

# **CALLAHAN PAVING CORP.**

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**6851 Jericho Turnpike, Suite 240  
Syosset, New York 11791  
Phone 516-679-1665**

## **LIST OF SDS INCLUDED IN HASP**

- 1) ASPHALT CEMENT**
- 2) ASPHALT & CRUSHED STONE**
- 3) CONCRETE**
- 4) DIESEL FUEL**
- 5) GASOLINE**
- 6) CRACKED MEMBRANE**
- 7) MOTOR OIL**
- 8) STREET PAINT**
- 9) PROPANE**
- 10) YELLOW AND WHITE TRAFFIC LINES**
- 11) ASPHALT & TAR REMOVER**

# SAFETY DATA SHEETS

## 1) ASPHALT CEMENT

# SAFETY DATA SHEET

## Asphalt Cement



### Section 1. Identification

GHS product identifier : Asphalt Cement

Other means of identification : Not available.

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

Not available.

Supplier's details : Western Refining Company LP  
123 W. Mills Avenue  
El Paso, TX 79901  
Tel: 915-534-1488

Emergency telephone number (with hours of operation) : CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3877 (24/7)

### Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

#### GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

#### Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : HEATING MAY RELEASE HIGHLY TOXIC AND FLAMMABLE HYDROGEN SULFIDE (H<sub>2</sub>S) GAS.

### Section 3. Composition/information on ingredients

Substance/mixture : Substance

Other means of identification : Not available.

#### CAS number/other identifiers

CAS number : Not available.

Product code : Not available.

## Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
Petroleum asphalt (SP) Modifier, asphalt	>98.5 0 - 1.5	8052-42-4 Proprietary

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

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

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

## Section 4. First aid measures

### Description of necessary first aid measures

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : If exposure to hydrogen sulfide (H<sub>2</sub>S) gas is possible during an emergency, wear an approved, positive pressure air-supplying respirator. Move exposed person to fresh air. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

**Skin contact** : If the hot material gets on skin, quickly cool in water. See a doctor for extensive burns. Do not try to peel the solidified material from the skin, or use solvents or thinners to dissolve it. The use of vegetable oil or mineral oil is recommended for removal of this material from the skin.

**Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

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

**Notes to physician** : Administration of 100% oxygen and supportive care is the preferred treatment for poisoning by hydrogen sulfide gas. For additional information on H<sub>2</sub>S, see Western MSDS for H<sub>2</sub>S.

**Specific treatments** : No specific treatment.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	: Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
<b>Unsuitable extinguishing media</b>	: None known.
<b>Specific hazards arising from the chemical</b>	: No specific fire or explosion hazard.
<b>Hazardous thermal decomposition products</b>	: Hydrogen Sulfide (Elevated temperatures).
<b>Special protective actions for fire-fighters</b>	: No special protection is required.
<b>Special protective equipment for fire-fighters</b>	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: Provide adequate ventilation. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
<b>Environmental precautions</b>	: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

<b>Spill</b>	: Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. 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.
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## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	: This material is typically stored, transported and used at temperatures between 275°F (135°C) and 360°F (183°C). Do not use or store near heat, sparks, or open flames. Use or store only in a well-ventilated area. Keep container closed when material is not in use. DO NOT ADD OR ALLOW WATER TO MIX WITH HOT ASPHALT. Steam generated eruptions may occur. STORE AND TRANSPORT ASPHALT ONLY IN PROPERLY VENTED CONTAINERS. Combustion of asphalt and asphalt vapors may occur. DO NOT MISHANDLE ASPHALT EQUIPMENT. Observe manufacturer's guidelines on proper equipment use. Do not breathe vapor or fumes from heated material. Avoid contact of heated material
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## Section 7. Handling and storage

Advice on general occupational hygiene	with eyes, skin, and clothing. Put on appropriate personal protective equipment (see Section 8). : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not use solvents to clean hands and face. Use vegetable oils or mineral oil, followed by a thorough washing with soap and water. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	: temperatures above 350°F (176.7°C). Deposits can form in the vapor space of large asphalt tanks which may ignite as low as 350°F. Pyrophoric iron sulfide, commonly present in such tanks, may cause ignition below 350°F. Toxic quantities of hydrogen sulfide (H <sub>2</sub> S) may be present in storage tanks and bulk transport vessels which contain or have contained this material. Persons opening or entering these compartments should first determine if H <sub>2</sub> S is present. See Exposure Controls/Personal Protection - Section 8. Do not attempt rescue of a person over exposed to H <sub>2</sub> S without wearing approved supplied-air or self-contained breathing equipment. If there is a potential for exceeding one-half the occupational exposure standard, monitoring of hydrogen sulfide levels is required. Since the sense of smell cannot be relied upon to detect the presence of H <sub>2</sub> S, the concentration should be measured by the use of fixed or portable devices. <b>Static Hazard:</b> 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 an accumulation of 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.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Petroleum asphalt	NIOSH REL (United States, 6/2009). CEIL: 5 mg/m <sup>3</sup> 15 minutes. Form: Fume ACGIH TLV (United States, 1/2011). TWA: 0.5 mg/m <sup>3</sup> , (as benzene soluble aerosol) 8 hours. Form: Inhalable fraction

**Appropriate engineering controls** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

### Individual protection measures

#### Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

## Section 8. Exposure controls/personal protection

<b>Eye/face protection</b>	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If this material is heated, wear chemical goggles or safety glasses or a face shield.
<b><u>Skin protection</u></b>	
<b>Hand protection</b>	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
<b>Body protection</b>	: 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. If this material is heated, wear insulated clothing to prevent skin contact if engineering controls or work practices are not adequate to prevent skin contact.
<b>Other skin protection</b>	: 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.
<b>Respiratory protection</b>	: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If material is heated and emits hydrogen sulfide, determine if airborne concentrations are below the occupational exposure limit for hydrogen sulfide. If not, wear an approved positive pressure air-supplying respirator. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

## Section 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	: Semi-solid.
<b>Color</b>	: Black.
<b>Odor</b>	: Low.
<b>Odor threshold</b>	: Not available.
<b>pH</b>	: Not available.
<b>Melting point</b>	: 37.78 to 93.33°C (100 to 200°F)
<b>Boiling point</b>	: >343.33°C (>650°F)
<b>Flash point</b>	: Closed cup: >232°C (>449.6°F) [Pensky-Martens.]
<b>Burning time</b>	: Not applicable.
<b>Burning rate</b>	: Not applicable.
<b>Evaporation rate</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Not available.
<b>Lower and upper explosive (flammable) limits</b>	: Not available.
<b>Vapor pressure</b>	: <0.069 kPa (<0.51711 mm Hg) [room temperature]
<b>Vapor density</b>	: Not available.
<b>Relative density</b>	: 0.96 to 1.04
<b>Solubility</b>	: Insoluble in the following materials: cold water and hot water.
<b>Solubility in water</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: 371.1°C (700°F)
<b>Decomposition temperature</b>	: Not available.

