marking Paint/Aerosols		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		
Emergency Telephone:	24 Hour Hotline: 847-367-7700		

2. Hazard Identification

Classification

Symbol(s) of Product



Signal Word

Danger

Possible Hazards

27% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Carcinogenicity, category 2	H351	Suspected of causing cancer.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.

GHS LABEL PRECAUTIONARY STATEMENTS

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P405	Store locked up.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/ 122°F.

P501

Dispose of contents/container in accordance with local, regional and national regulations.

3. Composition/Information On Ingredients

HAZARDOUS SUBSTANCES

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Wt.% Range</u>	<u>GHS Symbols</u>	<u>GHS Statements</u>
Propane	74-98-6	10-25	GHS04	H280
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	2.5-10	GHS08	H304
n-Butane	106-97-8	2.5-10	GHS04	H280
Hydrotreated Light Distillate	64742-47-8	2.5-10	GHS08	H304
Xylenes (o-, m-, p- isomers)	1330-20-7	2.5-10	GHS02-GHS07	H226-315-319-332
Barium Sulfate	7727-43-7	2.5-10	Not Available	Not Available
Ethylbenzene	100-41-4	1.0-2.5	GHS02-GHS07-GHS08	H225-304-332-351-373
Stoddard Solvent	8052-41-3	0.1-1.0	GHS08	H304-372
Pigment Orange 13	3520-72-7	0.1-1.0	Not Available	Not Available
Crystalline Silica / Quartz	14808-60-7	0.1-1.0	Not Available	Not Available

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - 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. If swallowed, get medical attention.

5. Fire-fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only in a well-ventilated area. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of flammable aerosols. Keep away from heat, sparks, flame and sources of ignition. Contents under pressure. Do not expose to heat or store above 120 ° F. Avoid excess heat. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials.

8. Exposure Controls/Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV- TWA	ACGIH TLV- STEL	OSHA PEL- TWA	OSHA PEL- CEILING
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	10.0	N.E.	N.E.	N.E.	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
Hydrotreated Light Distillate	64742-47-8	10.0	N.E.	N.E.	N.E.	N.E.
Xylenes (o-, m-, p- isomers)	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Barium Sulfate	7727-43-7	5.0	5 mg/m3	N.E.	15 mg/m3	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	N.E.	100 ppm	N.E.
Stoddard Solvent	8052-41-3	1.0	100 ppm	N.E.	500 ppm	N.E.
Pigment Orange 13	3520-72-7	1.0	N.E.	N.E.	N.E.	N.E.
Crystalline Silica / Quartz	14808-60-7	1.0	0.025 mg/m3	N.E.	50 µg/m3	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications. Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	Physical State:	Liquid
Odor:	Solvent Like	Odor Threshold:	N.E.
Relative Density:	0.857	pH:	N.A.
Freeze Point, °C:	N.D.	Viscosity:	N.D.
Solubility in Water:	Slight	Partition Coefficient, n-octanol/water:	N.D.
Decomposition Temp., °C:	N.D.	Explosive Limits, vol%:	0.9 - 12.6
Boiling Range, °C:	-37 - 537	Flash Point, °C:	-96
Flammability:	Supports Combustion	Auto-ignition Temp., °C:	N.D.
Evaporation Rate:	Faster than Ether	Vapor Pressure:	N.D.
Vapor Density:	Heavier than Air		

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120°F (49°C). Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. May cause skin irritation. Allergic reactions are possible. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. 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 damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B).

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
74-98-6	Propane	N.I.	N.I.	658 mg/L Rat
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
106-97-8	n-Butane	N.I.	N.I.	658 mg/L Rat
64742-47-8	Hydrotreated Light Distillate	>5000 mg/kg Rat	>2000 mg/kg Rabbit	>5000 mg/L Rat
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
3520-72-7	Pigment Orange 13	>5000 mg/kg Rat	N.I.	N.I.
14808-60-7	Crystalline Silica / Quartz	5500 mg/kg Rat	5500	100 mg/L

N.I. - No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components. Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	<u>Domestic (USDOT)</u>	<u>International (IMDG)</u>	<u>Air (IATA)</u>	<u>TDG (Canada)</u>
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS-No.</u>
Xylenes (o-, m-, p- isomers)	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

<u>Chemical Name</u>	<u>CAS-No.</u>
Castor oil, sulfated, sodium salt	68187-76-8

16. Other Information**HMIS RATINGS**

Health: 2* **Flammability:** 4 **Physical Hazard:** 0 **Personal Protection:** X

NFPA RATINGS

Health: 2 **Flammability:** 4 **Instability:** 0

VOLATILE ORGANIC COMPOUNDS, g/L: 551

SDS REVISION DATE: 5/12/2017

REASON FOR REVISION: Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
02 - Hazard Identification
05 - Fire-fighting Measures
16 - Other Information
Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

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SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name (as labeled):	SpecRez
Synonyms:	N/A
CAS No:	Mixture
1.2 Product Use:	Concrete curing compound
1.3 Company Name:	SpecChem
Company Address:	1511 Baltimore Ave; Suite 600
Company Address Cont:	Kansas City, MO 64108
Business Phone:	(816) 968-5600
Website:	www.specchemllc.com
1.4 Emergency Telephone Number:	Chemtrec: (800) 424-9300
Date of Current Revision:	July 6, 2016
Date of Last Revision:	March 22, 2015

SECTION 2 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a white liquid with a characteristic hydrocarbon odor.
Health Hazards: May cause skin, eye, and central nervous system irritation. May be an aspiration hazard. Inhalation may cause drowsiness or dizziness.
Flammability Hazards: This product is a flammable liquid with a flash point of >200°F (93.3°C).
Reactivity Hazards: None.
Environmental Hazards: The environmental effects of this product have not been investigated, however release may cause long term adverse environmental effects.

US DOT Symbols Not regulated



EU and GHS Symbols

Signal Word Danger

2.1 EU Labeling and Classification:

This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.

EU HAZARD CLASSIFICATION OF INGREDIENTS PER DIRECTIVE 1272/2008/EC:

Index Number:

232-489-3 is listed in Annex I 649-345-00-4

204-007-1 is not listed in Annex I

Substances not listed either individually or in group entries must be self classified.

Components Contributing to Classification:

Solvent Naphtha (Petroleum), Light Aromatic,
Methyl Acetate, Fatty Acid (Oleic Acid)

2.2 Label Elements:

GHS Hazard Classifications:

Skin Irritation Category 2

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Hazard Statements:

Germ Cell Mutagenicity Category 1B
Carcinogenicity Category 1B
STOT – SE Category 1 (Central Nervous System)
Aspiration Hazard Category 1
H315 Causes skin irritation
H340 May cause genetic defects
H350 May cause cancer
H304 May be fatal if swallowed and enters airways

Precautionary Statements:

H372 Causes damage to organs through prolonged or repeated exposure (Central Nervous System)
P280 Wear protective gloves/eye protection/face protection.
P264 Wash thoroughly after handling.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P270 Do not eat, drink or smoke when using this product.

Response Statements:

P302+P352 IF ON SKIN: Wash with plenty of water.
P321 Specific treatment (see supplemental first aid instructions on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention
P362+P364 Take off contaminated clothing and wash it before reuse.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P301+P310 IF SWALLOWED: Immediately call a POISON Center/doctor.
P331 Do NOT induce vomiting.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Storage Statements:

Disposal Statements:

2.3 Health Hazards or Risks From Exposure:

Symptoms of Overexposure by Route of Exposure:

The most significant routes of overexposure for this product are by contact with skin or eyes. The symptoms of overexposure are described in the following paragraphs.

Acute:

Inhalation: May cause central nervous system tract irritation.

Skin Contact: May cause moderate irritation to skin. Repeated exposure may cause skin dryness or cracking.

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Eye Contact: Vapors and direct contact to the eyes may be irritating.

Ingestion: May cause lung damage if aspirated.

Chronic: Unknown.

Target Organs:

Acute: Skin, Eyes, Central Nervous System, Lungs

Chronic: Unknown

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	WT%	CAS No.	EINECS No.	Hazard Classification
Solvent Naphtha (Petroleum), Light Aromatic	<1.5%	64742-95-6	265-199-0	Flammable liquids Category 3, Skin corrosion/irritation Category 2; Serious eye damage/eye irritation Category 2A; Carcinogenicity Category 2; Specific target organ toxicity (single exposure) Category 3 – Narcotics effects, Respiratory irritation
Methyl Acetate	<1.0%	79-20-9	201-185-2	Flammable liquids Category 2, Serious Eye Damage/Eye Irritation Category 2, Specific target organ toxicity (single exposure) Category 3, Target Organs – Central nervous system (CNS).
Fatty Acid(Oleic Acid)	0-2%	112-80-1	204-007-1	Skin Irrit 2
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).				

Note: All WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard JIS Z 7250:2000

SECTION 4 – FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye Contact: If product enters the eyes, flush with plenty of water or eye wash solution for several minutes. Remove contacts if present and easy to do. Seek medical attention if irritation persists.

Skin Contact: Wash skin thoroughly with soap and water after handling. Seek medical attention if irritation develops and persists.

Inhalation: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

Ingestion: If product is swallowed, call physician or poison center immediately. If professional advice is not available, do not induce vomiting. Never induce vomiting or give dilutents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

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Medical Conditions Generally Aggravated

By Exposure: Pre-existing skin, respiratory system or eye problems may be aggravated by prolonged contact.

4.2 Symptoms and Effects Both Acute and Delayed: Exposure to skin, eyes, and respiratory system may cause irritation. May cause headaches, drowsiness, or dizziness. Aspiration hazard.

4.3 Recommendations to Physicians: Treat symptoms and eliminate overexposure.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Fire Extinguishing Materials:

Use the following fire extinguishing materials:

Water Spray:	Yes
Foam:	Yes
Halon:	Yes
Carbon Dioxide:	Yes
Dry Chemical:	Yes
Other:	Any "C" Class

5.2 Unusual Fire and Explosion Hazards:

Irritating and toxic fumes may be produced at high temperatures. Use of water may result if the formation of a toxic aqueous solution. Do not allow run-off from fire fighting to enter drains or water courses.

Explosive Sensitivity to Mechanical Impact:	No
Explosive Sensitivity to Static Discharge:	No

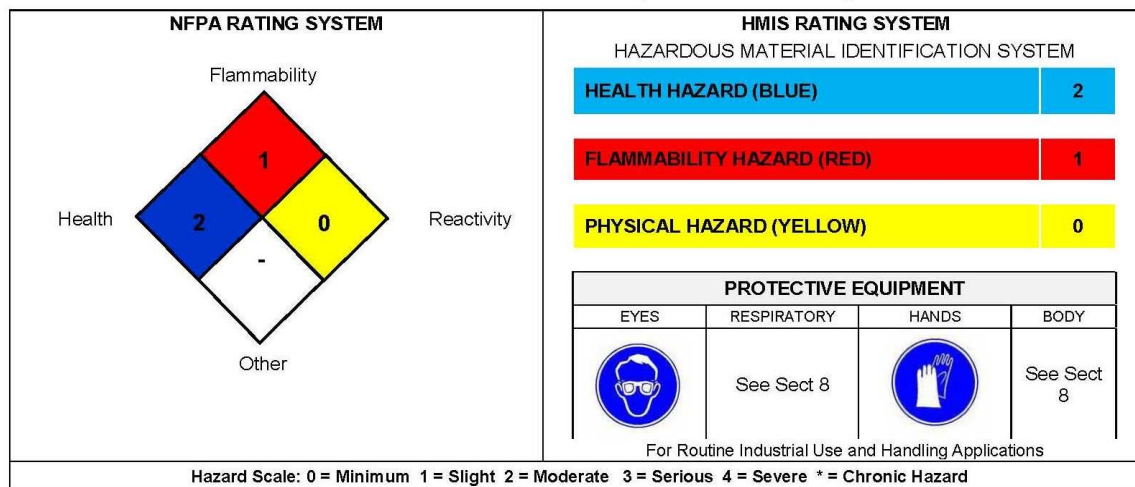
5.3 Special Fire-Fighting Procedures:

- Incipient fire responders should wear eye protection.
- Structural firefighters must wear Self-Contained Breathing Apparatus (SCBA) and full protective equipment.
- Isolate materials not yet involved in the fire and protect personnel.
- Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray.
- If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.

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SECTION 6 – ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Use cautious judgment when cleaning up spill. Wear suitable protective clothing, gloves, and eye/face protection.

6.2 Environmental Precautions:

Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.

6.3 Spill and Leak Response:

Small Spills:

- Collect material via broom or mop. Place in tightly sealed containers for proper disposal.
- Approach spill areas with caution.
- If liquid was introduced, create a dike or trench to contain material.
- Soak up with absorbent material such as clay, sand or other suitable non-reactive material.

Large Spills:

- Place in leak-proof containers. Seal tightly for proper disposal.
- Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

To prevent eye contact under the foreseeable conditions of use, wear appropriate safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling. Do not handle or store near heat, sparks, or flame.

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7.2 Storage and Handling Practices:

Keep away from incompatible materials. Keep container closed when not in use and store in well ventilated area.

7.3 Specific Uses:

Concrete curing compound.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Parameters:

Ingredients	CAS No.	OSHA PEL	NIOSH PEL
Solvent Naphtha (Petroleum), Light Aromatic	64742-95-6	Not Listed	Not Listed
Methyl Acetate	79-20-9	610 mg/m ³	610 mg/m ³
Fatty Acid(Oleic Acid)	112-80-1	Not Listed	Not Listed

8.2 Exposure Controls:

Ventilation and Engineering Controls:

Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132), or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory Protection:

Not required for properly ventilated areas. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Eye Protection:

Safety glasses or goggles are required. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

Hand Protection:

Chemical resistant gloves are required to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374,

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Body Protection:

the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards. Use body protect appropriate to task being performed. If necessary, refer to appropriate Standards of Canada, or appropriate standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

Appearance (Physical State and Color): White liquid

Odor: Characteristic hydrocarbon

Odor Threshold: No data available

pH: 10.0+/- 0.5

Melting/Freezing Point: No data available

Boiling Point: 280°F (137°C)

Flash Point: >200°F (93.3°C)

Evaporation Rate: 8

Flammability (Solid; Gas): Not applicable

Upper/Lower Flammability or Explosion Limits: LEL 0.7%, UFL 7.5%

Vapor Pressure (mm Hg @ 20°C (68° F): 11 mm Hg 100°F

Vapor Density: 4

Relative Density: No data available

Specific Gravity: 0.98

Solubility in Water: Completely miscible

Weight per Gallon: 8.1 +/- 0.1 #

Partition Coefficient (n-octanol/water): No data available

Auto-Ignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: 100 +/- 15 cps

9.2 Other Information: No data available

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity:

10.2 Stability:

10.3 Possibility of Hazardous Reactions:

10.4 Conditions to Avoid:

This product is not reactive.

Stable under conditions of normal storage and use.

Will not occur.

Avoid excessive temperatures, exposure to sunlight, sources of ignition.

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10.5 Incompatible Substances:

Strong oxidizing agents.

10.6 Hazardous Decomposition Products: Carbon monoxide and dioxide smoke.

SECTION 11 – TOXICOLOGY INFORMATION

11.1 Information on Toxicological Effects:

Toxicity Data:

Fatty Acid (Oleic Acid)	112-80-1	LD50 Intravenous – Rat	2.4 mg/kg
Solvent Naphtha (Petroleum), Light Aromatic	64742-95-6	LD50 Oral – Rat	>3000 mg/kg
		LD50 Dermal – Rabbit	>3160 mg/kg
		LC50 Inhalation – Rat	3400 ppm – 4h
Methyl Acetate	79-20-9	LD50 Oral – Rat	5000 mg/kg
		LD50 Dermal – Rabbit	5 g/kg
		LC50 Inhalation – Rat	16000 ppm – 4h

Suspected Cancer Agent:

Ingredients within this product are found on one or more of the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are considered to be cancer-causing agents by these agencies.

Irritancy:

Skin, eye, central nervous system.

Sensitization to the Product:

This product is not expected to cause skin sensitization.

Germ Cell Mutagenicity:

This product contains ingredients that are suspected to be a germ cell mutagenic.

Reproductive Toxicity:

This product is not expected to be a human reproductive toxicant.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity:

Fatty Acid (Oleic Acid)	112-80-1	LC50 – Fathead minnow	205 mg/l – 96h
Solvent Naphtha (Petroleum), Light Aromatic	64742-95-6	LC50 - Oncorhynchus mykiss	9.22mg/l – 96h
Methyl Acetate	79-20-9	LC50 – Freshwater Fish	348 mg/L- 96 h

12.2 Persistence and Degradability:

No specific data available on this product.