## Section 9. Physical and chemical properties

SADT	: Not available.
Viscosity	: Dynamic (room temperature): 50 to 20000 mPa·s (50 to 20000 cP)

## Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products	: Hydrogen Sulfide (Elevated temperatures).

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Petroleum asphalt	LD50 Oral	Rat	>5000 mg/kg	-

#### Irritation/Corrosion

There is no data available.

#### Sensitization

There is no data available.

#### Mutagenicity

There is no data available.

#### Carcinogenicity

##### Classification

Product/ingredient name	OSHA	IARC	ACGIH	NTP
Petroleum asphalt	-	3	A4	-

#### Reproductive toxicity

There is no data available.

#### Teratogenicity

There is no data available.

#### Specific target organ toxicity (single exposure)

There is no data available.

#### Specific target organ toxicity (repeated exposure)

There is no data available.

#### Aspiration hazard

There is no data available.

## Section 11. Toxicological information

**Information on the likely routes of exposure** : Dermal contact. Eye contact. Inhalation. Ingestion.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

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

#### Short term exposure

**Potential immediate effects** : No known significant effects or critical hazards.  
**Potential delayed effects** : No known significant effects or critical hazards.

#### Long term exposure

**Potential immediate effects** : No known significant effects or critical hazards.  
**Potential delayed effects** : No known significant effects or critical hazards.

#### Potential chronic health effects

**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

There is no data available.

## Section 12. Ecological information

### Toxicity

There is no data available.

### Persistence and degradability

There is no data available.

## Section 12. Ecological information

### Bioaccumulative potential

There is no data available.

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : There is no data available.

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

## Section 13. Disposal considerations

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

## Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN3257	UN3257	UN3257
UN proper shipping name	ELEVATED TEMPERATURE LIQUID, N. O.S. (Petroleum asphalt)	ELEVATED TEMPERATURE LIQUID, N. O.S. (Petroleum asphalt)	ELEVATED TEMPERATURE LIQUID, N. O.S. (Petroleum asphalt)
Transport hazard class(es)	9 	9 	9 
Packing group	III	III	III
Environmental hazards	No.	No.	No.
Additional information	-	<u>Emergency schedules (EmS)</u> F-A, S-P	-

AERG : 128

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

## Section 15. Regulatory information

**U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** All components are listed or exempted.  
**United States inventory (TSCA 8b):** All components are listed or exempted.

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

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

**SARA 311/312 Classification** : Not applicable.

#### Composition/information on ingredients

No products were found.

### State regulations

**Massachusetts** : The following components are listed: Petroleum asphalt

**New York** : None of the components are listed.

**New Jersey** : The following components are listed: Petroleum asphalt

**Pennsylvania** : The following components are listed: Petroleum asphalt

### California Prop. 65

No products were found.

### International regulations

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

**Chemical Weapons Convention List Schedule I Chemicals** : Not listed

**Chemical Weapons Convention List Schedule II Chemicals** : Not listed

## Section 15. Regulatory information

Chemical Weapons : Not listed

Convention List Schedule

III Chemicals

## Section 16. Other information

### History

Date of issue mm/dd/yyyy : 06/30/2013

Date of previous issue : 05/30/2012

Version : 3

Revised Section(s) : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

Prepared by : KMK Regulatory Services Inc.

Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

# SAFETY DATA SHEETS

2) ASPHALT &  
CRUSHED STONE

# Hot Mix Asphalt

# Willets Point Asphalt Corp

## SAFETY DATA SHEET

Revision #1: 01/03/2022

### 1. IDENTIFICATION

<b>PRODUCT NAME:</b>	Hot Mix Asphalt
<b>SYNONYMS:</b>	Blacktop; Asphaltic Concrete; Bituminous Concrete; Tarmac
<b>RECOMMENDED USE:</b>	Road Paving
<b>USE RESTRICTIONS:</b>	None.
<b>SUPPLIER:</b>	Willets Pt Asphalt Corp
<b>ADDRESS:</b>	32-02 College Pt Blvd Flushing, NY 11354
<b>TELEPHONE:</b>	718-358-2222
<b>FAX:</b>	718-886-8723
<b>EMERGENCY CONTACT:</b>	Not classified as dangerous for supply/use. Please contact the supplier above during normal business hours.

### 2. HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200) / GHS Classification      Not classified as dangerous for supply/use.

#### Label elements

Hazard Symbol	None
Signal Word(s)	None
Hazard Statement(s)	None
Precautionary Statement(s)	None

#### Other hazards

Contact with hot ASPHALT PAVING MATERIALS causes skin burns. May cause eye irritation.  
Fumes may cause upper respiratory irritation (nose & throat). Skin contact may increase susceptibility to sunburn.  
Poisonous hydrogen sulfide gas can accumulate in the head-space of containers of certain asphalt products.  
Mechanical disruption (e.g., milling, cutting, chipping) of cured asphalt pavement may release crystalline silica dust from the aggregate.

#### Additional Information

Avoid breathing dust/fume/gas/mist/vapors/spray.  
As necessary, Wear protective gloves/protective clothing/eye protection/face protection.  
Wash hands and exposed skin after use.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Composition/information on ingredients	% wt.	CAS No.
Aggregate (crushed stone, sand, gravel, slag)	70 - 97	Various
Petroleum asphalt / bitumen^	3 - 7	8052-42-4
Reclaimed Asphalt Pavement (RAP)	0 - 25	Mixture
Reclaimed Asphalt Shingles (RAS)	0 - 10	Mixture
Polymers and Natural Rubbers	< 0.5	Various
Process oils (inherent in refined petroleum asphalt)	< 0.1	Various
Anti-strip or other amine-based additives	< 0.1	Various
Warm-mix additives	< 0.1	Various

Contains: <0.05% of 3 - 7 ring Polycyclic Aromatic Hydrocarbons (PAHs).

Other Substances in the product which may present a health or environmental hazard, or which have been assigned occupational exposure limits, are detailed below. Please see Section 8 of SDS for more details.

- Contains: <0.1% airborne crystalline silica (inherent in aggregate) and <0.1% hydrogen sulfide.
- Hydrogen sulfide gas can accumulate in the head space of containers of certain asphalt products.
- Heated product releases asphalt fume.

**Additional Information** - None

### 4. FIRST AID MEASURES

#### Description of first aid measures

Inhalation	Not normally required. Move person to fresh air. Apply artificial respiration if necessary. If symptoms persist, obtain medical attention.
Skin Contact	Causes burns. Immediately cool skin where asphalt binder has adhered to skin. Allow asphalt binder which remains on the skin to fall off naturally. DO NOT REMOVE. If problem persist or continue, get medical attention.
Eye Contact	Flush eyes with water for at least 15 minutes while holding eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation develops and persists, get medical attention.
Ingestion	Not normally required. Do not induce vomiting. Do not give anything by mouth to an unconscious person. Get medical attention.

#### Most important symptoms and effects, both acute and delayed

None known

#### Indication of any immediate medical attention and special treatment needed

None known

### 5. FIRE FIGHTING MEASURES

#### Extinguishing Media

- Suitable Extinguishing Media
- Unsuitable Extinguishing Media

Extinguish with carbon dioxide, dry chemical, foam or water spray. None anticipated.

**Special hazards arising from the substance or mixture**

Combustion causes toxic fumes. Combustion products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides

**Advice for fire-fighters**

A self-contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment, and emergency procedures**

Avoid contact with skin and eyes.

**Environmental precautions**

Not normally required.

**Methods and material for containment and cleaning up**

Allow product to cool/solidify and pick up as a solid.

**Reference to other sections**

None

**Additional Information**

None.

## 7. HANDLING & STORAGE

**Precautions for safe handling**

Avoid contact with skin and eyes.

**Conditions for safe storage, including any incompatibilities**

-Storage temperature

Store at temperatures not exceeding the product's

-Incompatible materials

Strong oxidizing agents.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Control parameters**

**Occupational Exposure Limits**

SUBSTANCE.	CAS No.	(8hr TWA)		(STEL)		Note:
		PEL (OSHA) *	TLV (ACGIH)	PEL (OSHA)	TLV	
Asphalt fume	-----	-----	0.5 mg/m <sup>3</sup> (I)	-----	-----	See below
Crystalline Silica (respirable particulate)	-----	10 mg/m <sup>3</sup>	0.025 mg/m <sup>3</sup> ^	-----	-----	See below
Hydrogen sulfide	7783-06-4	-----	1 ppm	20 ppm ceiling	5 ppm	50 ppm peak

(I) Inhalable benzene-soluble fraction; ^Suspected Human Carcinogen; \*Refer to OSHA 29 CFR 1910.1000 & 29 CFR 1926.55; 8hr TWA = 8 hour time-weighted average; STEL = Short Term Exposure Limit.

**Recommended monitoring method**

NIOSH 5042 (Asphalt Fume), NIOSH 7500 (Crystalline Silica), Electrochemical sensor (hydrogen sulfide).

**Exposure controls**

**Appropriate engineering controls**

Use only outdoors or in a well-ventilated area.

**Personal protective equipment**

Eye/face protection

The following to be used as necessary: Safety Glasses



Skin protection (Hand protection/ Other)

The following to be used as necessary: Leather or thick textile gloves.



Respiratory protection

In case of inadequate ventilation wear respiratory protection. Use NIOSH approved respiratory protection. Air-purifying respirator with combination organic vapor cartridge / particulate filter may be sufficient. Check with protective equipment manufacturer's data.

Thermal hazards

Use gloves with insulation for thermal protection, when needed.

#### Environmental Exposure Controls

Do not discharge waste and/or cleaning water via public sewer system. Ensure waste is collected and contained.

## 9. PHYSICAL & CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

Appearance	Solid
Color.	Dark brown / Black
Odor	Asphalt / Bitumen
Odor Threshold (ppm)	Not available.
pH (Value)	Not available.
Melting Point (°C) / Freezing Point (°C)	Not available.
Boiling point/boiling range (°C):	> 371 (>700 °F)
Flash Point (°C)	> 232 (> 450 °F)
Evaporation Rate	Not available.
Flammability (solid, gas)	Not applicable.
Explosive Limit Ranges	Not applicable.
Vapor pressure (Pascal)	Not determined.
Vapor Density (Air=1)	Not determined.
Density (g/ml)	2.2 - 2.7
Solubility (Water)	Negligible
Solubility (Other)	Not known
Partition Coefficient (n-Octanol/water)	Not available.
Auto Ignition Point (°C)	Not available.
Decomposition Temperature (°C)	Not available.
Kinematic Viscosity (cSt) @ 40°C	Not available
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
<b>Other information</b>	Not available.

## 10. STABILITY & REACTIVITY

**Reactivity**

Stable under normal conditions.

**Chemical stability**

Stable.

<b>Possibility of hazardous reactions</b>	May react violently with: Strong oxidizing agents
<b>Conditions to avoid</b>	Incompatible materials
<b>Incompatible materials</b>	Oxidizers
<b>Hazardous decomposition product(s)</b>	Combustion causes toxic fumes. Combustion products: Carbonmonoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides

## 11. TOXICOLOGICAL INFORMATION

**Exposure routes:** Inhalation, Skin Contact, Eye Contact

### Information on toxicological effects

Acute toxicity	LD50 (rat): >5000 mg/kg bw LD50 (dermal): >2000 mg/kg bw LC50 (inhalation, fume): >94.4 mg/m <sup>3</sup>
Irritation/Corrosivity	May cause irritation to skin, eyes and respiratory system.
Sensitization	Not to be expected
Repeated dose toxicity	NOAEL(rat): 28 mg/m <sup>3</sup> LOAEL (rat): 149 mg/m <sup>3</sup>
Carcinogenicity	Not to be expected at typical road paving temperatures.

NTP	IARC	ACGIH	OSHA
No.	2B*	No.	No.
Mutagenicity	Not to be expected.		
Reproductive toxicity	Not to be expected.		

Other information \* IARC (2013, volume 103) identifies that “occupational exposures to straight-run bitumens and their emissions during road paving are possibly carcinogenic to humans (Group 2B).” However, classification as a carcinogen under OSHA 29 CFR 1910.1200 is not warranted given the absence of positive cancer findings in human epidemiological studies and in cancer studies with laboratory animals when exposed dermally or by inhalation to asphalt products or fume condensates that are typical of road paving applications. IARC (2013, volume 103) also identifies that “occupational exposures to oxidized bitumens and their emissions during roofing are probably carcinogenic to humans (Group 2A).” Roofing shingle are sometimes recycled into road paving asphalt mix. Emissions from oxidized bitumen, e.g., from shingles, at road paving temperatures are not expected to be qualitatively different than emissions from straight-run bitumens, and therefore would not warrant a carcinogen classification under OSHA 29 CFR 1910.1200.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Short term	LL50 (48 hour): >1000 mg/l (Fish) LL50 (48 hour): >1000 mg/L (Aquatic Invertebrates) EL50 (48 hour): >1000 mg/L (Aquatic Plants)
Long Term	No data

### Persistence and degradability

The product is poorly biodegradable.

### Bioaccumulative potential

The product has low potential for bioaccumulation.

### Mobility in soil

The product has low mobility in soil.

**Results of PBT and vPvB assessment**  
Not classified as PBT or vPvB.  
**Other adverse effects**  
None known.

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**  
Disposal should be in accordance with local, state or national legislation.  
Consult an accredited waste disposal contractor or the local authority for advice.