12.3 Bioaccumulative Potential:

No specific data available on this product.

12.4 Mobility in Soil:

No specific data available on this product.

12.5 Results of PBT and vPvB Assessment: No specific data available on this product.

12.6 Other Adverse Effects:

No data available

12.7 Water Endangerment Class:

At present, there are no ecotoxicological assessments for this product.

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SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:

Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Australia, EU Member States and Japan.

13.2 EU Waste Code:

Not determined

SECTION 14 - TRANSPORTATION INFORMATION

14.1 U.S. Department of Transportation (DOT) Shipping Regulations:

This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.

UN Identification Number:

Not applicable

Proper Shipping Name:

Not regulated

Hazard Class Number and Description:

Not applicable

Packing Group:

Not applicable

DOT Label(s) Required:

Not applicable

North American Emergency

Response Guidebook Number:

Not applicable

14.2 Environmental Hazards:

Marine Pollutant:

The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

None

14.3 Special Precaution for User:

14.4 International Air Transport Association

Shipping Information (IATA):

This product is not considered as dangerous goods.

14.5 International Maritime Organization

Shipping Information (IMO):

UN Identification Number:

Not applicable

Proper Shipping Name:

Not regulated

Hazard Class Number and Description:

Not applicable

Packing Group:

Not applicable

EMS-No:

Not applicable

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations Specific for the Substance or Mixture:

United States Regulations:

U.S. SARA Reporting Requirements:

The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA 311/312:

Acute Health: Yes; Chronic Health: No; Fire: No; Reactivity: No

U.S. CERCLA Reportable Quantity:

Not applicable

U.S. TSCA Inventory Status:

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The components of this product are listed on the TSCA Inventory or are exempted from listing.

Other U.S. Federal Regulations:

None known

California Safe Drinking Water and Toxic Enforcement Act (Proposition 66):

This product does not contain ingredients on the Proposition 65 Lists.

15.2 Canadian Regulations:

Canadian DSL/NDSL Inventory Status:

Components are DSL Listed, NDSL Listed and/or are exempt from listing

Other Canadian Regulations:

Not applicable

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists:

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

Canadian WHMIS Classification and Symbols:

This product is Class D2B, Materials causing other toxic effects, per WHMIS Controlled Product Regulations.



15.3 European Economic Community Information:

This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives. See Section 2 for Details.

Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

15.4 Australian Information for Product:

Components of this product are listed on the International Chemical Inventory list.

15.5 Japanese Information for Product:

Japanese Minister of International Trade and Industry (MITI) Status: The components of this product are not listed as Class I specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

15.6 International Chemical Inventories:

Listing of the components on individual country Chemical Inventories is as follows:

Australian Inventory of Chemical Substances (AICS): Listed

Korean Existing Chemicals List (ECL): Listed

Japanese Existing National Inventory of Chemical Substances (ENCS): Listed

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed

U.S. TSCA: Listed

SECTION 16 – OTHER INFORMATION

Date of Printing: April 10, 2015

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of

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the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. SpecChem assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, SpecChem assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

END OF SDS SHEET



SAFETY DATA SHEET

SDS ID NO.: 0127MAR019
Revision Date 03/19/2018

1. IDENTIFICATION

Product Name: Marathon Petroleum Gasoline - All Grades

Synonym: Gasoline; Regular Unleaded Gasoline; Conventional Regular Unleaded Gasoline; Mid Grade Unleaded Gasoline; Conventional Mid Grade Unleaded Gasoline; Premium Unleaded Gasoline; Conventional Premium Unleaded Gasoline; Sub-Octane Gasoline; Regular RBOB; Super RBOB; Premium RBOB; RBOB; Reformulated Blend Stock For Oxygenated Blending; 84 Octane Gasoline; CBOB; Premium CBOB; Conventional Blend Stock for Oxygenate Blending; Recreational Gasoline; Recreational Gasoline; Recreational Unleaded Gasoline; 89 Recreational Gasoline; Brand 89 Recreational Gasoline; 7.0 Max RVP 89 Recreational Gasoline; BR 7.0 Max RVP 89 Recreational Gasoline; 90 Recreational Gasoline; 90 Marina Gasoline; Brand EX 90 UL Recrtnl Gasoline; Brand 91 Recreational Gasoline; 91 Recreational Gasoline; 91 Marina Gasoline; 90 Octane Midgrade Gasoline with No Ethanol; 7.8# New York CBOB Gasoline Blend Grade; Non-Summer New York CBOB Gasoline Blend Grade 0125MAR019; 0126MAR019; 0134MAR019; 0313MAR019; 0314MAR019

Product Code: 0127MAR019
Chemical Family: Complex Hydrocarbon Substance

Recommended Use: Fuel.
Restrictions on Use: All others.

Manufacturer, Importer, or Responsible Party Name and Address:

MARATHON PETROLEUM COMPANY LP
539 South Main Street
Findlay, OH 45840

SDS information (M-F, 8-5 EST): 1-419-421-3070

Emergency Telephone (24/7): CHEMTREC: 1-800-424-9300 CCN#: 13740

2. HAZARD IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 1
Skin corrosion/irritation	Category 2
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1
Aspiration toxicity	Category 1

Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

Hazards Not Otherwise Classified (HNOC)

Static accumulating flammable liquid

Label elements

EMERGENCY OVERVIEW

Danger

EXTREMELY FLAMMABLE LIQUID AND VAPOR

May accumulate electrostatic charge and ignite or explode

May be fatal if swallowed and enters airways

Causes skin irritation

May cause respiratory irritation

May cause drowsiness or dizziness

May cause genetic defects

May cause cancer

Suspected of damaging fertility or the unborn child

Causes damage to organs (blood, blood-forming organs, immune system) through prolonged or repeated exposure

Toxic to aquatic life with long lasting effects



Appearance Clear yellow liquid

Physical State Liquid

Odor Hydrocarbon

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep container tightly closed

Ground/bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting/equipment

Use only non-sparking tools.

Take action to prevent static discharges

Do not eat, drink or smoke when using this product

Do not breathe mist/vapors/spray

Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

Wash hands and any possibly exposed skin thoroughly after handling

Avoid release to the environment

Precautionary Statements - Response

IF exposed, concerned or you feel unwell: Get medical attention

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

If skin irritation occurs: Get medical attention

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor if you feel unwell

IF SWALLOWED: Immediately call a POISON CENTER or doctor

Do NOT induce vomiting

In case of fire: Use water spray, fog or regular foam for extinction

Collect spillage

Precautionary Statements - Storage

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

Precautionary Statements - Disposal

Dispose of contents/container at an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Gasoline is a complex combination of hydrocarbons consisting of paraffins, cycloparaffins, aromatic and olefinic hydrocarbons having molecular chains ranging in length from four to ten carbons. May contain small amounts of dye and other additives (>0.02%) which are not considered hazardous at the concentrations used.

Composition Information:

Name	CAS Number	% Concentration
Gasoline	86290-81-5	100
Heptane (mixed isomers)	142-82-5	2.5-26
Butane (mixed isomers)	106-97-8	0.5-19
Pentane (mixed isomers)	78-78-4	6.5-19
Hexane Isomers (other than n-Hexane)	107-83-5	2-12
Toluene	108-88-3	3-9.5
Xylene (mixed isomers)	1330-20-7	3.5-9.5
Benzene	71-43-2	0.1-4.9
n-Hexane	110-54-3	0.1-4.5
Cumene	98-82-8	0-4
1,2,4 Trimethylbenzene	95-63-6	1-4
Ethylbenzene	100-41-4	0.5-2.5
Cyclohexane	110-82-7	0-1.5
Octane	111-65-9	0-1.5
1,2,3-Trimethylbenzene	526-73-8	0-1
Naphthalene	91-20-3	0.1-0.5

Benzene concentration is percent by volume. All other concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

First Aid Measures**General Advice:**

In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).

Inhalation:

Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear, give oxygen and continue to monitor. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). Keep affected person warm and at rest. If symptoms occur get medical attention.

Skin Contact:

Immediately wash exposed skin with plenty of soap and water while removing contaminated clothing and shoes. May be absorbed through the skin in harmful amounts. Get medical attention if irritation persists. Any injection injury from high pressure equipment should be evaluated immediately by a physician as potentially serious (See NOTES TO PHYSICIAN).

Place contaminated clothing in closed container until cleaned or discarded. If clothing is to be laundered, inform the person performing the operation of contaminant's hazardous properties. Destroy contaminated, non-chemical resistant footwear.

Eye Contact:

Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while

flushing. Get medical attention if irritation persists.

Ingestion:

Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. If spontaneous vomiting occurs, keep head below hips, or if patient is lying down, turn body and head to side to prevent aspiration and monitor for breathing difficulty. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

Most important signs and symptoms, both short-term and delayed with overexposure

Adverse Effects:

Irritating to the skin and mucous membranes. Symptoms may include redness, itching, and inflammation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Prolonged or repeated exposure may cause adverse effects on blood, blood-forming organs, and immune system. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

Indication of any immediate medical attention and special treatment needed

Notes To Physician:

INHALATION: This material (or a component) sensitizes the myocardium to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided.

SKIN: Leaks or accidents involving high-pressure equipment may inject a stream of material through the skin and initially produce an injury that may not appear serious. Only a small puncture wound may appear on the skin surface but, without proper treatment and depending on the nature, original pressure, volume, and location of the injected material, can compromise blood supply to an affected body part. Prompt surgical debridement of the wound may be necessary to prevent irreversible loss of function and/or the affected body part. High pressure injection injuries may be SERIOUS SURGICAL EMERGENCIES.

INGESTION: This material represents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

For small fires, Class B fire extinguishing media such as CO₂, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Unsuitable extinguishing media

Do not use straight water streams to avoid spreading fire.

Specific hazards arising from the chemical

This product has been determined to be an extremely flammable liquid per the OSHA Hazard Communication Standard and should be handled accordingly. May accumulate electrostatic charge and ignite or explode. Vapors may travel along the ground or be moved by ventilation and ignited by many sources such as pilot lights, sparks, electric motors, static discharge, or other ignition sources at locations distant from material handling. Flashback can occur along vapor trail. For additional fire related information, see NFPA 30 or the Emergency Response Guidebook 128.

Hazardous combustion products

Smoke, carbon monoxide, and other products of incomplete combustion.

Explosion data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge Yes.

Special protective equipment and precautions for firefighters

Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. Avoid using straight water streams. Water may be ineffective in extinguishing low flash point fires, but can be used to cool exposed surfaces. Avoid excessive water spray application. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Keep run-off water out of sewers and water sources.

Additional firefighting tactics

FIRES INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after the fire is out. Do not direct water at source of leak or safety devices; icing may occur. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

EVACUATION: Consider initial downwind evacuation for at least 1000 feet. If tank, rail car or tank truck is involved in a fire, ISOLATE for 5280 feet (1 mile) in all directions; also, consider initial evacuation of 5280 feet (1 mile) in all directions.

NFPA

Health 1

Flammability 3

Instability 0

Special Hazard -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources.
Protective equipment:	Use personal protection measures as recommended in Section 8.
Emergency procedures:	Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.
Environmental precautions:	Avoid release to the environment. Avoid subsoil penetration. Ethanol in gasoline phase separates in contact with water. Monitor downstream for dissolved ethanol or other appropriate indicators.
Methods and materials for containment:	Contain liquid with sand or soil. Prevent spilled material from entering storm drains, sewers, and open waterways.
Methods and materials for cleaning up:	Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers. When recovering free liquids ensure all equipment is grounded and bonded. Use only non-sparking tools.

7. HANDLING AND STORAGE

Safe Handling Precautions: NEVER SIPHON THIS PRODUCT BY MOUTH. Use appropriate grounding and bonding practices. Static accumulating flammable liquid. Bonding and grounding may be insufficient to eliminate the hazard from static electricity. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Vapors may travel along the ground or be moved by ventilation. Flashback may occur along vapor trails. No smoking. Use only non-sparking tools. Avoid contact with skin, eyes and clothing. Avoid breathing fumes, gas, or vapors. Use only with adequate ventilation. Avoid repeated and prolonged skin contact. Use personal protection measures as recommended in Section 8. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.

Hydrocarbons are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering, pumping at high flow rates or loading and transfer operations. If this charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids. Sudden release of hot organic chemical vapors or mists from process equipment operating under elevated temperature and pressure, or sudden ingress of air into vacuum equipment may result in ignition of vapors or mists without the

presence of obvious ignition sources. Nozzle spouts must be kept in contact with the containers or tank during the entire filling operation.

Portable containers should never be filled while in or on a motor vehicle or marine craft. Containers should be placed on the ground. Static electric discharge can ignite fuel vapors when filling non-grounded containers or vehicles on trailers. The nozzle spout must be kept in contact with the container before and during the entire filling operation. Use only approved containers.

A buildup of static electricity can occur upon re-entry into a vehicle during fueling especially in cold or dry climate conditions. The charge is generated by the action of dissimilar fabrics (i.e., clothing and upholstery) rubbing across each other as a person enters/exits the vehicle. A flash fire can result from this discharge if sufficient flammable vapors are present. Therefore, do not get back in your vehicle while refueling.

Cellular phones and other electronic devices may have the potential to emit electrical charges (sparks). Sparks in potentially explosive atmospheres (including fueling areas such as gas stations) could cause an explosion if sufficient flammable vapors are present. Therefore, turn off cellular phones and other electronic devices when working in potentially explosive atmospheres or keep devices inside your vehicle during refueling.

High-pressure injection of any material through the skin is a serious medical emergency even though the small entrance wound at the injection site may not initially appear serious. These injection injuries can occur from high-pressure equipment such as paint spray or grease or guns, fuel injectors, or pinhole leaks in hoses or hydraulic lines and should all be considered serious. High pressure injection injuries may be **SERIOUS SURGICAL EMERGENCIES** (See First Aid Section 4).

Storage Conditions:

Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area. Do not store near an open flame, heat or other sources of ignition.

Incompatible Materials

Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PELs:	OSHA - Vacated PELs	NIOSH IDLH
Gasoline 86290-81-5	300 ppm TWA 500 ppm STEL	-	300 ppm TWA 900 mg/m ³ TWA 500 ppm STEL 1500 mg/m ³ STEL	-
Heptane (mixed isomers) 142-82-5	400 ppm TWA 500 ppm STEL	TWA: 500 ppm TWA: 2000 mg/m ³	400 ppm TWA 1600 mg/m ³ TWA 500 ppm STEL 2000 mg/m ³ STEL	750 ppm
Butane (mixed isomers) 106-97-8	1000 ppm STEL	-	800 ppm TWA 1900 mg/m ³ TWA	-
Pentane (mixed isomers) 78-78-4	1000 ppm TWA	-	-	-
Hexane Isomers (other than n-Hexane) 107-83-5	500 ppm TWA 1000 ppm STEL	-	500 ppm TWA 1800 mg/m ³ TWA 1000 ppm STEL 3600 mg/m ³ STEL	-
Toluene 108-88-3	20 ppm TWA	TWA: 200 ppm Ceiling: 300 ppm	100 ppm TWA 375 mg/m ³ TWA 150 ppm STEL 560 mg/m ³ STEL	500 ppm
Xylene (mixed isomers) 1330-20-7	100 ppm TWA 150 ppm STEL	TWA: 100 ppm TWA: 435 mg/m ³	100 ppm TWA 435 mg/m ³ TWA 150 ppm STEL 655 mg/m ³ STEL	900 ppm
Benzene	0.5 ppm TWA	TWA: 10 ppm (applies to	25 ppm Ceiling	500 ppm

71-43-2	2.5 ppm STEL Skin - potential significant contribution to overall exposure by the cutaneous route	industry segments exempt from the benzene standard) TWA: 1 ppm STEL: 5 ppm (see 29 CFR 1910.1028)	1 ppm TWA 5 ppm STEL	
n-Hexane 110-54-3	50 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 500 ppm TWA: 1800 mg/m ³	50 ppm TWA 180 mg/m ³ TWA	1100 ppm
Cumene 98-82-8	50 ppm TWA	TWA: 50 ppm TWA: 245 mg/m ³ Skin	50 ppm TWA 245 mg/m ³ TWA Limit applies to skin	900 ppm
1,2,4 Trimethylbenzene 95-63-6	25 ppm TWA	-	25 ppm TWA 125 mg/m ³ TWA	-
Ethylbenzene 100-41-4	20 ppm TWA	TWA: 100 ppm TWA: 435 mg/m ³	100 ppm TWA 435 mg/m ³ TWA 125 ppm STEL 545 mg/m ³ STEL	800 ppm
Cyclohexane 110-82-7	100 ppm TWA	TWA: 300 ppm TWA: 1050 mg/m ³	300 ppm TWA 1050 mg/m ³ TWA	1300 ppm
Octane 111-65-9	300 ppm TWA	TWA: 500 ppm TWA: 2350 mg/m ³	300 ppm TWA 1450 mg/m ³ TWA 375 ppm STEL 1800 mg/m ³ STEL	1000 ppm
1,2,3-Trimethylbenzene 526-73-8	25 ppm TWA	-	25 ppm TWA 125 mg/m ³ TWA	-
Naphthalene 91-20-3	10 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 10 ppm TWA: 50 mg/m ³	10 ppm TWA 50 mg/m ³ TWA 15 ppm STEL 75 mg/m ³ STEL	250 ppm

Notes: The manufacturer has voluntarily elected to provide exposure limits contained in OSHA's 1989 air contaminants standard in its SDSs, even though certain of those exposure limits were vacated in 1992.