**Additional Information**  
None known.

## 14. TRANSPORT INFORMATION

**Ground or Water Domestic Voyage**  
Not regulated when transported below 240°C (464

## 15. REGULATORY INFORMATION

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

**TSCA (Toxic Substance Control Act)** - Inventory Status: All components listed or polymer exempt.

**RCRA Hazardous Waste Number (40 CFR 261.33):** None

**US RCRA Hazard Class:** Not applicable.

**Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):**

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
None	-----	-----	-----

**SARA 311/312 - Hazard Categories:** None

Fire    Sudden Release    Reactivity    Immediate (acute)    Chronic (delayed)

**SARA 313 - Toxic Chemicals (40 CFR 372):**

Chemical Name	CAS No.	Typical %wt.
None	-----	-----

**SARA 302 - Extremely Hazardous Substances(40 CFR 355):**

Chemical Name	CAS No.	Typical %wt.	TPO (pounds)
None	-----	-----	-----

## 16. OTHER INFORMATION

**Additional Information**

The following sections contain revisions or new statements: 1-16.

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. The manufacturer gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. The manufacturer accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information.

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# SAFETY DATA SHEETS

## 3) CONCRETE

# Safety Data Sheet Ready Mix Concrete

## Section 1. Identification

<b>GHS product identifier:</b>	Ready Mix Concrete
<b>Other means of identification:</b>	Concrete, Colored Concrete, Freshly Mixed Concrete
<b>Relevant identified uses of the substance or mixture and uses advised against:</b>	Ready Mix Concrete is used in the construction of various structures and objects.
<b>Supplier's details:</b>	300 E. John Carpenter Freeway, Suite 1645 Irving, TX 75062 (972) 653-5500
<b>Emergency telephone number (24 hours):</b>	<b>CHEMTRIC: (800) 424-9300</b>

## Section 2. Hazards Identification

<b>GHS Classification:</b>	SKIN SENSITIZATION – Category 1; H317 CARCINOGENICITY – Category 1A; H350 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) – Category 3; H335 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) – Category 1; H372 SKIN CORROSION/IRRITATION – Category 2; H315 SERIOUS EYE DAMAGE/EYE IRRITATION – Category 1; H318
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## GHS label elements

<b>Hazard pictograms:</b>	
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<b>Signal word:</b>	Danger
<b>Hazard statements:</b>	May cause cancer (inhalation) May cause damage to organs (lung) through prolonged or repeated exposure Causes severe skin burns and eye damage Causes serious eye irritation May cause an allergic skin reaction

<b>Precautionary statements:</b>	
<b>Prevention:</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash any exposed body parts thoroughly after handling. Avoid breathing dust. Contaminated clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

<b>Response:</b>	If exposed or concerned: Get medical advice/attention if irritation or rash occurs. If on skin: Take off immediately all contaminated clothing. Rinse/wash skin with plenty of water/shower. Wash contaminated clothing before reuse. If in eyes: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do.
<b>Storage:</b>	Restrict or control access to ready mix concrete (store locked up).

<b>Disposal:</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
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<b>Hazards not otherwise classified (HNOC):</b>	None known
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<b>Supplemental Information:</b>	Respirable Crystalline Silica (RCS) may cause cancer. Wet, freshly mixed concrete is not expected to pose respiratory concern. Ready Mix Concrete is comprised of cement, additives and a naturally occurring mineral complex that contains varying quantities of quartz (crystalline silica). When set/cured Ready Mix Concrete is subjected to various natural or mechanical forces it may produce small particles (dust) which may contain respirable crystalline silica (particles less than 10 micrometers in aerodynamic diameter). Repeated inhalation of respirable crystalline silica (quartz) may cause lung cancer according to IARC and NTP; ACGIH states that it is a suspected cause of cancer. Other forms of RCS (e.g., tridymite and cristobalite) may also be present or formed under certain industrial processes.
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## Section 3. Composition/information on ingredients

Substance/mixture: Ready Mix Concrete

### CAS number/other identifiers

Ingredient name	%	CAS number
Aggregates/Crushed Stone	35 - 60	Varies
Portland Cement	25 - 30	65997-15-1
Ashes	0 - 25	68131-74-8
Water	5 - 10	7732-18-5
Crystalline Silica (Quartz)	0 - 2	14808-60-7

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Any concentration shown as a range is to protect confidentiality or is due to process variation. Portland Cement may contain trace (< 0.05%) amounts of chromium salts or compounds (including hexavalent chromium) or other metals (including nickel compounds) found to be dangerous, hazardous or toxic in some chemical forms. These metals are present mostly as trace substitutions within the principal minerals. Other trace constituents may include potassium and sodium sulfate compounds.

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

## Section 4. First aid measures

### Description of necessary first aid measures

<b>Eye Contact:</b>	If exposed or concerned: get medical attention. Do not allow individual to rub eyes. Flush eyes gently under running water for 15 minutes or longer, making sure that the eyelids are held open. Other than washing with water, do not attempt to remove material from eyes. Remove contact lenses, if present and easy to do. Obtain medical attention for eye contact with wet concrete.
<b>Inhalation:</b>	Move exposed individual to fresh air. Dust in throat and nasal passages should clear naturally by coughing, sneezing and nasal discharge. Obtain medical attention if symptoms persist or develop later.
<b>Skin Contact:</b>	Wash affected areas with water and soap. Remove contaminated clothing and wash before reuse. If irritation persists or develops later, obtain medical attention.
<b>Ingestion:</b>	Ingestion is not a common route of occupational exposure. If swallowed and irritation or discomfort occurs, obtain medical attention.

### Most important symptoms/effects, acute and delayed potential acute health effects

<b>Eye contact:</b>	Exposure to dust from dry ingredients or hardened cement can cause irritation and tearing of the eyes. Exposure to wet concrete may result in irritation or burns.
<b>Inhalation:</b>	Symptoms of exposure may include upper respiratory discomfort with coughing and sneezing. Inhalation may cause upper respiratory tract infection. A "rare" acute form of silicosis may develop from inhalation of extremely high concentrations of crystalline silica over a period of several months to five years.
<b>Skin contact:</b>	Ready Mix Concrete contains Portland Cement, which may contain trace amounts of hexavalent chromium and is linked with allergic sensitization reactions in some individuals. These reactions may lead to contact dermatitis and skin ulceration. Exposure to dust from dry ingredients or hardened cement can cause skin irritation, dermatitis and/or redness to the exposed skin. Wet concrete exhibits caustic, abrasive and dehydrating properties. Irritation or pain may be delayed for several hours and cannot be relied upon as an indication of exposure.
<b>Ingestion:</b>	Ingestion is not a common route of occupational exposure. If swallowed and irritation or discomfort occurs, obtain medical attention.

## Over-exposure signs/symptoms

<b>Notes to physician:</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>Specific treatments:</b>	Not Applicable
<b>Protection of first-aiders:</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>General information:</b>	Pre-existing medical conditions that may be aggravated by exposure include disorders of the eye, skin and lung (including asthma and other breathing disorders). If addicted to tobacco, smoking will impair the ability of the lungs to clear themselves of dust.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media:</b>	Not combustible. Use extinguishing agent appropriate for surrounding flammable materials
<b>Unsuitable extinguishing media:</b>	None known.
<b>Specific hazards arising from the chemical:</b>	Not combustible. Nonflammable. Spalling of hardened concrete may occur under conditions of intense heat.
<b>Hazardous thermal decomposition Products:</b>	Material is not combustible.
<b>Special protective actions for fire-fighters:</b>	Material is nonflammable. Use appropriate procedures for surrounding flammable materials.
<b>Special protective equipment for fire-fighters:</b>	Use protective equipment appropriate for surrounding materials. No specific precautions.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For response personnel:</b>	Keep unprotected personnel out of the area. Do not dry sweep dusty material. All local and national laws governing waste disposal must be followed.
<b>Environmental precautions:</b>	Clean spilled material immediately. Contain spills and wash water to prevent run-off into public waterways. Remove wet concrete from roadways immediately. Do not dry sweep spilled dusty material.

### Methods and materials for containment and cleaning up

<b>Small spill:</b>	Alkali resistant gloves, long sleeves, long pants and safety glasses should be used by clean up personnel for wet concrete releases.
<b>Large spill:</b>	Waterproof boots and goggles should be used. Eye protection and appropriate respirator protection should be used to protect clean up personnel against dust.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures:</b>	Use personnel protective equipment to avoid direct contact with concrete. Remove contaminated clothes as soon as possible. Dust may be generated during handling or mixing dry powder or from cutting, breaking or crushing hardened material. Use wet cutting methods when possible.
<b>Advice on general occupational hygiene:</b>	Observe good industrial hygiene practices. Promptly remove dusty clothing and launder before reuse.

## Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Particulates not otherwise classified (CAS SEQ250)	<p><b>ACGIH TLV (United States, Canada)</b> TWA: 3 mg/m<sup>3</sup>. Form: Respirable particles TWA: 10 mg/m<sup>3</sup>. Form: Inhalable particles</p> <p><b>OSHA PEL (United States)</b> PEL: 5 mg/m<sup>3</sup>. Form: Respirable fraction PEL: 15 mg/m<sup>3</sup>. Form: Total dust</p> <p><b>MSHA PEL (United States)</b> PEL: 5 mg/m<sup>3</sup>. Form: Respirable fraction PEL: 10 mg/m<sup>3</sup>. Form: Total dust</p>
Portland Cement	<p><b>ACGIH TLV (United States and Canada)</b> TWA: 1 mg/m<sup>3</sup>. Form: Respirable dust</p> <p><b>OSHA PEL (United States)</b> PEL: 5 mg/m<sup>3</sup>. Form: Respirable fraction PEL: 15 mg/m<sup>3</sup>. Form: Total dust</p> <p><b>MSHA PEL (United States)</b> PEL: 5 mg/m<sup>3</sup>. Form: Respirable fraction PEL: 10 mg/m<sup>3</sup>. Form: Total dust</p>
Crystalline Silica (Quartz) (CAS 14808-60-7)	<p><b>ACGIH TLV (United States)</b> TWA: 0.025 mg/m<sup>3</sup>. Form: Respirable fraction</p> <p><b>OSHA PEL (United States)</b> TWA: 0.05 mg/m<sup>3</sup>. Form: Respirable</p> <p><b>MSHA PEL (United States)</b> TWA: 10/(%SiO<sub>2</sub> + 2) in mg/m<sup>3</sup></p> <p><b>Provincial Exposure Limits (Canada, various)</b></p> <ul style="list-style-type: none"> <li>▪ <b>Alberta (OHS Code)</b> 0.025 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>British Columbia (WorkSafeBC OHS Regulation)</b> 0.025 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>British Columbia (Health, Safety &amp; Reclamation Code, Mines Act)</b> 0.1 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>Manitoba (Workplace Safety and Health Regulation)</b> 0.025 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>New Brunswick</b> 0.025 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>Newfoundland</b> 0.025 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>Nova Scotia</b> 0.025 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>Ontario (O. Reg 490/09; and O. Reg. 833)</b> 0.1 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>Prince Edward Island</b> 0.025 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>Quebec (Regulation Respecting OHS, Chapter S-2.1, r. 13)</b> 0.1 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>Saskatchewan (OHS Regulations)</b> 0.05 mg/m<sup>3</sup> 8 hour TWA</li> </ul>

### Appropriate engineering controls:

The use of ventilation or other engineering controls may be necessary to maintain airborne levels below any applicable limits. Under normal operations general ventilation should suffice.

### Environmental exposure controls:

Use general ventilation, local exhaust and/or wet suppression methods to maintain exposures below allowable exposure limits.

### Exposure guidelines:

OSHA PELs, MSHA PELs, Canadian Provincial OELs, and ACGIH TLVs are 8-hr TWA values. Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled. Terms including "Particulates Not Otherwise Classified," "Particulates Not Otherwise Regulated," Particulates Not Otherwise Specified," and "Inert or Nuisance Due" are often used interchangeably; however, the user should review each agency's terminology for differences in meanings.

## Individual protection measures

<b>Hygiene measures:</b>	Use good personal hygiene practices. Do not consume or store food in the work area. Wash hands thoroughly before eating, drinking, or smoking.
<b>Eye/face protection:</b>	Safety glasses with side shields should be worn as minimum protection from dust. Dust goggles or full face protection should be worn when very dusty conditions are present or are anticipated.

## Skin protection

<b>Hand protection:</b>	Use alkali resistant gloves to provide hand protection from concrete.
<b>Body protection:</b>	Clothing with long sleeves will provide protection. Waterproof boots high enough to prevent cement from entering should be worn when workers will be standing in wet concrete. Contaminated work clothing should be washed after use.
<b>Other skin protection:</b>	Clothing with long sleeves and long pants should be used to prevent contact with wet concrete.
<b>Respiratory protection:</b>	The need for respiratory protection should be evaluated by a qualified professional. The use of respirators for controlling exposures in excess of the occupational exposure limit must comply with regulatory requirements for medical surveillance, respiratory fit testing, repair and cleaning, and user training. In dusty areas, air monitoring for dust and quartz should be conducted regularly. Dust and quartz levels in excess of appropriate exposure limits should be reduced by all feasible engineering controls, including but not limited to, wet suppression, ventilation, process enclosure, and enclosed employee work stations.