Engineering measures: Local or general exhaust required in an enclosed area or when there is inadequate ventilation. Use mechanical ventilation equipment that is explosion-proof.

Personal protective equipment

Eye protection: Use goggles or face-shield if the potential for splashing exists.

Skin and body protection: Use nitrile rubber, Viton® or PVA gloves for repeated or prolonged skin exposure. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times.

Respiratory protection: Use a NIOSH approved organic vapor chemical cartridge or supplied air respirators when there is the potential for airborne exposures to exceed permissible exposure limits or if excessive vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134. Self-contained breathing apparatus should be used for fire fighting.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid
Appearance Clear yellow liquid

Color	Yellow
Odor	Hydrocarbon
Odor Threshold	No data available.
<u>Property</u>	<u>Values (Method)</u>
Melting Point / Freezing Point	No data available.
Initial Boiling Point / Boiling Range	24-210 °C / 75-410 °F (ASTM D86)
Flash Point	-43 °C / -45 °F
Evaporation Rate	No data available.
Flammability (solid, gas)	Not applicable.
Flammability Limit in Air (%):	
Upper Flammability Limit:	7.6
Lower Flammability Limit:	1.4
Explosion limits:	No data available.
Vapor Pressure	5.5-15 psi (ASTM D4814)
Vapor Density	3-4
Specific Gravity / Relative Density	0.70-0.76
Water Solubility	No data available.
Solubility in other solvents	No data available.
Partition Coefficient	2.13-4.5
Decomposition temperature	No data available.
pH:	Not applicable
Autoignition Temperature	280 °C / 536 °F
Kinematic Viscosity	No data available.
Dynamic Viscosity	No data available.
Explosive Properties	No data available.
VOC Content (%)	100%
Density	No data available.
Bulk Density	Not applicable.

10. STABILITY AND REACTIVITY

<u>Reactivity</u>	The product is non-reactive under normal conditions.
<u>Chemical stability</u>	The material is stable at 70°F (21°C), 760 mmHg pressure.
<u>Possibility of hazardous reactions</u>	None under normal processing.
<u>Hazardous polymerization</u>	Will not occur.
<u>Conditions to avoid</u>	Excessive heat, sources of ignition, open flame.
<u>Incompatible Materials</u>	Strong oxidizing agents.
<u>Hazardous decomposition products</u>	None known under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Potential short-term adverse effects from overexposures

Inhalation	May cause irritation of respiratory tract. May cause drowsiness or dizziness. Breathing high concentrations of this material in a confined space or by intentional abuse can cause irregular heartbeats which can cause death.
Eye contact	Exposure to vapor or contact with liquid may cause mild eye irritation, including tearing, stinging, and redness.
Skin contact	Irritating to skin. Effects may become more serious with repeated or prolonged contact. May be absorbed through the skin in harmful amounts.

Ingestion

May be fatal if swallowed or vomited and enters airways. May cause irritation of the mouth, throat and gastrointestinal tract.

Acute toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50
Gasoline 86290-81-5	14000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h
Heptane (mixed isomers) 142-82-5	-	3000 mg/kg (Rabbit)	103 g/m ³ (Rat) 4 h
Butane (mixed isomers) 106-97-8	-	-	658 mg/L (Rat) 4 h
Pentane (mixed isomers) 78-78-4	-	-	450 mg/L (Mouse) 2 h
Hexane Isomers (other than n-Hexane) 107-83-5	> 5000 mg/kg (Rat)	-	-
Toluene 108-88-3	> 2000 mg/kg (Rat)	8390 mg/kg (Rabbit)	12.5 mg/L (Rat) 4 h
Xylene (mixed isomers) 1330-20-7	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.04 mg/L (Rat) 4 h
Benzene 71-43-2	> 2000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	> 20 mg/l (Rat) 4 h
n-Hexane 110-54-3	15000 mg/kg (Rat)	3000 mg/kg (Rabbit)	48000 ppm (Rat) 4 h
Cumene 98-82-8	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 20 mg/L (Rat) 6 h
1,2,4 Trimethylbenzene 95-63-6	3280 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	18,000 mg/m ³ (Rat) 4 h
Ethylbenzene 100-41-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	17.2 mg/L (Rat) 4 h
Cyclohexane 110-82-7	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	13.9 mg/L (Rat) 4 h
Octane 111-65-9	-	-	118 g/m ³ (Rat) 4 h
1,2,3-Trimethylbenzene 526-73-8	-	-	-
Naphthalene 91-20-3	490 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 340 mg/m ³ (Rat) 1 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

NAPHTHAS: In a large epidemiological study on over 15,000 employees at several petroleum refineries and amongst residents located near these refineries, no increased risk of kidney cancer was observed in association with gasoline exposures (a similar material). In a similar study, no increased risk of kidney cancer was observed among petroleum refinery workers, but there was a slight trend in the incidence of kidney cancers among service station employees, especially after a 30-year latency period. Altered mental state, drowsiness, peripheral motor neuropathy, irreversible brain damage (so-called Petrol Sniffer's Encephalopathy), delirium, seizures, and sudden death have been reported from repeated overexposure to some hydrocarbon solvents, naphthas, and gasoline.

ISOPARAFFINS: Studies in laboratory animals have shown that long-term exposure to similar materials (isoparaaffins) can cause kidney damage and kidney cancer in male laboratory rats. However, in-depth research indicates that these findings are unique to the male rat, and that these effects are not relevant to humans.

C9 AROMATIC HYDROCARBONS: A developmental inhalation study was conducted in laboratory mice. Increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate were observed at the highest exposure level (1,500 ppm). This exposure level was extremely toxic to pregnant female mice (44% mortality). Reduced fetal body weights were also observed at 500 ppm. A multi-generation reproduction inhalation study was conducted in laboratory rats.

Reductions in pup weights, pup weight gain, litter size, and pup survival were observed at 1,500 ppm, an exposure level at which significant maternal toxicity was observed. Reduced pup weight gain was also observed at 500 ppm.

BUTANES: Studies in laboratory animals indicate exposure to extremely high levels of butanes (1-10 or higher vol.% in air) may cause cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

PENTANES: Studies of pentane isomers in laboratory animals indicate exposure to extremely high levels (roughly 10 vol.%) may induce cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

TOLUENE: Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Abuse of toluene at high concentrations (e.g., glue sniffing and solvent abuse) has been associated with adverse effects on the liver, kidney and nervous system, and can cause CNS depression, cardiac arrhythmias, and death. Studies of workers indicate longterm exposure may be related to impaired color vision and hearing. Some studies of workers suggest longterm exposure may be related to neurobehavioral and cognitive changes. Some of these effects have been observed in laboratory animals following repeated exposure to high levels of toluene. Several studies of workers suggest longterm exposure may be related to small increases in spontaneous abortions and changes in some gonadotropic hormones. However, the weight of evidence does not indicate toluene is a reproductive hazard to humans. Studies in laboratory animals indicate some changes in reproductive organs following high levels of exposure, but no significant effects on mating performance or reproduction were observed. Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Findings in laboratory animals have been largely negative. Positive findings include small increases in minor skeletal and visceral malformations and developmental delays following very high levels of maternal exposure. Studies of workers indicate long-term exposure may be related to effects on the liver, kidney and blood, but these appear to be limited to changes in serum enzymes and decreased leukocyte counts. Adverse effects on the liver, kidney, thymus and nervous system were observed in animal studies following very high levels of exposure. The relevance of these findings to humans is not clear at this time.

XYLENES, ALL ISOMERS: Overexposure to xylene may cause upper respiratory tract irritation, headache, cyanosis, blood serum changes, nervous system damage and narcosis. Effects may be increased by the use of alcoholic beverages. Evidence of liver and kidney impairment were reported in workers recovering from a gross overexposure. Effects from Prolonged or Repeated Exposure: Impaired neurological function was reported in workers exposed to solvents including xylene. Studies in laboratory animals have shown evidence of impaired hearing following high levels of exposure. Studies in laboratory animals suggest some changes in reproductive organs following high levels of exposure but no significant effects on reproduction were observed. Studies in laboratory animals indicate skeletal and visceral malformations, developmental delays, and increased fetal resorptions following extremely high levels of maternal exposure with evidence of maternal toxicity. The relevance of these observations to humans is not clear at this time. Adverse effects on the liver, kidney, bone marrow (changes in blood cell parameters) were observed in laboratory animals following high levels of exposure. The relevance of these observations to humans is not clear at this time.

BENZENE: Studies of workers exposed to benzene show clear evidence that overexposure can cause cancer and other diseases of the blood forming organs including Acute Myelogenous Leukemia (AML), and Aplastic Anemia (AA), an often fatal disease. Some studies suggest overexposure to benzene may also be associated with Myelodysplastic Syndrome (MDS). Findings from a case control study of workers exposed to benzene was reported during the 2009 Benzene Symposium in Munich included an increase in Acute Myeloid Leukemias and Non-Hodgkins Lymphoid Neoplasms (NHLN) of the subtype follicular lymphoma (FL) in some occupational categories. Some studies of workers exposed to benzene have shown an association with increased rates of chromosome aberrations in circulating lymphocytes. One study of women workers exposed to benzene

suggested a weak association with irregular menstruation. However, other studies of workers exposed to benzene have not demonstrated clear evidence of an effect on fertility or reproductive outcome in humans. Benzene can cross the placenta and affect the developing fetus. Cases of AA have been reported in the offspring of persons severely overexposed to benzene. Studies in laboratory animals indicate that prolonged, repeated exposure to high levels of benzene vapor can cause bone marrow suppression and cancer in multiple organ systems. Studies in laboratory animals show evidence of adverse effects on male reproductive organs following high levels of exposure but no significant effects on reproduction have been observed. Embryotoxicity has been reported in studies of laboratory animals but effects were limited to reduced fetal weight and minor skeletal variations. Benzene has been classified as a proven human carcinogen by OSHA and a Group 1 (Carcinogenic to Humans) material by IARC. The current proposed IARC classification for benzene is summarized as follows: Sufficient evidence for Acute Myeloid Leukemia; limited evidence for Acute Lymphatic Leukemia, Chronic Lymphatic Leukemia, Non-Hodgkin Lymphoma, and Multiple Myeloma.

N-HEXANE: Long-term or repeated exposure to n-hexane can cause peripheral nerve damage. Initial symptoms are numbness of the fingers and toes. Also, motor weakness can occur in the digits, but may also involve muscles of the arms, thighs and forearms. The onset of these symptoms may be delayed for several months to a year after the beginning of exposure. Testicular atrophy and partial to full loss of the germ cell line were observed in sub-chronic high-dose inhalation studies of laboratory rodents. These effects appeared irreversible. Rodent reproduction studies have shown evidence of reduced fetal weight but no frank malformations.

CUMENE: Overexposure to cumene may cause upper respiratory tract irritation and CNS depression. Studies in laboratory animals indicate evidence of respiratory tract hyperplasia, and adverse effects on the liver, kidney and adrenal glands following high level exposure. The relevance of these findings to humans is not clear at this time. Findings from lifetime laboratory rodent inhalation studies were as follows: In F344/N rats: an increased incidence of renal carcinomas and adenomas, respiratory epithelial adenomas, and interstitial cell adenomas of the testes. In B6C3F1 mice: an increased incidence of carcinomas and adenomas of the bronchi and lung, liver neoplasms, hemangiosarcomas of the spleen, and adenomas of the thyroid.

1,2,4-TRIMETHYLBENZENE: The following information pertains to a mixture of C9 aromatic hydrocarbons, over 40% of which was composed of 1,2,4-trimethylbenzene. A developmental inhalation study was conducted in laboratory mice. Increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate were observed at the highest exposure level (1,500 ppm). This exposure level was extremely toxic to pregnant female mice (44% mortality). Reduced fetal body weights were also observed at 500 ppm. A multi-generation reproduction inhalation study was conducted in laboratory rats. Reductions in pup weights, pup weight gain, litter size, and pup survival were observed at 1,500 ppm, an exposure level at which significant maternal toxicity was observed. Reduced pup weight gain was also observed at 500 ppm. Embryotoxicity has been reported in studies of laboratory animals. Adverse effects included increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate.<n><n>

ETHYLBENZENE: Findings from a 2-year inhalation study in rodents conducted by NTP were as follows: Effects were observed only at the highest exposure level (750 ppm). At this level the incidence of renal tumors was elevated in male rats (tubular carcinomas) and female rats (tubular adenomas). The incidence of tumors was also elevated in male mice (alveolar and bronchiolar carcinomas) and female mice (hepatocellular carcinomas). IARC has classified ethyl benzene as "possibly carcinogenic to humans" (Group 2B). Studies in laboratory animals indicate some evidence of post-implantation deaths following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate limited evidence of renal malformations, resorptions, and developmental delays following high levels of maternal exposure with evidence of maternal toxicity. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals have demonstrated evidence of ototoxicity (hearing loss)

following exposure levels as low as 300 ppm for 5 days. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland.

NAPHTHALENE: Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from overexposure to naphthalene. Persons with glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have been reported in persons overexposed to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect. Hemolytic anemia has been observed in laboratory animals exposed to naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) in vitro. Naphthalene has been classified as Possibly Carcinogenic to Humans (2B) by IARC, based on findings from studies in laboratory animals.

CARBON MONOXIDE: is a chemical asphyxiant with no warning properties (such as odor). At 400-500 ppm for 1 hour headache and dyspnea may occur. If activity is increased, symptoms of overexposure may include nausea, irritability, increased respiration, tinnitus, sweating, chest pain, confusion, impaired judgement, dizziness, weakness, drowsiness, ataxia, irregular heart beat, cyanosis and pallor. Levels in excess of 1000 ppm can result in collapse, loss of consciousness, respiratory failure and death. Extremely high concentrations (12,800 ppm) can cause immediate unconsciousness and death in 1-3 minutes. Repeated anoxia can lead to central nervous system damage and peripheral neuropathy, with loss of sensation in the fingers, amnesia, and mental deterioration and possible congestive heart failure. Damage may also occur to the fetus, lung, liver, kidney, spleen, cardiovascular system and other organs.

WHOLLY-VAPORIZED UNLEADED GASOLINE: Lifetime exposure to wholly vaporized unleaded gasoline produced an increased incidence of liver tumors in female mice exposed to the highest exposure concentration (2056 ppm) and α -2 urinary globulin-mediated kidney tumors in male rats. No exposure-related tumors were observed in male mice or female rats. The male-specific rat kidney tumors are not considered relevant to human health. Mice receiving lifetime repeated skin application of various petroleum naphthas exhibited an irritation-dependent increased incidence of skin tumors. Additional studies suggest that these tumors occur through a mechanism that may not be relevant to human health. Epidemiological data from over 18,000 petroleum marketing and distribution workers showed no increased risk of leukemia, multiple myeloma, or kidney cancer resulting from gasoline exposure. Unleaded gasoline has been identified as possibly carcinogenic to humans (2B) by the International Agency for Research on Cancer (IARC).

COMBUSTION ENGINE EXHAUST: Chronic inhalation studies of gasoline engine exhaust in mice, rats and hamsters did not produce any carcinogenic effects. Condensates/extracts of gasoline engine exhaust produced an increase in tumors compared to controls when testing by skin painting, subcutaneous injection, intratracheal instillation or implantation into the lungs. Gasoline exhaust has been classified as possibly carcinogenic to humans (2B) by the International Agency for Research on Cancer (IARC).

Adverse effects related to the physical, chemical and toxicological characteristics

Signs and Symptoms

Irritating to the skin and mucous membranes. Symptoms may include redness, itching, and inflammation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Prolonged or repeated exposure may cause damage to organs. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

Sensitization Not expected to be a skin or respiratory sensitizer.

Mutagenic effects May cause genetic defects.

Carcinogenicity May cause cancer.