## Section 9. Physical and chemical properties

### Appearance

<b>Physical State:</b>	Flowable, granular mud-like material	<b>Lower and Upper explosive flammable limits</b>	No test data available
<b>Color:</b>	Gray	<b>Vapor pressure:</b>	No test data available
<b>Odor:</b>	None	<b>Vapor density:</b>	Not applicable
<b>Odor threshold:</b>	Not applicable	<b>Relative density:</b>	1.5-3.0
<b>pH:</b>	12-13 in water	<b>Solubility:</b>	Not applicable
<b>Melting point:</b>	Not applicable	<b>Solubility in water:</b>	Negligible
<b>Boiling point:</b>	Not applicable	<b>Partition coefficient: n-octanol/water:</b>	Not applicable
<b>Flash point:</b>	Not applicable	<b>Auto-ignition temperature:</b>	No test data available
<b>Burning time:</b>	Not applicable	<b>Decomposition temperature:</b>	No test data available
<b>Burning rate:</b>	Not applicable	<b>SADT:</b>	Not applicable
<b>Evaporation Rate:</b>	Not applicable	<b>Viscosity:</b>	Not applicable
<b>Flammability (solid, gas):</b>	No		

## Section 10. Stability and reactivity

<b>Reactivity:</b>	Stable
<b>Chemical Stability:</b>	This material is considered stable under recommended handling and storage conditions.
<b>Possibility of hazardous reactions:</b>	Polymerization will not occur.
<b>Conditions to avoid:</b>	Keep dry until used. Avoid contact with incompatible compounds.
<b>Incompatible materials:</b>	Wet cement may react with acids, aluminum, ammonium salts, alkali and alkaline earth compounds.
<b>Hazardous decomposition products:</b>	None

## Section 11. Toxicological information

### Information on toxicological effects

<b>Acute toxicity:</b>	Not reported to be acutely toxic.
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<b>Irritation/Corrosion:</b>	<b>Skin:</b> May cause skin burns or skin ulcers. <b>Eyes:</b> May cause eye irritation or serious eye damage. <b>Respiratory:</b> Studies indicate an increased risk of lung cancer from chronic exposure to respirable crystalline silica. This effect was more pronounced in those with silicosis. Studies have also linked crystalline silica exposure with autoimmune diseases and kidney disorders.
<b>Sensitization:</b>	May cause sensitization due to the potential presence of trace amounts of hexavalent chromium.
<b>Mutagenicity:</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity:** See chart below.

Product/ingredient name	IARC	ACGIH	NTP
Portland Cement	-	A4	-
Crystalline Silica (Quartz) CAS 14808-60-7	1	A2	Known to be a human carcinogen

**Reproductive toxicity:** Not expected to be a reproductive hazard.

**Teratogenicity:** Not expected to be a teratogenic hazard.

#### Specific target organ toxicity (single exposure)

Name	Category	Route of Exposure	Target Organs
Crystalline Silica (Quartz) CAS 14808-60-7	-	Inhalation	Not reported to have effects

#### Specific target organ toxicity (repeated exposure)

Name	Category	Route of Exposure	Target Organs
Crystalline Silica (Quartz) CAS 14808-60-7	-	Inhalation	May cause damage to organs (lung) through prolonged or repeated exposure.

**Potential chronic health effects: General:** Prolonged inhalation of respirable crystalline silica may be harmful. May cause damage to organs (lungs) through prolonged or repeated exposure. There are reports in the literature suggesting that excessive crystalline silica exposure may be associated with autoimmune disorders and other adverse health effects involving the kidney. In particular, the incidence of scleroderma (thickening of the skin caused by swelling and the thickening of fibrous tissue) appears to be higher in silicotic individuals. To date, the evidence does not conclusively determine a causal relationship between silica exposure and these adverse health effects.

**Aspiration hazard:** Due to the physical form of the product it is not an aspiration hazard.

## Section 12. Ecological Information

<b>Persistence and degradability:</b>	Not readily biodegradable.
<b>Bioaccumulative potential:</b>	No available data.
<b>Mobility in soil:</b>	No available data.
<b>Other adverse effects:</b>	Harmful to aquatic life. Contact with water forms an alkaline solution. Avoid release to the environment. Data for Calcium oxide: 96 hour LC50 freshwater fish <i>Cyprinus carpio</i> = 1 070 mg/L (static). Chronic 46 day NOEC freshwater fish <i>Oreochromis niloticus</i> juvenile(fledgling, hatchling, weanling)= 100 mg/L.

## Section 13. Disposal considerations

<b>Disposal methods:</b>	Dispose of waste product and unused product in compliance with national, state/provincial and local requirements. Used material which has become contaminated, may have significantly different characteristics based on the contaminant and should be evaluated accordingly. The product may be contaminated during use and it is the responsibility of the user to assess the appropriate disposal method in that situation.
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## Section 14. Transportation information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	-	-	-
Special precautions for user	-	-	-
US DOT 49 CFR	-	-	-
Canada TDG	-	-	-
Additional information	-	-	-

**Special precautions for user:**

It is the responsibility of the transporting entity to follow all applicable laws, regulations, and rules regarding the transport of this material.

## Section 15. Regulatory Information

**U.S. Federal regulations:**

OSHA Hazard Communication Standard, 29 CFR 1910.1200

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, Subpart. D):

Not regulated

OSHA Specifically Regulated

Substances (29 CFR 1910.1001-1050):

Listed

CERCLA Hazardous Substance List (40 CFR 302.4):

Not listed

Clean Air Act Section 112 (b):

Hazardous Air Pollutants (HAPs):

Not regulated

Clean Air Act Section 112 (r) Accidental

Release Prevention (40 CFR 68.130):

Not regulated

Safe Drinking Water Act (SDWA):

Not regulated

**Canada Federal regulations:**

NSNR Status:

Listed on DSL or exempt

## SARA 311/312

**Composition/information on ingredients**

Name	%	Fire Hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Crystalline Silica (Quartz)	>1	No	No	No	No	Yes

## SARA 313

	Product name	CAS number	%
Form R-Report requirements	Crystalline Silica (Quartz)	14808-60-7	Not regulated

## State regulations

Massachusetts RTK:	Listed
New Jersey RTK:	Listed
Pennsylvania RTK:	Listed
Rhode Island RTK:	Listed

## California Prop. 65

WARNING: This product contains crystalline silica and chemicals (trace metals) known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Crystalline Silica (Quartz) CAS 14808-60-7	Yes	No	No	No

## International regulations

Ingredient name	CAS #	TSCA	Canada	WHMIS	EEC
Portland Cement	65997-15-1	Yes	DSL	D2A	EINECS
Water	7732-18-5	Yes	DSL	-	EINECS
Crystalline Silica (Quartz)	14808-60-7	Yes	DSL	-	EINECS

WHMIS Classification:

D2A "Materials Causing Other Toxic Effects"



## Section 16. Other Information

Date of issue: Jan 01 2023

Replaces: Jan 01 2022

Revised Section(s):

## Notice to reader

While the information provided in this safety data sheet is believed to provide a useful summary of the hazards of ready mix concrete as it is commonly used, the sheet cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with ready mix concrete to produce ready mix concrete products. Users should review other relevant material safety data sheets before working with this ready mix concrete or working on ready mix concrete products.

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## Abbreviations

ACGIH — American Conference of Governmental Industrial Hygienists

CAS — Chemical Abstract Service

CERCLA — Comprehensive Emergency Response and Comprehensive Liability Act

CFR — Code of Federal Regulations

DOT — Department of Transportation

GHS — Globally Harmonized System

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HEPA — High Efficiency Particulate Air  
IATA — International Air Transport Association  
IARC — International Agency for Research on Cancer  
IMDG — International Maritime Dangerous Goods  
NIOSH — National Institute of Occupational Safety and Health  
NOEC — No Observed Effect Concentration  
NRNS — New Substances Notification Regulations  
NTP — National Toxicology Program  
OSHA — Occupational Safety and Health Administration  
PEL — Permissible Exposure Limit  
REL — Recommended Exposure Limit  
RQ — Reportable Quantity  
SARA — Superfund Amendments and Reauthorization Act  
SDS — Safety Data Sheet  
TDG — Transportation of Dangerous Goods  
TLV — Threshold Limit Value  
TPQ — Threshold Planning Quantity  
TSCA — Toxic Substances Control Act  
TWA — Time-Weighted Average  
UN — United Nations

# SAFETY DATA SHEETS

## 4) DIESEL FUEL

# SAFETY DATA SHEET



Automotive Diesel Fuel

## Section 1. Identification

GHS product identifier	Automotive Diesel Fuel
Other means of identification	Truck diesel, G10, BP 10 ppm diesel fuel, Ultra Low Sulphur diesel fuel, Automotive Diesel fuel, AD20, AD40, Alpine Diesel and Biodiesel up to B5.
Product code	0000002718
SDS no.	0000002718
Historic SDS no.	AD0K1
<u>Relevant identified uses of the substance or mixture and uses advised against</u>	
Use of the substance/mixture	Fuel for compression ignition diesel engines.
Manufacturer	
Supplier	BP Australia Pty Ltd Level 17, 717 Bourke Street Docklands, Victoria 3008 ABN 53 004 085 616  <a href="http://www.bp.com.au">www.bp.com.au</a>
EMERGENCY TELEPHONE NUMBER	Technical Helpline Number: 1300 139 700 1800 638 556

## Section 2. Hazard(s) identification

Classification of the substance or mixture	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 2 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 ASPIRATION HAZARD - Category 1
GHS label elements	
Hazard pictograms	
Signal word	DANGER
Hazard statements	H227 - Combustible liquid. H304 - May be fatal if swallowed and enters airways. H315 - Causes skin irritation. H332 - Harmful if inhaled. H351 - Suspected of causing cancer. H373 - May cause damage to organs through prolonged or repeated exposure. (bone marrow, liver, thymus)
Precautionary statements	
General	P102 - Keep out of reach of children. P101 - If medical advice is needed, have product container or label at hand.

## Section 2. Hazard(s) identification

<b>Prevention</b>	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P281 - Use personal protective equipment as required. P280 - Wear protective gloves, protective clothing and eye or face protection. P210 - Keep away from flames and hot surfaces. No smoking. P271 - Use only outdoors or in a well-ventilated area. P260 - Do not breathe vapour or spray. P264 - Wash hands thoroughly after handling.
<b>Response</b>	P308 + P313 - IF exposed or concerned: Get medical attention. P304 + P340, P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. P362 - Take off contaminated clothing and wash before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of soap and water. P332 + P313 - If skin irritation occurs: Get medical attention.
<b>Storage</b>	P405 - Store locked up. P403 + P235 - Store in a well-ventilated place. Keep cool.
<b>Disposal</b>	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	Not applicable.
<b>Other hazards which do not result in classification</b>	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapour may cause flash fire or explosion. 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.

## Section 3. Composition and ingredient information

<b>Substance/mixture</b>	Mixture	
May contain Fatty Acid Methyl Esters (FAME). May also contain small quantities of proprietary performance additives. Contains small quantities of polycyclic aromatic hydrocarbons (PAHs).		
<b>Ingredient name</b>	<b>% (w/w)</b>	<b>CAS number</b>
Fuels, diesel Alkanes, C10-20-branched and linear	≥75 ≤20	68334-30-5 928771-01-1

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

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

## Section 4. First aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	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.
<b>Inhalation</b>	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.

## Section 4. First aid measures

### 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.

### 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.

### Most important symptoms/effects, acute and delayed

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

### 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, discoloured 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 minimise 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.

#### 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.

## Section 5. Firefighting measures

### Extinguishing media

#### Suitable extinguishing media

In case of fire, use water fog, foam, dry chemical or carbon dioxide extinguisher or spray.

#### 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. Vapours can form explosive mixtures with air. Vapours are heavier than air and can spread along the ground or float on water surfaces to remote ignition sources. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. 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.

## Section 5. Firefighting measures

<b>Hazardous thermal decomposition products</b>	Combustion products may include the following: carbon oxides (CO, CO <sub>2</sub> ) (carbon monoxide, carbon dioxide)
<b>Special protective actions for fire-fighters</b>	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.
<b>Special protective equipment for fire-fighters</b>	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

<b>For non-emergency personnel</b>	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 spilt material. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling. Eliminate all ignition sources.
<b>For emergency responders</b>	Entry into a confined space or poorly ventilated area contaminated with vapour, 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 spilt 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 material for containment and cleaning up

<b>Small spill</b>	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.
<b>Large spill</b>	Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Approach the 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 spilt 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 vapour 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 spilt 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.

#### **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 oxidising 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

Light hydrocarbon vapours 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 vapour 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 vapour, 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/vapour mixtures may form at ambient temperature. If product comes into contact with hot surfaces, or leaks occur from pressurised fuel pipes, the vapour 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 and personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Fuels, diesel	<b>ACGIH TLV (United States). Absorbed through skin.</b> TWA: 100 mg/m <sup>3</sup> , (measured as total hydrocarbons) 8 hours. Issued/Revised: 1/2007 Form: Inhalable fraction and vapor

#### **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.

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.

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.

#### **Environmental exposure controls**

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

### Individual protection measures

#### Hygiene measures

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

#### Eye/face protection

Chemical splash goggles.

#### Skin protection

**Wear chemical resistant gloves.** Recommended: Nitrile gloves.

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.

**Use of protective clothing is good industrial practice.**

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.

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.

Wear suitable protective clothing.

Footwear highly resistant to chemicals.

When there is a risk of ignition wear inherently fire resistant protective clothes and gloves.

When there is a risk of ignition from static electricity, wear anti-static protective clothing. For greatest effectiveness against static electricity, overalls, boots and

## Section 8. Exposure controls and personal protection

gloves should all be anti-static.