Cancer designations are listed in the table below

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Gasoline 86290-81-5	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Not Listed	Not Listed
Heptane (mixed isomers) 142-82-5	Not Listed	Not Listed	Not Listed	Not Listed
Butane (mixed isomers) 106-97-8	Not Listed	Not Listed	Not Listed	Not Listed
Pentane (mixed isomers) 78-78-4	Not Listed	Not Listed	Not Listed	Not Listed
Hexane Isomers (other than n-Hexane) 107-83-5	Not Listed	Not Listed	Not Listed	Not Listed
Toluene 108-88-3	Not Classifiable (A4)	Not Classifiable (3)	Not Listed	Not Listed
Xylene (mixed isomers) 1330-20-7	Not classifiable (A4)	Not classifiable (3)	Not Listed	Not Listed
Benzene 71-43-2	Confirmed human carcinogen (A1)	Carcinogenic to humans (1)	Known to be human carcinogen	Known carcinogen
n-Hexane 110-54-3	Not Listed	Not Listed	Not Listed	Not Listed
Cumene 98-82-8	Not listed	Possible human carcinogen (2B)	Reasonably anticipated to be a human carcinogen	Not listed
1,2,4 Trimethylbenzene 95-63-6	Not Listed	Not Listed	Not Listed	Not Listed
Ethylbenzene 100-41-4	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Not Listed	Not Listed
Cyclohexane 110-82-7	Not Listed	Not Listed	Not Listed	Not Listed
Octane 111-65-9	Not Listed	Not Listed	Not Listed	Not Listed
1,2,3-Trimethylbenzene 526-73-8	Not Listed	Not Listed	Not Listed	Not Listed
Naphthalene 91-20-3	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Reasonably anticipated to be a human carcinogen	Not Listed

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity (STOT) - single exposure Respiratory system. Central nervous system.

Specific Target Organ Toxicity (STOT) - repeated exposure Blood. Blood-forming organs. Immune system.

Aspiration hazard May be fatal if swallowed or vomited and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity This product should be considered toxic to aquatic organisms, with the potential to cause long lasting adverse effects in the aquatic environment.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Gasoline 86290-81-5	72-hr EC50 = 56 mg/l Algae	96-hr LC50 = 11 mg/l Rainbow trout (static)	-	48-hr LC50 = 7.6 mg/l Daphnia magna
Heptane (mixed isomers)	-	96-hr LC50 = 375 mg/L	-	-

142-82-5		Tilapia		
Butane (mixed isomers) 106-97-8	-	-	-	-
Pentane (mixed isomers) 78-78-4	-	96-hr LC50 = 3.1 mg/L Rainbow trout	-	48-hr EC50 = >1 - <10 mg/L Daphnia magna
Hexane Isomers (other than n-Hexane) 107-83-5	-	-	-	-
Toluene 108-88-3	72-hr EC50 = 12.5 mg/l Algae	96-hr LC50 <= 10 mg/l Rainbow trout	-	48-hr EC50 = 5.46-9.83 mg/l Daphnia magna 48-hr EC50 = 11.5 mg/l Daphnia magna (Static)
Xylene (mixed isomers) 1330-20-7	72-hr EC50 = 11 mg/l Algae	96-hr LC50 = 8 mg/l Rainbow trout	-	48-hr LC50 = 3.82 mg/l Daphnia magna
Benzene 71-43-2	72-hr EC50 = 29 mg/l Algae	96-hr LC50 = 5.3 mg/l Rainbow trout (flow-through)	-	48-hr EC50 = 8.76-15.6 mg/l Daphnia magna (Static)
n-Hexane 110-54-3	-	96-hr LC50 = 2.5 mg/l Fathead minnow	-	-
Cumene 98-82-8	72-hr EC50 = 2.6 mg/l Algae	96-hr LC50 = 6.04-6.61 mg/l Fathead minnow (Flow-through) 96-hr LC50 = 2.7 mg/l Rainbow trout (semi-static)	-	48-hr EC50 = 7.9-14.1 mg/l Daphnia magna (static)
1,2,4 Trimethylbenzene 95-63-6	-	96-hr LC50 = 7.19-8.28 mg/l Fathead minnow (flow-through)	-	48-hr EC50 = 6.14 mg/L Daphnia magna
Ethylbenzene 100-41-4	72-hr EC50 = 1.7-7.6 mg/l Algae	96-hr LC50 = 4 mg/L Rainbow trout	-	48-hr EC50 = 1-4 mg/L Daphnia magna
Cyclohexane 110-82-7	72-hr EC50 = 500 mg/l Algae	96-hr LC50 = 3.96-5.18 mg/l Fathead minnow	-	48-hr EC50 = 1.7-3.5 mg/L Bay shrimp
Octane 111-65-9	-	-	-	48-hr LC50 = 0.38 mg/l Daphnia magna
1,2,3-Trimethylbenzene 526-73-8	-	96-hr LC50 = 7.72 mg/l Fathead Minnow (flow-through)	-	-
Naphthalene 91-20-3	-	96-hr LC50 = 0.91-2.82 mg/l Rainbow trout (static) 96-hr LC50 = 1.99 mg/l Fathead minnow (static)	-	48-hr LC50 = 1.6 mg/l Daphnia magna

Persistence and degradability

Expected to be inherently biodegradable. The presence of ethanol in this product may impede the biodegradation of benzene, toluene, ethylbenzene and xylene in groundwater, resulting in elongated plumes of these constituents.

Bioaccumulation

Has the potential to bioaccumulate.

Mobility in soil

May partition into air, soil and water.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Description of Waste Residues

This material may be a flammable liquid waste.

Safe Handling of Wastes

Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required. Use appropriate grounding and bonding practices. Use only non-sparking tools. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. No smoking.

Disposal of Wastes / Methods of Disposal

The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

Methods of Contaminated Packaging Disposal

Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT (49 CFR 172.101):

UN Proper Shipping Name:	Gasoline
UN/Identification No:	UN 1203
Class:	3
Packing Group:	II

TDG (Canada):

UN Proper Shipping Name:	Gasoline
UN/Identification No:	UN 1203
Transport Hazard Class(es):	3
Packing Group:	II

15. REGULATORY INFORMATION

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b):

This product and/or its components are listed on the TSCA Chemical Inventory.

EPA Superfund Amendment & Reauthorization Act (SARA):**SARA Section 302:**

This product does not contain any component(s) included on EPA's Extremely Hazardous Substance (EHS) List.

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Gasoline	NA
Heptane (mixed isomers)	NA
Butane (mixed isomers)	NA
Pentane (mixed isomers)	NA
Hexane Isomers (other than n-Hexane)	NA
Toluene	NA
Xylene (mixed isomers)	NA
Benzene	NA
n-Hexane	NA
Cumene	NA
1,2,4 Trimethylbenzene	NA
Ethylbenzene	NA
Cyclohexane	NA
Octane	NA
1,2,3-Trimethylbenzene	NA
Naphthalene	NA

SARA Section 304:

This product may contain component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	Hazardous Substances RQs
Gasoline	NA
Heptane (mixed isomers)	NA
Butane (mixed isomers)	NA
Pentane (mixed isomers)	NA
Hexane Isomers (other than n-Hexane)	NA

Toluene	1000 lb final RQ 454 kg final RQ
Xylene (mixed isomers)	100
Benzene	10
n-Hexane	5000
Cumene	5000
1,2,4 Trimethylbenzene	NA
Ethylbenzene	1000
Cyclohexane	1000
Octane	NA
1,2,3-Trimethylbenzene	NA
Naphthalene	100 lb final RQ 45.4 kg final RQ

SARA Section 311/312:

The following EPA hazard categories apply to this product:

Acute Health Hazard
Chronic Health Hazard
Fire Hazard

SARA Section 313:

This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting:
Gasoline	None
Heptane (mixed isomers)	None
Butane (mixed isomers)	None
Pentane (mixed isomers)	None
Hexane Isomers (other than n-Hexane)	None
Toluene	1.0 % de minimis concentration
Xylene (mixed isomers)	1.0 % de minimis concentration
Benzene	0.1 % de minimis concentration
n-Hexane	1.0 % de minimis concentration
Cumene	1.0 % de minimis concentration
1,2,4 Trimethylbenzene	1.0 % de minimis concentration
Ethylbenzene	0.1 % de minimis concentration
Cyclohexane	1.0 % de minimis concentration
Octane	None
1,2,3-Trimethylbenzene	None
Naphthalene	0.1 % de minimis concentration

State and Community Right-To-Know Regulations:

The following component(s) of this material are identified on the regulatory lists below:

Gasoline

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 0957
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Carcinogen; Flammable - third degree
New Jersey - Environmental Hazardous	SN 0957 TPQ: 10000 lb (Under N.J.A.C. 7:1G, environmental

Substances List:	hazardous substances in mixtures such as gasoline or new and used petroleum oil may be reported under these categories)
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Heptane (mixed isomers)	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1339
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Butane (mixed isomers)	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 0273
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - fourth degree
New Jersey - Environmental Hazardous Substances List:	SN 0273 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Pentane (mixed isomers)	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1064
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - fourth degree
New Jersey - Environmental Hazardous Substances List:	SN 1064 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 -	Not Listed

List of Hazardous Substances:	
Hexane Isomers (other than n-Hexane)	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1285
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Toluene	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Developmental toxicity, initial date 1/1/91 Female reproductive toxicity, initial date 8/7/09
New Jersey Right-To-Know:	SN 1866
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin)
Michigan Critical Materials Register List:	100 lb Annual usage threshold
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree; Teratogen
New Jersey - Environmental Hazardous Substances List:	SN 1866 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)
Xylene (mixed isomers)	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 2014
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin)
Michigan Critical Materials Register List:	100 lb Annual usage threshold all isomers
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 2014 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)
Benzene	
Louisiana Right-To-Know:	Not Listed

California Proposition 65:	Carcinogen, initial date 2/27/87 Developmental toxicity, initial date 12/26/97 Male reproductive toxicity, initial date 12/26/97 SN 0197
New Jersey Right-To-Know:	Environmental hazard; Special hazardous substance
Pennsylvania Right-To-Know:	Carcinogen; Extraordinarily hazardous
Massachusetts Right-To-Know:	Not Listed
Florida Substance List:	Toxic (skin); Flammable (skin); Carcinogen (skin)
Rhode Island Right-To-Know:	100 lb Annual usage threshold
Michigan Critical Materials Register List:	Carcinogen; Extraordinarily hazardous
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Present
Pennsylvania RTK - Special Hazardous Substances:	Carcinogen; Flammable - third degree; Mutagen SN 0197 TPQ: 500 lb
New Jersey - Special Hazardous Substances:	
New Jersey - Environmental Hazardous Substances List:	Present
Illinois - Toxic Air Contaminants:	10 lb RQ (air); 1 lb RQ (land/water)
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	
n-Hexane	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1340
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To-Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 1340 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1 lb RQ (air); 1 lb RQ (land/water)
Cumene	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Carcinogen, initial date 4/6/10
New Jersey Right-To-Know:	SN 0542
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To-Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin)
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 0542 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	5000 lb RQ (air); 1 lb RQ (land/water)
1,2,4 Trimethylbenzene	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1929

Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Ethylbenzene	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Carcinogen, initial date 6/11/04
New Jersey Right-To-Know:	SN 0851
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Carcinogen; flammable - Third degree
New Jersey - Environmental Hazardous Substances List:	SN 0851 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)
Cyclohexane	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 0565
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 0565 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)
Octane	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1434
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable

Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
1,2,3-Trimethylbenzene	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1929
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed
Naphthalene	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Carcinogen, initial date 4/19/02
New Jersey Right-To-Know:	SN 1322 SN 3758
Pennsylvania Right-To-Know:	Environmental hazard Present (particulate)
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Carcinogen
New Jersey - Environmental Hazardous Substances List:	SN 1322 TPQ: 500 lb (Reportable at the de minimis quantity of >0.1%)
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	100 lb RQ (air); 1 lb RQ (land/water)

Canada DSL/NDL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Canadian Regulatory Information: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Gasoline	B2,D2A,D2B	0.1%
Heptane (mixed isomers)	B2,D2B	1%

Butane (mixed isomers)	A,B1	1%
Pentane (mixed isomers)	B2	1%
Hexane Isomers (other than n-Hexane)	B2	1%
Toluene	B2,D2A,D2B	0.1%
Xylene (mixed isomers)	B2,D2A,D2B	m-, o-isomers 1.0%; p-isomer 0.1%
Benzene	B2,D2A,D2B	0.1%
n-Hexane	B2,D2A,D2B	1%
Cumene	B2,D2A	0.1%
1,2,4 Trimethylbenzene	B3,D2B	1%
Ethylbenzene	B2,D2A,D2B	0.1%
Cyclohexane	B2,D2B	1%
Octane	B2,D2B	1%
1,2,3-Trimethylbenzene	B3	1%
Naphthalene	B4,D2A	0.1%



Note: Not applicable.

16. OTHER INFORMATION

Prepared By Toxicology and Product Safety

Revision Notes

Revision Date 03/19/2018

Previous Publish Date 11/06/2017

Revised Sections

The following sections (§) have been updated:

2. HAZARD IDENTIFICATION
3. COMPOSITION/INFORMATION ON INGREDIENTS
4. FIRST AID MEASURES
11. TOXICOLOGICAL INFORMATION

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 is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not 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.

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SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name (as labeled):	Duo Patch
Synonyms:	N/A
CAS No:	Mixture
1.2 Product Use:	Concrete repair mortar
1.3 Company Name:	SpecChem
Company Address:	1511 Baltimore Ave; Suite 600
Company Address Cont:	Kansas City, MO 64108
Business Phone:	(816) 968-5600
Website:	www.specchemllc.com
1.4 Emergency Telephone Number:	Chemtrec: (800) 424-9300
Date of Last Revision:	February 1, 2015
Date of Current Revision:	July 1, 2018

SECTION 2 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a gray powder with minimal odor.

Health Hazards: May cause skin and respiratory irritation and burns to the eyes. Contact with skin may cause an allergic reaction. Repeated exposure may cause damage to the lungs. Contains components that are defined as human carcinogens.

Flammability Hazards: This product is not considered flammable.

Reactivity Hazards: None.

Environmental Hazards: The environmental effects of this product have not been investigated, however release may cause long term adverse environmental effects.

US DOT Symbols Not Regulated



EU and GHS Symbols

Signal Word Danger

2.1 EU Labeling and Classification:

This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.

EU HAZARD CLASSIFICATION OF INGREDIENTS PER DIRECTIVE 1272/2008/EC:

Index Number:

238-878-4 is not listed in Annex I

266-043-4 is not listed in Annex I

Substances not listed either individually or in group entries must be self classified.

Components Contributing to Classification:

Crystalline Silica (Quartz)/Silica Sand, Portland Cement, Calcium Oxide, Aluminum Sulfate

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2.2 Label Elements:

GHS Hazard Classifications:

Carcinogenicity Category 2
STOT – SE Category 3 (Respiratory System)
Skin Irritation Category 2
Skin Sensitization Category 1
Eye Damage Category 1

Hazard Statements:

H351 Suspected of causing cancer
H373 May cause damage to organs
(Respiratory System) through prolonged or
repeated exposure

H335 May cause respiratory irritation

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H318 Causes serious eye damage

Precautionary Statements:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions
have been read and understood.

P260 Do not breathe

dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated
area.

P272 Contaminated work clothing should not be
allowed out of the workplace

P270 Do not eat, drink or smoke when using
this product.

P280 Wear protective gloves/eye
protection/face protection.

Response Statements:

P308+P313 IF exposed or concerned: Get
medical advice/attention.

P304+P340 IF INHALED: Remove person to
fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER/Doctor if you
feel unwell.

P302+P352 IF ON SKIN: Wash with plenty of
water.

P333+P312 If skin irritation or rash occurs: Get
medical advice/attention.

P362+P364 Take off contaminated clothing and
wash it before reuse.

P305+P351+P338 IF IN EYES: Rinse

cautiously with water for several minutes.

Remove contact lenses, if present and easy to
do. Continue rinsing.

P310 Immediately call a POISON
CENTER/Doctor.

Storage Statements:

P403+P233 Store in a well-ventilated place.

Keep container tightly closed.

P405 Store locked up.

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Disposal Statements:

P501 Dispose of contents/container in accordance with local/regional/national/international regulations..

2.3 Health Hazards or Risks From Exposure:

Symptoms of Overexposure by Route of Exposure:

The most significant routes of overexposure for this product are by contact with skin or eyes. The symptoms of overexposure are described in the following paragraphs.

Acute:

Inhalation: May cause respiratory irritation.

Skin Contact: May cause irritation to skin.

Eye Contact: Contact with the eyes may cause burns or irritation.

Ingestion: May cause gastrointestinal irritation, nausea, and vomiting.

Chronic: Repeated exposure may cause skin dryness or cracking.

Target Organs:

Acute: Eyes, Skin, Respiratory

Chronic: Lung, Skin

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	WT%	CAS No.	EINECS No.	Hazard Classification
Crystalline Silica (Quartz)/ Silica Sand	50–70%	14808-60-7	238-878-4	Carc. 2, STOT RE2
Portland Cement	25–45%	65997-15-1	266-043-4	STOT SE3, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1
Calcium Oxide	3–10%	1305-78-8	215-138-9	STOT SE3, Skin Irrit. 2, Eye Dam. 1
Aluminum Sulfate	1–4%	10043-01-3	233-135-0	STOT SE3, Skin Irrit. 2, Eye Dam. 1
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).				

Note: All WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard JIS Z 7250:2000

SECTION 4 – FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye Contact:

If product enters the eyes, flush with plenty of water or eye wash solution for several minutes. Remove contacts if present and easy to do. Seek medical attention if irritation persists.

Skin Contact:

Wash skin thoroughly with soap and water after handling. Seek medical attention if irritation develops and persists.

Inhalation:

If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

Ingestion:

If product is swallowed, call physician or poison center if you feel unwell.

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If professional advice is not available, do not induce vomiting. Never induce vomiting or give dilutents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

**Medical Conditions
Generally Aggravated
By Exposure:**

Pre-existing skin, respiratory system or eye problems may be aggravated by prolonged contact.

4.2 Symptoms and Effects Both Acute and Delayed: Exposure to skin and respiratory may cause irritation. Contact with the eyes may cause burns. Contact with skin may cause an allergic reaction. Repeated exposure may cause damage to the lungs.

4.3 Recommendations to Physicians: Treat symptoms and eliminate overexposure.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Fire Extinguishing Materials:

Use the following fire extinguishing materials:

Water Spray:	Yes
Foam:	Yes
Halon:	Yes
Carbon Dioxide:	Yes
Dry Chemical:	Yes
Other:	Any "C" Class

5.2 Unusual Fire and Explosion Hazards:

Irritating and toxic fumes may be produced at high temperatures. Use of water may result if the formation of a toxic aqueous solution. Do not allow run-off from fire fighting to enter drains or water courses.

Explosive Sensitivity to Mechanical Impact:	No
Explosive Sensitivity to Static Discharge:	No

5.3 Special Fire-Fighting Procedures:

- Incipient fire responders should wear eye protection.
- Structural firefighters must wear Self-Contained Breathing Apparatus (SCBA) and full protective equipment.
- Isolate materials not yet involved in the fire and protect personnel.
- Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray.

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- If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING SYSTEM		HMIS RATING SYSTEM	
<p>Flammability</p> <p>Health Reactivity</p> <p>Other</p>		HAZARDOUS MATERIAL IDENTIFICATION SYSTEM	
		HEALTH HAZARD (BLUE)	2
		FLAMMABILITY HAZARD (RED)	0
		PHYSICAL HAZARD (YELLOW)	0
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	See Sect 8		See Sect 8
For Routine Industrial Use and Handling Applications			
Hazard Scale: 0 = Minimum 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic Hazard			

SECTION 6 – ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Use cautious judgment when cleaning up spill. Wear suitable protective clothing, gloves, and eye/face protection.

6.2 Environmental Precautions:

If liquid was introduced, construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.

6.3 Spill and Leak Response:

Small Spills:

- Collect material via broom or mop. Place in tightly sealed containers for proper disposal.
- Approach spill areas with caution.
- If liquid was introduced, create a dike or trench to contain material.
- Soak up with absorbent material such as clay, sand or other suitable non-reactive material.

Large Spills:

- Place in leak-proof containers. Seal tightly for proper disposal.
- Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING AND STORAGE

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7.1 Precautions for Safe Handling:

To prevent eye contact under the foreseeable conditions of use, wear appropriate safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling.

7.2 Storage and Handling Practices:

Keep away from incompatible materials. Keep container closed when not in use and store in well ventilated area.

7.3 Specific Uses:

Rapid setting concrete repair mortar.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Parameters:

Ingredients	CAS No.	OSHA PEL	NIOSH PEL	ACGIH TWA
Crystalline Silica (Quartz)/Silica Sand	14808-60-7	TWA 0.1 mg/m3 (resp) TWA 0.3 mg/m3 (total)	Ca TWA 0.05 mg/m3	0.025 mg/m3
Portland Cement	65997-15-1	TWA 5 mg/m3 (resp) TWA 15 mg/m3 (total)	TWA 5 mg/m3 (resp) TWA 10 mg/m3 (total)	10 mg/m3 (total)
Calcium Oxide	1305-78-8	TWA 5 mg/m3	TWA 2 mg/m3	TWA 2 mg/m3
Aluminum Sulfate	10043-01-3	TWA 2 mg/m3	TWA 2 mg/m3	TWA 2 mg/m3

8.2 Exposure Controls:

Ventilation and Engineering Controls:

Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132), or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory Protection:

Maintain airborne contaminant concentrations below guidelines listed above. Use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Eye Protection:

Safety glasses or goggles are required. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

Hand Protection:

Chemical resistant gloves are required to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European

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Body Protection:

Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.
Use body protect appropriate to task being performed.
If necessary, refer to appropriate Standards of Canada, or appropriate standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

Appearance (Physical State and Color): Gray powder

Odor: Minimal

Odor Threshold: No data available

pH: No data available

Melting/Freezing Point: No data available

Boiling Point: No data available

Flash Point: No data available

Evaporation Rate: No data available

Flammability (Solid; Gas): No data available

Upper/Lower Flammability or Explosion Limits: No data available

Vapor Pressure (mm Hg @ 20°C (68° F): No data available

Vapor Density: No data available

Relative Density: No data available

Specific Gravity: 2.6 - 3.2

Solubility in Water: Miscible

Weight per Gallon: 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

9.2 Other Information: No data available

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity:

This product is not reactive.

10.2 Stability:

Stable under conditions of normal storage and use.

10.3 Possibility of Hazardous Reactions:

Will not occur.

10.4 Conditions to Avoid:

No data available.

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10.5 Incompatible Substances: Hydrogen fluoride.

10.6 Hazardous Decomposition Products: No data available.

SECTION 11 – TOXICOLOGY INFORMATION

11.1 Information on Toxicological Effects:

Toxicity Data:

No data available

Suspected Cancer Agent:

Crystalline Silica (Quartz)/Silica Sand (CAS 14808-60-7) is found on one or more of the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore is considered to be a cancer-causing agent by these agencies.

Irritancy:

Skin, eye, and respiratory irritant.

Sensitization to the Product:

This product is expected to cause skin sensitization.

Germ Cell Mutagenicity:

This product does not contain ingredients that are suspected to be a germ cell mutagenic.

Reproductive Toxicity:

This product is not expected to be a human reproductive toxicant.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity:

No data available

12.2 Persistence and Degradability:

No specific data available on this product.

12.3 Bioaccumulative Potential:

No specific data available on this product.

12.4 Mobility in Soil:

No specific data available on this product.

12.5 Results of PBT and vPvB Assessment: No specific data available on this product.

12.6 Other Adverse Effects:

No data available

12.7 Water Endangerment Class:

At present, there are no ecotoxicological assessments for this product.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:

Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Australia, EU Member States and Japan.

13.2 EU Waste Code:

Not determined

SECTION 14 - TRANSPORTATION INFORMATION

14.1 U.S. Department of Transportation (DOT) Shipping Regulations:

This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.

UN Identification Number:

Not applicable

Proper Shipping Name:

Not regulated

Hazard Class Number and Description:

Not applicable

Packing Group:

Not applicable

DOT Label(s) Required:

Not applicable

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**North American Emergency
Response Guidebook Number:**

Not applicable

14.2 Environmental Hazards:

Marine Pollutant:

The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

14.3 Special Precaution for User:

None

14.4 International Air Transport Association

Shipping Information (IATA):

Not regulated.

14.5 International Maritime Organization

Shipping Information (IMO):

UN Identification Number:

Not applicable

Proper Shipping Name:

Not regulated

Hazard Class Number and Description:

Not applicable

Packing Group:

Not applicable

EMS-No:

Not applicable

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations Specific for the Substance or Mixture:

United States Regulations:

U.S. SARA Reporting Requirements:

The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA 311/312:

Acute Health: Yes; Chronic Health: Yes; Fire: No; Reactivity: No

U.S. CERCLA Reportable Quantity:

None

U.S. TSCA Inventory Status:

The components of this product are listed on the TSCA Inventory or are exempted from listing.

Other U.S. Federal Regulations:

None known

California Safe Drinking Water and Toxic Enforcement Act (Proposition 66):

This product does contain "Silica, crystalline", which is on the Proposition 65 Lists.

15.2 Canadian Regulations:

Canadian DSL/NDSL Inventory Status:

Components are DSL Listed, NDSL Listed and/or are exempt from listing

Other Canadian Regulations:

Not applicable

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists:

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

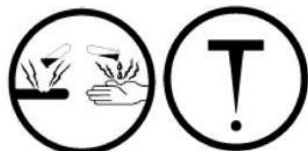
Canadian WHMIS Classification and Symbols:

This product is Class E, Corrosive, and D2B, Materials causing other toxic effects, per WHMIS Controlled Product Regulations

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15.3 European Economic Community Information:

This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives. See Section 2 for Details.

Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

15.4 Australian Information for Product:

Components of this product are listed on the International Chemical Inventory list.

15.5 Japanese Information for Product:

Japanese Minister of International Trade and Industry (MITI) Status: The components of this product are not listed as Class I specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

15.6 International Chemical Inventories:

Listing of the components on individual country Chemical Inventories is as follows:

Australian Inventory of Chemical Substances (AICS): Listed

Korean Existing Chemicals List (ECL): Listed

Japanese Existing National Inventory of Chemical Substances (ENCS): Listed

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed

U.S. TSCA: Listed

SECTION 16 – OTHER INFORMATION

Prepared By: Chris Eigbrett (MSDS to GHS Compliance)

Date of Printing: July 1, 2018

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. SpecChem assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, SpecChem assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

END OF SDS SHEET

Safety Data Sheet



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SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name (as labeled):	Duo Patch
Synonyms:	N/A
CAS No:	Mixture
1.2 Product Use:	Concrete repair mortar
1.3 Company Name:	SpecChem
Company Address:	1511 Baltimore Ave; Suite 600
Company Address Cont:	Kansas City, MO 64108
Business Phone:	(816) 968-5600
Website:	www.specchemllc.com
1.4 Emergency Telephone Number:	Chemtrec: (800) 424-9300
Date of Last Revision:	February 1, 2015
Date of Current Revision:	July 1, 2018

SECTION 2 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a gray powder with minimal odor.

Health Hazards: May cause skin and respiratory irritation and burns to the eyes. Contact with skin may cause an allergic reaction. Repeated exposure may cause damage to the lungs. Contains components that are defined as human carcinogens.

Flammability Hazards: This product is not considered flammable.

Reactivity Hazards: None.

Environmental Hazards: The environmental effects of this product have not been investigated, however release may cause long term adverse environmental effects.

US DOT Symbols Not Regulated



EU and GHS Symbols

Signal Word Danger

2.1 EU Labeling and Classification:

This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.

EU HAZARD CLASSIFICATION OF INGREDIENTS PER DIRECTIVE 1272/2008/EC:

Index Number:

238-878-4 is not listed in Annex I

266-043-4 is not listed in Annex I

Substances not listed either individually or in group entries must be self classified.

Components Contributing to Classification:

Crystalline Silica (Quartz)/Silica Sand, Portland Cement, Calcium Oxide, Aluminum Sulfate

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2.2 Label Elements:

GHS Hazard Classifications:

Carcinogenicity Category 2
STOT – SE Category 3 (Respiratory System)
Skin Irritation Category 2
Skin Sensitization Category 1
Eye Damage Category 1

Hazard Statements:

H351 Suspected of causing cancer
H373 May cause damage to organs
(Respiratory System) through prolonged or
repeated exposure

H335 May cause respiratory irritation

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H318 Causes serious eye damage

Precautionary Statements:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions
have been read and understood.

P260 Do not breathe

dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated
area.

P272 Contaminated work clothing should not be
allowed out of the workplace

P270 Do not eat, drink or smoke when using
this product.

P280 Wear protective gloves/eye
protection/face protection.

Response Statements:

P308+P313 IF exposed or concerned: Get
medical advice/attention.

P304+P340 IF INHALED: Remove person to
fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER/Doctor if you
feel unwell.

P302+P352 IF ON SKIN: Wash with plenty of
water.

P333+P312 If skin irritation or rash occurs: Get
medical advice/attention.

P362+P364 Take off contaminated clothing and
wash it before reuse.

P305+P351+P338 IF IN EYES: Rinse
cautiously with water for several minutes.
Remove contact lenses, if present and easy to
do. Continue rinsing.

P310 Immediately call a POISON
CENTER/Doctor.

Storage Statements:

P403+P233 Store in a well-ventilated place.

Keep container tightly closed.

P405 Store locked up.

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Disposal Statements:

P501 Dispose of contents/container in accordance with local/regional/national/international regulations..

2.3 Health Hazards or Risks From Exposure:

Symptoms of Overexposure by Route of Exposure:

The most significant routes of overexposure for this product are by contact with skin or eyes. The symptoms of overexposure are described in the following paragraphs.

Acute:

Inhalation: May cause respiratory irritation.

Skin Contact: May cause irritation to skin.

Eye Contact: Contact with the eyes may cause burns or irritation.

Ingestion: May cause gastrointestinal irritation, nausea, and vomiting.

Chronic: Repeated exposure may cause skin dryness or cracking.

Target Organs:

Acute: Eyes, Skin, Respiratory

Chronic: Lung, Skin

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	WT%	CAS No.	EINECS No.	Hazard Classification
Crystalline Silica (Quartz)/ Silica Sand	50–70%	14808-60-7	238-878-4	Carc. 2, STOT RE2
Portland Cement	25–45%	65997-15-1	266-043-4	STOT SE3, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1
Calcium Oxide	3–10%	1305-78-8	215-138-9	STOT SE3, Skin Irrit. 2, Eye Dam. 1
Aluminum Sulfate	1–4%	10043-01-3	233-135-0	STOT SE3, Skin Irrit. 2, Eye Dam. 1
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).				

Note: All WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard JIS Z 7250:2000

SECTION 4 – FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye Contact:

If product enters the eyes, flush with plenty of water or eye wash solution for several minutes. Remove contacts if present and easy to do. Seek medical attention if irritation persists.

Skin Contact:

Wash skin thoroughly with soap and water after handling. Seek medical attention if irritation develops and persists.

Inhalation:

If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

Ingestion:

If product is swallowed, call physician or poison center if you feel unwell.

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If professional advice is not available, do not induce vomiting. Never induce vomiting or give dilutents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

**Medical Conditions
Generally Aggravated
By Exposure:**

Pre-existing skin, respiratory system or eye problems may be aggravated by prolonged contact.

4.2 Symptoms and Effects Both Acute and Delayed: Exposure to skin and respiratory may cause irritation. Contact with the eyes may cause burns. Contact with skin may cause an allergic reaction. Repeated exposure may cause damage to the lungs.

4.3 Recommendations to Physicians: Treat symptoms and eliminate overexposure.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Fire Extinguishing Materials:

Use the following fire extinguishing materials:

Water Spray:	Yes
Foam:	Yes
Halon:	Yes
Carbon Dioxide:	Yes
Dry Chemical:	Yes
Other:	Any "C" Class

5.2 Unusual Fire and Explosion Hazards:

Irritating and toxic fumes may be produced at high temperatures. Use of water may result if the formation of a toxic aqueous solution. Do not allow run-off from fire fighting to enter drains or water courses.

Explosive Sensitivity to Mechanical Impact:	No
Explosive Sensitivity to Static Discharge:	No

5.3 Special Fire-Fighting Procedures:

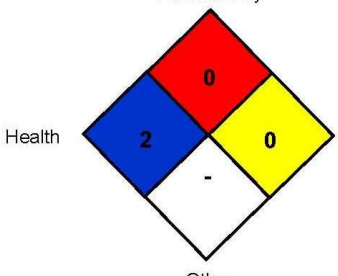


- Incipient fire responders should wear eye protection.
- Structural firefighters must wear Self-Contained Breathing Apparatus (SCBA) and full protective equipment.
- Isolate materials not yet involved in the fire and protect personnel.
- Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray.

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- If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING SYSTEM		HMIS RATING SYSTEM	
<p>Flammability</p>  <p>Health Reactivity</p> <p>Other</p>		HAZARDOUS MATERIAL IDENTIFICATION SYSTEM	
		HEALTH HAZARD (BLUE)	2
		FLAMMABILITY HAZARD (RED)	0
		PHYSICAL HAZARD (YELLOW)	0
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	See Sect 8		See Sect 8
For Routine Industrial Use and Handling Applications			
Hazard Scale: 0 = Minimum 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic Hazard			

SECTION 6 – ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Use cautious judgment when cleaning up spill. Wear suitable protective clothing, gloves, and eye/face protection.

6.2 Environmental Precautions:

If liquid was introduced, construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.

6.3 Spill and Leak Response:

Small Spills:

- Collect material via broom or mop. Place in tightly sealed containers for proper disposal.
- Approach spill areas with caution.
- If liquid was introduced, create a dike or trench to contain material.
- Soak up with absorbent material such as clay, sand or other suitable non-reactive material.

Large Spills:

- Place in leak-proof containers. Seal tightly for proper disposal.
- Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING AND STORAGE

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7.1 Precautions for Safe Handling:

To prevent eye contact under the foreseeable conditions of use, wear appropriate safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling.

7.2 Storage and Handling Practices:

Keep away from incompatible materials. Keep container closed when not in use and store in well ventilated area.

7.3 Specific Uses:

Rapid setting concrete repair mortar.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Parameters:

Ingredients	CAS No.	OSHA PEL	NIOSH PEL	ACGIH TWA
Crystalline Silica (Quartz)/Silica Sand	14808-60-7	TWA 0.1 mg/m ³ (resp) TWA 0.3 mg/m ³ (total)	Ca TWA 0.05 mg/m ³	0.025 mg/m ³
Portland Cement	65997-15-1	TWA 5 mg/m ³ (resp) TWA 15 mg/m ³ (total)	TWA 5 mg/m ³ (resp) TWA 10 mg/m ³ (total)	10 mg/m ³ (total)
Calcium Oxide	1305-78-8	TWA 5 mg/m ³	TWA 2 mg/m ³	TWA 2 mg/m ³
Aluminum Sulfate	10043-01-3	TWA 2 mg/m ³	TWA 2 mg/m ³	TWA 2 mg/m ³

8.2 Exposure Controls:

Ventilation and Engineering Controls:

Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132), or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory Protection:

Maintain airborne contaminant concentrations below guidelines listed above. Use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Eye Protection:

Safety glasses or goggles are required. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

Hand Protection:

Chemical resistant gloves are required to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European

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Body Protection:

Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.
Use body protect appropriate to task being performed.
If necessary, refer to appropriate Standards of Canada, or appropriate standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

Appearance (Physical State and Color): Gray powder

Odor: Minimal

Odor Threshold: No data available

pH: No data available

Melting/Freezing Point: No data available

Boiling Point: No data available

Flash Point: No data available

Evaporation Rate: No data available

Flammability (Solid; Gas): No data available

Upper/Lower Flammability or Explosion Limits: No data available

Vapor Pressure (mm Hg @ 20°C (68° F): No data available

Vapor Density: No data available

Relative Density: No data available

Specific Gravity: 2.6 - 3.2

Solubility in Water: Miscible

Weight per Gallon: 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

9.2 Other Information: No data available

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity:

This product is not reactive.

10.2 Stability:

Stable under conditions of normal storage and use.

10.3 Possibility of Hazardous Reactions:

Will not occur.

10.4 Conditions to Avoid:

No data available.

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10.5 Incompatible Substances: Hydrogen fluoride.

10.6 Hazardous Decomposition Products: No data available.

SECTION 11 – TOXICOLOGY INFORMATION

11.1 Information on Toxicological Effects:

Toxicity Data:

No data available

Suspected Cancer Agent:

Crystalline Silica (Quartz)/Silica Sand (CAS 14808-60-7) is found on one or more of the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore is considered to be a cancer-causing agent by these agencies.

Irritancy:

Skin, eye, and respiratory irritant.

Sensitization to the Product:

This product is expected to cause skin sensitization.

Germ Cell Mutagenicity:

This product does not contain ingredients that are suspected to be a germ cell mutagenic.

Reproductive Toxicity:

This product is not expected to be a human reproductive toxicant.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity:

No data available

12.2 Persistence and Degradability:

No specific data available on this product.

12.3 Bioaccumulative Potential:

No specific data available on this product.

12.4 Mobility in Soil:

No specific data available on this product.

12.5 Results of PBT and vPvB Assessment: No specific data available on this product.

12.6 Other Adverse Effects:

No data available

12.7 Water Endangerment Class:

At present, there are no ecotoxicological assessments for this product.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:

Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Australia, EU Member States and Japan.

13.2 EU Waste Code:

Not determined

SECTION 14 - TRANSPORTATION INFORMATION

14.1 U.S. Department of Transportation (DOT) Shipping Regulations:

This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.

UN Identification Number:

Not applicable

Proper Shipping Name:

Not regulated

Hazard Class Number and Description:

Not applicable

Packing Group:

Not applicable

DOT Label(s) Required:

Not applicable

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**North American Emergency
Response Guidebook Number:**

Not applicable

14.2 Environmental Hazards:

Marine Pollutant:

The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

None

14.3 Special Precaution for User:

14.4 International Air Transport Association

Shipping Information (IATA):

Not regulated.

14.5 International Maritime Organization

Shipping Information (IMO):

UN Identification Number:

Not applicable

Proper Shipping Name:

Not regulated

Hazard Class Number and Description:

Not applicable

Packing Group:

Not applicable

EMS-No:

Not applicable

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations Specific for the Substance or Mixture:

United States Regulations:

U.S. SARA Reporting Requirements:

The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA 311/312:

Acute Health: Yes; Chronic Health: Yes; Fire: No; Reactivity: No

U.S. CERCLA Reportable Quantity:

None

U.S. TSCA Inventory Status:

The components of this product are listed on the TSCA Inventory or are exempted from listing.

Other U.S. Federal Regulations:

None known

California Safe Drinking Water and Toxic Enforcement Act (Proposition 66):

This product does contain "Silica, crystalline", which is on the Proposition 65 Lists.

15.2 Canadian Regulations:

Canadian DSL/NDSL Inventory Status:

Components are DSL Listed, NDSL Listed and/or are exempt from listing

Other Canadian Regulations:

Not applicable

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists:

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

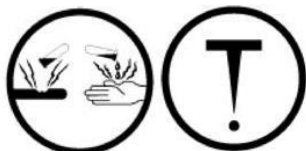
Canadian WHMIS Classification and Symbols:

This product is Class E, Corrosive, and D2B, Materials causing other toxic effects, per WHMIS Controlled Product Regulations

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15.3 European Economic Community Information:

This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives. See Section 2 for Details.

Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

15.4 Australian Information for Product:

Components of this product are listed on the International Chemical Inventory list.

15.5 Japanese Information for Product:

Japanese Minister of International Trade and Industry (MITI) Status: The components of this product are not listed as Class I specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

15.6 International Chemical Inventories:

Listing of the components on individual country Chemical Inventories is as follows:

Australian Inventory of Chemical Substances (AICS): Listed

Korean Existing Chemicals List (ECL): Listed

Japanese Existing National Inventory of Chemical Substances (ENCS): Listed

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed

U.S. TSCA: Listed

SECTION 16 – OTHER INFORMATION

Prepared By: Chris Eigbrett (MSDS to GHS Compliance)

Date of Printing: July 1, 2018

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. SpecChem assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, SpecChem assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

END OF SDS SHEET

SAFETY DATA SHEET



Section 1. Identification

Product name Fuels, diesel
Other means of identification DMA LS, Marine Distillate Fuels, Ultra Low Sulfur No. 2 Diesel Fuel
SDS # SMF2115
Code SMF2115

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

Product use Fuel for marine engines.


Supplier BP Products North America Inc
30 South Wacker Drive
Chicago, Illinois 60606

EMERGENCY HEALTH INFORMATION: Direct Phone +1 630 961 6200 (24/7)
Toll Free 1 800 321 8642 (24/7)

E-mail address bpcares@bp.com

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 LIQUIDS - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN IRRITATION - Category 2
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (bone marrow, liver, thymus) - Category 2
ASPIRATION HAZARD - Category 1

GHS label elements

Hazard pictograms



Signal word  Danger

Hazard statements  Combustible liquid.
Harmful if inhaled.
Causes skin irritation.
Suspected of causing cancer.
May be fatal if swallowed and enters airways.
May cause damage to organs through prolonged or repeated exposure. (bone marrow, liver, thymus)

Precautionary statements

Prevention

Obtain special instructions before use.
Wear protective gloves and eye protection.
Do not breathe vapor.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Use explosion-proof electrical/ventilating/lighting/material-handling equipment.
Avoid release to the environment.

Section 2. Hazards identification

Response	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
Storage	Keep cool.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and receiving equipment. These alone may be insufficient to remove static electricity.
Hazards not otherwise classified	Note: High Pressure Applications Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. See 'Notes to physician' under First-Aid Measures, Section 4 of this Safety Data Sheet. This material may contain significant quantities of polycyclic aromatic hydrocarbons, some of which have been shown by experimental studies to induce skin cancer.

Section 3. Composition/information on ingredients

Substance/mixture Mixture
May also contain small quantities of proprietary performance additives.

Ingredient name	CAS number	%
Fuels, diesel, No 2 Contains: Naphthalene	68476-34-6 91-20-3	>99 1 - 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 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	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Drench contaminated clothing with water before removing. This is necessary to avoid the risk of sparks from static electricity that could ignite contaminated clothing. Contaminated clothing is a fire hazard. Contaminated leather, particularly footwear, must be discarded. Clean shoes thoroughly before reuse. Get medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention.
Ingestion	Do not induce vomiting. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Aspiration hazard if swallowed. Can enter lungs and cause damage. Get medical attention immediately.
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.

Most important symptoms/effects, acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

Section 4. First aid measures

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

Notes to physician

☑ Treatment should in general be symptomatic and directed to relieving any effects. Product can be aspirated on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias.

Note: High Pressure Applications

Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discolored and extremely painful with extensive subcutaneous necrosis.

Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimize tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.

Specific treatments

No specific treatment.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

☑ In case of fire, use water fog, foam, dry chemicals, or carbon dioxide.

Unsuitable extinguishing media

Do not use water jet.

Specific hazards arising from the chemical

☑ Combustible liquid. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Liquid will float and may reignite on surface of water.

Hazardous combustion products

☑ Combustion products may include the following:
carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide)

Special protective actions for fire-fighters

☑ No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. This material is toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Special protective equipment for fire-fighters

Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Immediately contact 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. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling. Eliminate all ignition sources.

Section 6. Accidental release measures

For emergency responders

Entry into a confined space or poorly ventilated area contaminated with vapor, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. 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). Water polluting material. May be harmful to the environment if released in large quantities. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities. Collect recovered product and other contaminated materials in suitable tanks or containers for recycle, recovery or safe disposal.

Methods and materials for containment and cleaning up

Small spill

Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Absorb with an inert 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. The method and equipment used must be in conformance with appropriate regulations and industry practice on explosive atmospheres.

Large spill

Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Dike spill area and do not allow product to reach sewage system and surface or ground water. 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. Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product. The method and equipment used must be in conformance with appropriate regulations and industry practice on explosive atmospheres. Dispose of via a licensed waste disposal contractor.

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 breathe vapor or mist. Do not swallow. Aspiration hazard if swallowed. Can enter lungs and cause damage. Never siphon by mouth. 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. 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. Do not reuse container. Avoid contact of spilled material and runoff with soil and surface waterways. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Restrict flow velocity according to API 2003 (2008), NFPA 77 (2007), and Laurence Britton, "Avoiding Static Ignition Hazards in Chemical Operations". To reduce potential for static discharge, ensure that all equipment is properly grounded and bonded and meets appropriate electrical classification requirements.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities

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. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Store and use only in equipment/containers designed for use with this product. 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.

Light hydrocarbon vapors can build up in the headspace of tanks. These can cause flammability/explosion hazards even at temperatures below the normal flash point (note: flash point must not be regarded as a reliable indicator of the potential flammability of vapor in tank headspaces). Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electrical discharge and all ignition sources during filling, ullaging and sampling from storage tanks. Do not enter storage tanks. If entry to vessels is necessary, follow permit to work procedures. Entry into a confined space or poorly ventilated area contaminated with vapor, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. When the product is pumped (e.g. during filling, discharge or ullaging) and when sampling, there is a risk of static discharge. Ensure equipment used is properly earthed or bonded to the tank structure. Electrical equipment should not be used unless it is intrinsically safe (i.e. will not produce sparks). Explosive air/vapor mixtures may form at ambient temperature. If product comes into contact with hot surfaces, or leaks occur from pressurized fuel pipes, the vapor or mists generated will create a flammability or explosion hazard. Product contaminated rags, paper or material used to absorb spillages, represent a fire hazard, and should not be allowed to accumulate. Dispose of safely immediately after use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Fuels, diesel, No 2	ACGIH TLV (United States). Absorbed through skin. TWA: 100 mg/m ³ , (measured as total hydrocarbons) 8 hours. Issued/Revised: 1/2007 Form: Inhalable fraction and vapor
Naphthalene	ACGIH TLV (United States). Absorbed through skin. TWA: 52 mg/m ³ 8 hours. Issued/Revised: 5/1996 TWA: 10 ppm 8 hours. Issued/Revised: 5/1996 OSHA PEL (United States). TWA: 50 mg/m ³ 8 hours. Issued/Revised: 6/1993 TWA: 10 ppm 8 hours. Issued/Revised: 6/1993

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Appropriate engineering controls

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.

Section 8. Exposure controls/personal protection

Environmental exposure controls	<p>Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.</p> <p>The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.</p> <p>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.</p>
<u>Individual protection measures</u>	
Hygiene measures	<p>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.</p> <p>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.</p>
Eye/face protection	<p>Chemical splash goggles.</p>
<u>Skin protection</u>	
Hand protection	<p>Wear chemical resistant gloves. Recommended: Nitrile gloves.</p>
Body protection	<p>Do not re-use gloves. Protective gloves must give suitable protection against mechanical risks (i.e. abrasion, blade cut and puncture). Protective gloves will deteriorate over time due to physical and chemical damage. Inspect and replace gloves on a regular basis. The frequency of replacement will depend upon the circumstances of use.</p> <p>Use of protective clothing is good industrial practice.</p> <p>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.</p> <p>Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.</p> <p>Wear suitable protective clothing.</p> <p>Footwear highly resistant to chemicals.</p> <p>When there is a risk of ignition wear inherently fire resistant protective clothes and gloves.</p> <p>When there is a risk of ignition from static electricity, wear anti-static protective clothing. For greatest effectiveness against static electricity, overalls, boots and gloves should all be anti-static.</p> <p>When the risk of skin exposure is high (from experience this could apply to the following tasks: cleaning work, maintenance and service, filling and transfer, taking samples and cleaning up spillages) then a chemical protective suit and boots will be required.</p> <p>Work clothing / overalls should be laundered on a regular basis. Laundering of contaminated work clothing should only be done by professional cleaners who have been told about the hazards of the contamination. Always keep contaminated work clothing away from uncontaminated work clothing and uncontaminated personal clothes.</p>
Other skin protection	<p>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.</p>
Respiratory protection	<p>Use only with adequate ventilation. Do not breathe vapor or mist. If ventilation is inadequate, use a NIOSH certified respirator with an organic vapor cartridge and P95 particulate filter. If operating conditions cause high vapor concentrations or the TLV is exceeded, use supplied-air respirator.</p> <p>CAUTION: The protection provided by air-purifying respirators is limited. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are not known, or if concentrations exceed the protection limits of air-purifying respirator.</p> <p>Use with adequate ventilation.</p> <p>If there is a requirement for the use of a respiratory protective device, but the use of breathing apparatus (independent of ambient atmosphere) is not required, then a suitable filtering device must be worn.</p>

Section 8. Exposure controls/personal protection

The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product.

Section 9. Physical and chemical properties

Appearance

Physical state	Liquid.
Color	Yellow. [Light]
Odor	Kerosene
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Boiling point	162.78°C (325°F)
Flash point	Closed cup: >60°C (>140°F)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable. Based on - Physical state
Lower and upper explosive (flammable) limits	Lower: 0.7% Upper: 5%
Vapor pressure	0.27 kPa (<2 mm Hg) [20°C (68°F)]
Vapor density	Not available.
Density	860 kg/m ³ (0.86 g/cm ³)
Solubility	Insoluble in water. <0.1%
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	257°C (494.6°F)
Decomposition temperature	Not available.
Viscosity	Dynamic: 0.003 Pa·s (3 cP) at 37.778°C Kinematic: 2 to 11 mm ² /s (2 to 11 cSt) at 40°C

Section 10. Stability and reactivity

Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
Chemical stability	The product is stable.
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.
Conditions to avoid	Keep away from heat, sparks and flame. Avoid all possible sources of ignition (spark or flame).
Incompatible materials	Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis. halogenated compounds.
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	Test	Species	Result	Exposure	Remarks
Fuels, diesel, No 2	LC50 Inhalation Dusts and mists	Rat	4.1 mg/l	4 hours	Based on Diesel fuel
	LD50 Dermal	Rabbit	>4300 mg/kg	-	Based on No. 2 Heating Oil.
	LD50 Dermal	Rabbit	>4300 mg/kg	-	Based on Diesel fuel
	LD50 Oral	Rat	17900 mg/kg	-	Based on No. 2 Heating Oil.
	LD50 Oral	Rat	7600 mg/kg	-	Based on Diesel fuel

Conclusion/Summary Not available.

Irritation/Corrosion

Product/ingredient name	Species	Result	Score	Exposure	Observation	Conc.	Remarks
Fuels, diesel, No 2	Rabbit	Skin - Irritation	-	-	-	-	Based on No. 2 Heating Oil.
	Rabbit	Skin - Irritation	-	-	-	-	Based on Diesel fuel
	Rabbit	Eyes - Non-irritating to the eyes.	-	-	-	-	Based on No. 2 Heating Oil.
	Rabbit	Eyes - Non-irritating to the eyes.	-	-	-	-	Based on Diesel fuel

Sensitizer

Product/ingredient name	Route of exposure	Species	Result	Remarks
Fuels, diesel, No 2	skin	Guinea pig	Not sensitizing	Based on No. 2 Heating Oil.
	skin	Guinea pig	Not sensitizing	Based on Diesel fuel

Mutagenicity

Product/ingredient name	Test	Experiment	Result	Remarks
Fuels, diesel, No 2	OECD 471	Experiment: In vitro Subject: Non-mammalian species	Positive	Based on Diesel fuel
	Equivalent to OECD 476	Experiment: In vitro Subject: Mammalian-Animal Cell: Germ	Negative	Based on Heating Oil.
	not guideline	Experiment: In vivo Subject: Unspecified Cell: Somatic	Negative	Based on Heating Oil.

Conclusion/Summary Not classified. Based on available data, the classification criteria are not met.

Carcinogenicity

Product/ingredient name	Test authority / Test number	Species	Route	Exposure	Result	Remarks
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Section 11. Toxicological information

Fuels, diesel, No 2 Equivalent 451 Mouse Dermal 2 years Positive - Dermal - Unspecified Based on Heating Oil.

Conclusion/Summary Suspected of causing cancer.

Classification

Product/ingredient name	OSHA	IARC	NTP
Naphthalene	-	2B	Reasonably anticipated to be a human carcinogen.

Descriptors: *OSHA:* + - Potential occupational carcinogen *IARC:* 1 - Carcinogenic to human. 2A - Probable human carcinogen. 2B - Possible carcinogen to human. 3 - Not classifiable as a human carcinogen. 4 - Probably not a human carcinogen. *NTP:* Proven - Known to be human carcinogens. Possible - Reasonably anticipated to be human carcinogens.

Carcinogenicity Additional information Not applicable.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Result	Exposure
Fuels, diesel, No 2	-	-	Negative	Rat	Dermal	20 days
	-	-	Negative	Rat	Dermal	10 days
	-	-	Negative	Rat	Dermal	10 days

Conclusion/Summary Development: Not classified. Based on available data, the classification criteria are not met.
Fertility: Not classified. Based on available data, the classification criteria are not met.
Effects on or via lactation: Not classified. Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Fuels, diesel, No 2	Category 2	Not determined	bone marrow, liver and thymus

Aspiration hazard

Name	Result
Fuels, diesel, No 2	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact No known significant effects or critical hazards.
Skin contact Causes skin irritation.
Inhalation Harmful if inhaled.
Ingestion Irritating to mouth, throat and stomach. Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.

Symptoms related to the physical, chemical and toxicological characteristics

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

Section 11. Toxicological information

Inhalation	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Ingestion	Adverse symptoms may include the following: nausea or vomiting

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

Short term exposure

Potential immediate effects	Vapor, mists or fumes may contain polycyclic aromatic hydrocarbons some of which are known to produce skin cancer. May be harmful by inhalation if exposure to vapor, mists or fumes resulting from thermal decomposition products occurs. Vapor, mist or fume may irritate the nose, mouth and respiratory tract. Vapor, mist or fume may cause eye irritation. Exposure to vapor, mist or fume may cause stinging, redness and watering of the eyes.
Potential delayed effects	As with all such products containing potentially harmful levels of polycyclic aromatic hydrocarbons, prolonged or repeated skin contact may eventually result in dermatitis or more serious irreversible skin disorders including cancer.

Long term exposure

Potential immediate effects	Not available.
Potential delayed effects	Not available.

Potential chronic health effects

General	May cause damage to organs through prolonged or repeated exposure. Vapor, mists or fumes may contain polycyclic aromatic hydrocarbons some of which are known to produce skin cancer.
Carcinogenicity	Suspected of causing 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
Inhalation (dusts and mists)	4.1 mg/l

Additional information

Middle distillate: From skin-painting studies of petroleum distillates of similar composition and distillate range, it has been shown that these types of materials often possess weak carcinogenic activity in laboratory animals. In these tests, the material is painted on the shaved backs of mice twice a week for their lifetime. The material is not washed off between applications. Therefore, there may be a potential risk of skin cancer from prolonged or repeated skin contact with this product in the absence of good personal hygiene. This particular product has not been tested for carcinogenic activity, but we have chosen to be cautious in light of the findings with other distillate streams.

Occasional skin contact with this product is not expected to have serious effects, but good personal hygiene should be practiced and repeated skin contact avoided. This product can also be expected to produce skin irritation upon prolonged or repeated skin contact. Personal hygiene measures taken to prevent skin irritation are expected to be adequate to prevent risk of skin cancer.

Diesel exhaust particulates have been classified by the National Toxicological Program (NTP) to be a reasonably anticipated human carcinogen. Exposure should be minimized to reduce potential risk.

Section 11. Toxicological information

Naphthalene has been reported to cause developmental toxicity in mice after oral exposure to relatively high dose levels, but developmental toxicity was not observed in NTP (National Toxicology Program) sponsored studies in rats and rabbits. Ingestion or inhalation of naphthalene can result in hemolysis and other blood abnormalities, and individuals (and infants) deficient in glucose-6-phosphate dehydrogenase may be especially susceptible to these effects. Inhalation of naphthalene may cause headache and nausea. Airborne exposure can result in eye irritation. Naphthalene exposure has been associated with cataracts in animals and humans.

Section 12. Ecological information

Toxicity

Product/ingredient name	Species	Test/Result	Exposure	Effects	Remarks
Fuels, diesel, No 2	Micro-organism	EL50 >1000 mg/l Nominal Fresh water	40 hours	growth inhibition	Based on Vacuum gas oil / Hydrocracked gas oil / Distillate Fuel
	Micro-organism	NOELR 3.217 mg/l Nominal Fresh water	40 hours	growth inhibition	Based on Vacuum gas oil / Hydrocracked gas oil / Distillate Fuel
	Algae	Acute EL50 22 mg/l Nominal Fresh water	72 hours	(growth rate)	Based on Diesel fuel
	Daphnia	Acute EL50 210 mg/l Nominal Fresh water	48 hours	Mobility	Based on Diesel fuel
	Daphnia	Acute EL50 68 mg/l Nominal Fresh water	48 hours	Mobility	Based on Diesel fuel
	Algae	Acute EL50 78 mg/l Nominal Fresh water	72 hours	(growth rate)	Based on Diesel fuel
	Fish	Acute LL50 65 mg/l Nominal Fresh water	96 hours	Mortality	Based on Diesel fuel
	Fish	Acute LL50 21 mg/l Nominal Fresh water	96 hours	Mortality	Based on Diesel fuel
	Algae	Acute NOELR 10 mg/l Nominal Fresh water	72 hours	(growth rate)	Based on Diesel fuel
	Algae	Acute NOELR 1 mg/l Nominal Fresh water	72 hours	(growth rate)	Based on Diesel fuel
	Daphnia	Acute NOELR 46 mg/l Nominal Fresh water	48 hours	Mobility	Based on Diesel fuel
	Fish	Chronic NOEL 0.083 mg/l Nominal Fresh water	14 days	Mortality	Based on Vacuum gas oil / Hydrocracked gas oil / Distillate Fuel

Section 12. Ecological information

Daphnia Chronic NOELR 21 days Immobilization Based on
0.2 mg/l Nominal Vacuum gas oil /
Fresh water Hydrocracked
gas oil / Distillate
Fuel

Conclusion/Summary Not available.

Persistence and degradability

Not available.

Product/ingredient name	Test	Result	Remarks
Fuels, diesel, No 2	OECD 301 F	60 % - Readily - 28 days	Based on Diesel fuel
	OECD 301 F	57.5 % - Not readily - 28 days	Based on Diesel fuel
	Equivalent to EPA OTS 796.3100	35 % - Not readily - 28 days	Based on Gas Oils (petroleum), solvent refined

Conclusion/Summary Not available.

Bioaccumulative potential

This product is not expected to bioaccumulate through food chains in the environment.

Mobility in soil

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

Mobility Spillages may penetrate the soil causing ground water contamination. This material may accumulate in sediments.

Other adverse effects No known significant effects or critical hazards.

Other ecological information Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.






Section 13. Disposal considerations

Disposal methods 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.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Naphthalene	91-20-3	Listed	U165

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	NA1993	UN1202	UN1202	UN1202
UN proper shipping name	DIESEL FUEL	DIESEL FUEL	DIESEL FUEL. Marine pollutant	DIESEL FUEL
Transport hazard class(es)	Combustible liquid.	3  	3  	3 
Packing group	III	III	III	III
Environmental hazards	No.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Additional information	Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials in package sizes less than the product reportable quantity. Reportable quantity 3333.3 lbs / 1513.3 kg [464.86 gal / 1759.7 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules F-E, S-E	The environmentally hazardous substance mark may appear if required by other transportation regulations.

Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL and the IBC Code

Proper shipping name

MARPOL Annex 1 rules apply for bulk shipments by sea.
Category: gas oils, including ship's bunkers

Section 15. Regulatory information

U.S. Federal regulations

United States inventory
(TSCA 8b)

☒ All components are active or exempted.

[SARA 302/304](#)

[Composition/information on ingredients](#)

No products were found.

[SARA 311/312](#)

Product name Fuels, diesel

Product code SMF2115

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Section 15. Regulatory information

Classification

FLAMMABLE LIQUIDS - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN IRRITATION - Category 2
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (bone marrow, liver, thymus) - Category 2
ASPIRATION HAZARD - Category 1
HNOC - Static-accumulating flammable liquid

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	Naphthalene	91-20-3	1 - 3
Supplier notification	Naphthalene	91-20-3	1 - 3

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts

The following components are listed: NAPHTHALENE

New Jersey

The following components are listed: NAPHTHALENE; MOTH FLAKES

Pennsylvania

The following components are listed: NAPHTHALENE

California Prop. 65

Prop 65 chemicals will result under certain conditions from the use of this material. For example, burning fuels produces combustion products including diesel exhaust, a Prop 65 carcinogen, and carbon monoxide, a Prop 65 reproductive toxin.

⚠ WARNING: This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Naphthalene, Ethylbenzene and Cumene, which are known to the State of California to cause cancer, and Toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Other regulations

Australia inventory (AICS)

At least one component is not listed.

Canada inventory

All components are listed or exempted.

China inventory (IECSC)

All components are listed or exempted.

Japan inventory (ENCS)

Not determined.

Korea inventory (KECI)

All components are listed or exempted.

Philippines inventory (PICCS)

At least one component is not listed.

Taiwan Chemical Substances Inventory (TCSI)

All components are listed or exempted.

REACH Status

For the REACH status of this product please consult your company contact, as identified in Section 1.

Section 16. Other information

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



History

Date of issue/Date of revision

01/24/2020.

Date of previous issue

10/07/2014.

Prepared by

Product Stewardship

Product name Fuels, diesel

Product code SMF2115

Page: 14/15

Version 2 Date of issue 01/24/2020.

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Section 16. Other information

Key to abbreviations

ACGIH = American Conference of Industrial Hygienists
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS Number = Chemical Abstracts Service Registry Number
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)
OEL = Occupational Exposure Limit
SDS = Safety Data Sheet
STEL = Short term exposure limit
TWA = Time weighted average
UN = United Nations
UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.
Varies = may contain one or more of the following 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4, 64742-01-4, 64742-44-5, 64742-45-6, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-58-1, 64742-62-7, 64742-63-8, 64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1

 Indicates information that has changed from previously issued version.

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.



SAFETY DATA SHEET

1. Identification

Material name: KUREZ DR VOX

Material: 157D 55

Recommended use and restriction on use

Recommended use: Coatings

Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

EUCLID CHEMICAL COMPANY

19218 REDWOOD ROAD

CLEVELAND OH 44110

US

Contact person:

EH&S Department

Telephone:

216-531-9222

Emergency telephone number:

1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Specific Target Organ Toxicity - Repeated Exposure Category 1¹

Aspiration Hazard Category 1

Target Organs

1. Central nervous system

Unknown toxicity - Health

Acute toxicity, oral	7.2 %
Acute toxicity, dermal	7.21 %
Acute toxicity, inhalation, vapor	18.63 %
Acute toxicity, inhalation, dust or mist	8.61 %

Environmental Hazards

Acute hazards to the aquatic environment Category 3

Chronic hazards to the aquatic environment Category 3

Unknown toxicity - Environment

Acute hazards to the aquatic environment	98.73 %
Chronic hazards to the aquatic environment	98.74 %

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Causes damage to organs through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.
Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention: Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment.

Response: IF SWALLOWED: Immediately call a POISON CENTER/doctor/... Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

Storage: Store locked up.

Disposal: 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.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Petroleum Hydrocarbon Resin	68131-87-3	5 - <10%
Aliphatic naphtha	64742-88-7	5 - <10%
Hydrotreated heavy naphthenic distillate	64742-52-5	5 - <10%
Nonylphenoxy ethoxylate	68412-54-4	1 - <2.5%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Description of necessary first-aid measures



Inhalation:	Move to fresh air.
Skin Contact:	Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact:	Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.
Ingestion:	Call a physician or poison control center immediately. Rinse mouth. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Personal Protection for First-aid Responders:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Most important symptoms/effects, acute and delayed

Symptoms:	May cause skin and eye irritation.
Hazards:	No data available.

Indication of immediate medical attention and special treatment needed

Treatment:	Get medical attention if symptoms occur.
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5. Fire-fighting measures

General Fire Hazards:	No unusual fire or explosion hazards noted.
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Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical:	During fire, gases hazardous to health may be formed.
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Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No data available.
Special protective equipment for fire-fighters:	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:	No data available.
Accidental release measures:	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Methods and material for containment and cleaning up:	Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.
Environmental Precautions:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation):	Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.
Safe handling advice:	Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Contact avoidance measures:	No data available.
Hygiene measures:	Observe good industrial hygiene practices.

Storage

Safe storage conditions:	Store locked up.
Safe packaging materials:	No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Petroleum Hydrocarbon Resin	PEL	100 ppm 400 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Aliphatic naphtha - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m ³	US. ACGIH Threshold Limit Values, as amended (03 2014)
Aliphatic naphtha	PEL	100 ppm 400 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (01 2017)
Hydrotreated heavy naphthenic distillate - Inhalable fraction.	TWA	5 mg/m ³	US. ACGIH Threshold Limit Values, as amended (03 2014)
Hydrotreated heavy naphthenic distillate	PEL	500 ppm 2,000 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Hydrotreated heavy	PEL	5 mg/m ³	US. OSHA Table Z-1 Limits for Air



naphthenic distillate - Mist.			Contaminants (29 CFR 1910.1000), as amended (02 2006)
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Chemical name	Type	Exposure Limit Values	Source
Petroleum Hydrocarbon Resin	TWA	400 ppm 1,590 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Aliphatic naphtha - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Aliphatic naphtha - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Aliphatic naphtha	TWA	400 ppm 1,590 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Hydrotreated heavy naphthenic distillate - Mist.	TWA	0.2 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
	TWA	1 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Hydrotreated heavy naphthenic distillate - Inhalable fraction.	TWA	5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)
	TWA	5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)
Hydrotreated heavy naphthenic distillate - Mist.	STEL	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Naphthalene	STEL	15 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	10 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Naphthalene	TWA	10 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Naphthalene	TWA	10 ppm 52 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
	STEL	15 ppm 79 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
Ammonium hydroxide	STEL	35 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. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)



Ammonium hydroxide	TWA	25 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
	STEL	35 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Sodium hydroxide	CEILING	2 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Sodium hydroxide	CEV	2 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
Sodium hydroxide	CEILING	2 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)
p-Dioxane	TWA	20 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
p-Dioxane	TWA	20 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (11 2010)
p-Dioxane	TWA	20 ppm 72 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (12 2008)
Ethylene oxide	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)
	STEL	1 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Ethylene oxide	STEL	10 ppm 18 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)
	TWA	1 ppm 1.8 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended (06 2015)
Ethylene oxide	TWA	1 ppm 1.8 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety), as amended (09 2017)

Appropriate Engineering Controls

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment

General information:	Use personal protective equipment as required.
Eye/face protection:	Wear goggles/face shield.
Skin Protection	
Hand Protection:	Use suitable protective gloves if risk of skin contact.
Other:	No data available.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Observe good industrial hygiene practices.

**9. Physical and chemical properties****Appearance**

Physical state:	liquid
Form:	liquid
Color:	Off-white
Odor:	Mild
Odor threshold:	No data available.
pH:	< 8
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	> 96 °C > 205 °F
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	No
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:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	1
Solubility(ies)	
Solubility in water:	Soluble
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:	< 20.5 mm ² /s (40 °C 104 °F)

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	Strong acids. Strong bases.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

**11. Toxicological information****Information on likely routes of exposure**

Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Causes mild skin irritation.
Eye contact:	Eye contact is possible and should be avoided.
Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)**

Oral	
Product:	ATEmix: 405,515 mg/kg
Dermal	
Product:	ATEmix: 32,080.69 mg/kg
Inhalation	
Product:	Not classified for acute toxicity based on available data.
Specified substance(s):	
Aliphatic naphtha	LC 50 (Rat): > 6.03 mg/l
Hydrotreated heavy naphthenic distillate	LC 50 (Rat): 9.6 mg/l

Repeated dose toxicity

Product:	No data available.
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Skin Corrosion/Irritation

Product:	No data available.
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Specified substance(s):



Aliphatic naphtha	in vivo (Rabbit): Irritating
Hydrotreated heavy naphthenic distillate	in vivo (Rabbit): Not irritant
Nonylphenoxy ethoxylate	in vivo (Rabbit): Category 2

Serious Eye Damage/Eye Irritation**Product:** No data available.**Specified substance(s):**

Aliphatic naphtha	Rabbit, 24 - 72 hrs: Not irritating
Hydrotreated heavy naphthenic distillate	Rabbit, 24 hrs: Not irritating
Nonylphenoxy ethoxylate	Rabbit, 24 - 72 hrs: Category 2B

Respiratory or Skin Sensitization**Product:** No data available.**Carcinogenicity****Product:** No data available.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:

No carcinogenic components identified

Germ Cell Mutagenicity**In vitro****Product:** No data available.**In vivo****Product:** No data available.**Reproductive toxicity****Product:** No data available.**Specific Target Organ Toxicity - Single Exposure****Product:** No data available.

**Specific Target Organ Toxicity - Repeated Exposure****Product:** No data available.**Target Organs**

Specific Target Organ Toxicity - Repeated Exposure: Central nervous system

Aspiration Hazard**Product:** May be fatal if swallowed and enters airways.**Other effects:** No data available.**12. Ecological information****Ecotoxicity:****Acute hazards to the aquatic environment:****Fish****Product:** No data available.**Specified substance(s):**

Nonylphenoxy ethoxylate LC 50 (Fathead Minnow, 96 h): 0.218 mg/l

Aquatic Invertebrates**Product:** No data available.**Specified substance(s):**

Nonylphenoxy ethoxylate LC 50 (Daphnia magna, 48 h): 0.100 mg/l

Chronic hazards to the aquatic environment:**Fish****Product:** No data available.**Specified substance(s):**

Aliphatic naphtha NOAEL (Oncorhynchus mykiss, 28 d): 0.098 mg/l QSAR QSAR, Key study

Hydrotreated heavy naphthenic distillate NOAEL (Oncorhynchus mykiss, 14 d): $\geq 1,000$ mg/l QSAR QSAR, Supporting studyNonylphenoxy ethoxylate NOAEL (Oncorhynchus mykiss, 91 d): ± 6 μ g/l Experimental result, Key study**Aquatic Invertebrates****Product:** No data available.**Specified substance(s):**Nonylphenoxy ethoxylate NOEC (Daphnia magna, 21 d): 100 μ g/l**Toxicity to Aquatic Plants****Product:** No data available.

**Persistence and Degradability****Biodegradation****Product:** No data available.**BOD/COD Ratio****Product:** No data available.**Bioaccumulative potential****Bioconcentration Factor (BCF)****Product:** No data available.**Partition Coefficient n-octanol / water (log K_{ow})****Product:** No data available.**Mobility in soil:** No data available.**Other adverse effects:** Harmful to aquatic life with long lasting effects.**13. Disposal considerations****Disposal methods:**

Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging:

No data available.

14. Transport information**TDG:**

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

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. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs)
(40 CFR 721, Subpt E)**

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

<u>Chemical Identity</u>	<u>OSHA hazard(s)</u>
Ethylene oxide	Skin sensitization Reproductive toxicity Mutagenicity Eye irritation Acute toxicity respiratory tract irritation Cancer Skin irritation Flammability Central nervous system

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Naphthalene	100 lbs.
Ammonium hydroxide	1000 lbs.
Sodium hydroxide	1000 lbs.
p-Dioxane	100 lbs.
Ethylene oxide	10 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Delayed (Chronic) Health Hazard
Immediate (Acute) Health Hazards
Specific target organ toxicity (single or repeated exposure)
Aspiration Hazard

SARA 302 Extremely Hazardous Substance

<u>Chemical Identity</u>	<u>Reportable quantity</u>	<u>Threshold Planning Quantity</u>
Ethylene oxide	10 lbs.	1000 lbs.

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Ethylene oxide	500lbs

SARA 313 (TRI Reporting)

<u>Chemical Identity</u>
Nonylphenoxy ethoxylate

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

<u>Chemical Identity</u>	<u>Reportable quantity</u>
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Ethylene oxide lbs

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65



WARNING

Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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

Chemical Identity

Petroleum Hydrocarbon Resin
Aliphatic naphtha
Hydrotreated heavy naphthenic distillate

US. Massachusetts RTK - Substance List

Chemical Identity

Petroleum Hydrocarbon Resin
Aliphatic naphtha
Hydrotreated heavy naphthenic distillate

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Petroleum Hydrocarbon Resin
Aliphatic naphtha
Hydrotreated heavy naphthenic distillate

US. Rhode Island RTK

Chemical Identity

Petroleum Hydrocarbon Resin
Aliphatic naphtha
Hydrotreated heavy naphthenic distillate

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

VOC:



Regulatory VOC (less water and exempt solvent)	:	301 g/l
VOC Method 310	:	5.60 %

Inventory Status:

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Ontario Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.
Mexico INSQ:	One or more components in this product are not listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.
Taiwan Chemical Substance Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.



EUCLID CHEMICAL

Version: 3.0
Revision Date: 05/27/2020

16. Other information, including date of preparation or last revision
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Revision Date: 05/27/2020

Version #: 3.0

Further Information: No data available.

Disclaimer: For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

Safety Data Sheet



SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Rando HD 150, 220, 320

Product Use: Hydraulic Oil

Product Number(s): 273280, 273281, 274303, 274304, 274305, 277316

Synonyms: Rando HD 150 ISOCLEAN Certified; Rando HD 220 ISOCLEAN Certified; Rando HD 320 ISOCLEAN Certified

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: 1 (800) 582-3835, LUBETEK@chevron.com

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION: Not classified as hazardous according to 29 CFR 1910.1200 (2012).

HAZARDS NOT OTHERWISE CLASSIFIED: Not Applicable

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	70 - 99 %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: 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: No specific first aid measures are required. Do not induce vomiting. As a precaution, get

medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

Most important symptoms and effects, both acute and delayed

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.

Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Not expected to be harmful if swallowed.

Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

DELAYED OR OTHER HEALTH EFFECTS: Not classified

Indication of any immediate medical attention and special treatment needed

Note to Physicians: In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Unusual Fire Hazards: Leaks/ruptures in high pressure system using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. 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 vicinity of spilled material.

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

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Precautionary Measures: DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed. 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.

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 in a well-ventilated area.

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: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	Form	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	ACGIH	--	5 mg/m3	10 mg/m3	--	--
Highly refined mineral oil	OSHA Z-1	--	5 mg/m3	--	--	--

(C15 - C50)						
-------------	--	--	--	--	--	--

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: Brown

Physical State: Liquid

Odor: Petroleum odor

Odor Threshold: No data available

pH: No data available

Vapor Pressure: No data available

Vapor Density (Air = 1): No data available

Initial Boiling Point: No data available

Solubility: Soluble in hydrocarbon solvents; insoluble in water.

Freezing Point: No data available

Melting Point: No data available

Density: 0.873 kg/l - 0.8951 kg/l @ 15°C (59°F) (Typical)

Viscosity: 90 mm²/s - 320 mm²/s @ 40°C (104°F)

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: (Cleveland Open Cup) 220 °C (428 °F) (Minimum)

Autoignition: No data available

Flammability (Explosive) Limits (% by volume in air): Lower: No data available Upper: No data available

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: The skin irritation hazard is based on evaluation of data for product components.

Skin Sensitization: The skin sensitization hazard is based on evaluation of data for product components.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for product components.

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.

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 petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).

These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

This material is not expected to be harmful to aquatic organisms.

The product has not been tested. The statement has been derived from the properties of the individual components.

MOBILITY

No data available.

PERSISTENCE AND DEGRADABILITY

This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.

The product has not been tested. The statement has been derived from the properties of the individual components.

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. 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: NOT REGULATED AS HAZARDOUS MATERIAL UNDER 49 CFR

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

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: Not applicable

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

No components of this material were found on the regulatory lists above.

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AIIIC (Australia), DSL (Canada), ENCS (Japan), 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: PETROLEUM OIL (Hydraulic oil)

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 0 Flammability: 1 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).

REVISION STATEMENT: SECTION 01 - Health Emergency information was modified.

SECTION 01 - Product Code(s) information was modified.
 SECTION 08 - Occupational Exposure Limit Table information was modified.
 SECTION 09 - Physical/Chemical Properties information was deleted.
 SECTION 09 - Physical/Chemical Properties information was modified.
 SECTION 14 - DOT Classification information was added.
 SECTION 14 - DOT Classification information was deleted.
 SECTION 14 - ICAO Classification information was added.
 SECTION 14 - ICAO Classification information was deleted.
 SECTION 14 - IMO Classification information was added.
 SECTION 14 - IMO Classification information was deleted.
 SECTION 15 - Chemical Inventories information was modified.
 SECTION 15 - SARA 311 EPCRA Score information was added.
 SECTION 15 - SARA 311 Score information was deleted.

Revision Date: July 29, 2020

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

1. Identification

Product identifier	WATERSTOP-RX® 101
Other means of identification	None.
Recommended use	Not available.
Recommended restrictions	Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	CETCO, an MTI Company
Address	2870 Forbs Avenue Hoffman Estates, IL 60192 United States
Telephone	General Information 800 527-9948
Website	http://www.cetco.com/
E-mail	safetydata@mineralstech.com
Emergency phone number	Emergency 1.866.519.4752/1 760 476 3962
Americas	1.866.519.4752 (US, Canada, Mexico) 1 760 476 3962

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Carcinogenicity Category 1A Specific target organ toxicity, repeated exposure Category 1
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	



Signal word	Danger
Hazard statement	May cause cancer. Causes damage to organs through prolonged or repeated exposure.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If exposed or concerned: Get medical advice/attention.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	28.16% of the mixture consists of component(s) of unknown acute oral toxicity. 29.16% of the mixture consists of component(s) of unknown acute dermal toxicity. 29.16% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 29.16% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
QUARTZ (SIO ₂)		14808-60-7	3 - < 5
CARBON BLACK		1333-86-4	1 - < 3
CRISTOBALITE		14464-46-1	1 - < 3
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.

Composition comments Occupational Exposure Limits for constituents are listed in Section 8.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or 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	Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. 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.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

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. Ensure adequate ventilation. 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	Stop the flow of material, if this is without risk. Following product recovery, flush area with water. Put material in suitable, covered, labeled containers. 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	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

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

Components	Type	Value	Form
CARBON BLACK (CAS 1333-86-4)	PEL	3.5 mg/m3	
CRISTOBALITE (CAS 14464-46-1)	PEL	0.05 mg/m3	Respirable dust.
QUARTZ (SIO2) (CAS 14808-60-7)	PEL	0.05 mg/m3	Respirable dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
CRISTOBALITE (CAS 14464-46-1)	TWA	0.05 mg/m3	Respirable.
		1.2 mppcf	Respirable.
QUARTZ (SIO2) (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
CARBON BLACK (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction.
CRISTOBALITE (CAS 14464-46-1)	TWA	0.025 mg/m3	Respirable fraction.
QUARTZ (SIO2) (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
CARBON BLACK (CAS 1333-86-4)	TWA	0.1 mg/m3	
CRISTOBALITE (CAS 14464-46-1)	TWA	0.05 mg/m3	Respirable dust.
QUARTZ (SIO2) (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

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.

Other Use of an impervious apron is recommended.

Respiratory protection Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. 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 Solid.

Form Solid.

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	Not available.
Flash point	Not available.
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	0.00001 hPa 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	
Density	1.80 g/cm3 estimated
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Percent volatile	0 % estimated estimated
Specific gravity	1.8 estimated
VOC	CARB

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	No dangerous reaction known under conditions of normal use.
Conditions to avoid	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	No adverse effects due to skin contact are expected.
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

Not known.

Components

Species

Test Results

CARBON BLACK (CAS 1333-86-4)

Acute

Oral

LD50

Rat

> 8000 mg/kg

CRISTOBALITE (CAS 14464-46-1)

Acute

Oral

LD50

Rat

> 22500 mg/kg

Skin corrosion/irritation

Prolonged skin contact may cause temporary 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

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

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. May cause cancer. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

IARC Monographs. Overall Evaluation of Carcinogenicity

CARBON BLACK (CAS 1333-86-4)

2B Possibly carcinogenic to humans.

CRISTOBALITE (CAS 14464-46-1)

1 Carcinogenic to humans.

QUARTZ (SiO₂) (CAS 14808-60-7)

1 Carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

CRISTOBALITE (CAS 14464-46-1)

Cancer

QUARTZ (SiO₂) (CAS 14808-60-7)

Cancer

US. National Toxicology Program (NTP) Report on Carcinogens

CRISTOBALITE (CAS 14464-46-1)

Known To Be Human Carcinogen.

Reasonably Anticipated to be a Human Carcinogen.

QUARTZ (SiO₂) (CAS 14808-60-7)

Known To Be Human Carcinogen.

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

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

Not an aspiration hazard.

Chronic effects

Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

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 is available on the degradability of any ingredients in the mixture.
Bioaccumulative potential	No data available.
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. 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.

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 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 1910.1001-1052)	
CRISTOBALITE (CAS 14464-46-1)	Cancer
QUARTZ (SiO ₂) (CAS 14808-60-7)	Cancer
CRISTOBALITE (CAS 14464-46-1)	lung effects
QUARTZ (SiO ₂) (CAS 14808-60-7)	lung effects
CRISTOBALITE (CAS 14464-46-1)	immune system effects
QUARTZ (SiO ₂) (CAS 14808-60-7)	immune system effects
CRISTOBALITE (CAS 14464-46-1)	kidney effects
QUARTZ (SiO ₂) (CAS 14808-60-7)	kidney effects
Superfund Amendments and Reauthorization Act of 1986 (SARA)	
SARA 302 Extremely hazardous substance	Not listed.
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.

Food and Drug Administration (FDA) Total food additive
Indirect food additive
GRAS food additive

US state regulations

California Proposition 65



WARNING: This product can expose you to chemicals including QUARTZ (SiO₂), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

CARBON BLACK (CAS 1333-86-4) Listed: February 21, 2003

QUARTZ (SiO₂) (CAS 14808-60-7) Listed: October 1, 1988

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

CARBON BLACK (CAS 1333-86-4)

CRISTOBALITE (CAS 14464-46-1)

QUARTZ (SiO₂) (CAS 14808-60-7)

International Inventories

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

*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	13-August-2014
Revision date	23-July-2018
Version #	11
HMIS® ratings	Health: 3* Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 0 Instability: 0

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 manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use. 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. CETCO, an MTI Company 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

Hazard(s) identification: Prevention

Regulatory information: California Proposition 65