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.

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.

### Other skin protection

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

### Respiratory protection

Use with adequate ventilation.

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.

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

**Recommended:** If ventilation is inadequate, use respirator that will protect against organic vapour and dust/mist.

### Refer to standards:

Respiratory protection:AS/NZS 1715 and AS/NZS 1716

Gloves:AS/NZS 2161.1

Eye protection:AS/NZS 1336 and AS/NZS 1337

## Section 9. Physical and chemical properties

### Appearance

#### Physical state

Liquid.

#### Colour

Water white to straw including fluorescent green, blue or yellow.

#### Odour

Mild

#### Odour threshold

0.7 ppm (Based on Fuels, diesel)

#### pH

Not applicable. Based on Solubility in Water (Very slightly soluble in water)

-29 to -18°C (-20.2 to -0.4°F) (Based on Fuels, diesel)

#### Melting point

180 to 380°C (356 to 716°F)

#### Boiling point

Closed cup: >61.5°C (>142.7°F) [Pensky-Martens.]

#### Flash point

Not relevant/applicable due to nature of the product. Based on low volatility

#### Evaporation rate

Not applicable. Based on - Physical state

#### Flammability (solid, gas)

Lower: 0.5%

Upper: 7.5%

#### Lower and upper explosive (flammable) limits

0.1 kPa (0.755 mm Hg) (Based on Concawe Category: Vacuum Gas Oils, Hydrocracked Gas Oils & Distillate Fuels (VHGO) )

 [Air = 1]

0.83

#### Density

820 to 850 kg/m³ (0.82 to 0.85 g/cm³) at 15°C

#### Solubility

Very slightly soluble in water

#### Partition coefficient: n-octanol/water

Not applicable. Based on Fuels, diesel - Substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance.

240°C (464°F) (Based on Fuels, diesel)

#### Auto-ignition temperature

Not observed to decompose by final boiling point: 380°C (716°F)

#### Decomposition temperature

Kinematic: 2 to 4.5 mm²/s (2 to 4.5 cSt) at 40°C

## Section 10. Stability and reactivity

<b>Reactivity</b>	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
<b>Chemical stability</b>	The product is stable.
<b>Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
<b>Conditions to avoid</b>	Avoid all possible sources of ignition (spark or flame). Avoid excessive heat.
<b>Incompatible materials</b>	Reactive or incompatible with the following materials: oxidising materials.
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Fuels, diesel	LC50 Inhalation Dusts and mists	Rat	4.1 mg/l	4 hours
	LD50 Dermal	Rabbit	>4300 mg/kg	-
	LD50 Dermal	Rabbit	>4300 mg/kg	-
	LD50 Oral	Rat	17900 mg/kg	-
	LD50 Oral	Rat	7600 mg/kg	-

#### Conclusion/Summary

Harmful if inhaled.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Fuels, diesel	Skin - Irritation	Rabbit	-	-	-
	Skin - Irritation	Rabbit	-	-	-
	Eyes - Non-irritating to the eyes.	Rabbit	-	-	-
	Eyes - Non-irritating to the eyes.	Rabbit	-	-	-

#### Skin

Causes skin irritation.

#### Eyes

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

#### Sensitisation

Product/ingredient name	Route of exposure	Species	Result
Fuels, diesel	skin	Guinea pig	Not sensitising
	skin	Guinea pig	Not sensitising
Skin			Not classified. Based on available data, the classification criteria are not met.

#### Mutagenicity

Product/ingredient name	Test	Experiment	Result
Fuels, diesel	OECD 471	Experiment: In vitro Subject: Non-mammalian species	Positive
	Equivalent to OECD 476	Experiment: In vitro Subject: Mammalian-Animal Cell: Germ	Negative
	not guideline	Experiment: In vivo Subject: Unspecified Cell: Somatic	Negative

#### Conclusion/Summary

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

#### Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Product name	Automotive Diesel Fuel	Product code	0000002718	Page: 8/14
Version	4	Date of issue	5/14/2021	Format Australia (Australia)
				Language ENGLISH (ENGLISH)

## Section 11. Toxicological information

Fuels, diesel	Positive - Dermal - Unspecified	Mouse	-	2 years				
<b>Conclusion/Summary</b>	Suspected of causing cancer.							
<b>Reproductive toxicity</b>								
Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure		
Fuels, diesel	-	-	Negative	Rat	Dermal	20 days		
	-	-	Negative	Rat	Dermal	10 days		
	-	-	Negative	Rat	Dermal	10 days		
<b>Conclusion/Summary</b>	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.							
<b>Specific target organ toxicity (repeated exposure)</b>								
Name	Category	Route of exposure	Target organs					
Fuels, diesel	Category 2	-	bone marrow, liver, thymus					
<b>Aspiration hazard</b>								
Name	Result							
Fuels, diesel	ASPIRATION HAZARD - Category 1							
Alkanes, C10-20-branched and linear	ASPIRATION HAZARD - Category 1							
<b>Information on likely routes of exposure</b>	Routes of entry anticipated: Oral, Dermal, Inhalation.							
<b>Potential acute health effects</b>								
<b>Eye contact</b>	No known significant effects or critical hazards.							
<b>Inhalation</b>	Harmful if inhaled.							
<b>Skin contact</b>	Causes skin irritation.							
<b>Ingestion</b>	Irritating to mouth, throat and stomach. Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.							
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>								
<b>Eye contact</b>	Adverse symptoms may include the following: pain or irritation watering redness							
<b>Inhalation</b>	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness							
<b>Skin contact</b>	Adverse symptoms may include the following: irritation redness							
<b>Ingestion</b>	Adverse symptoms may include the following: nausea or vomiting							

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

Product name	Automotive Diesel Fuel	Product code	0000002718	Page: 9/14
Version	4	Date of issue	5/14/2021	Format

## Section 11. Toxicological information

<b>Eye contact</b>	Vapour, mist or fume may cause eye irritation. Exposure to vapour, mist or fume may cause stinging, redness and watering of the eyes.
<b>Inhalation</b>	Vapour, mists or fumes may contain polycyclic aromatic hydrocarbons some of which are known to produce skin cancer. Vapour, mists or fumes may contain polycyclic aromatic hydrocarbons some of which are known to produce skin cancer. Vapour, mist or fume may irritate the nose, mouth and respiratory tract.
<b>Skin contact</b>	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.
<b>Ingestion</b>	If swallowed, may irritate the mouth, throat and digestive system. If swallowed, may cause abdominal pain, stomach cramps, nausea, vomiting, diarrhoea, dizziness and drowsiness.
<b>General</b>	May cause damage to organs through prolonged or repeated exposure. Vapour, mists or fumes may contain polycyclic aromatic hydrocarbons some of which are known to produce skin cancer. Vapour, mists or fumes may contain polycyclic aromatic hydrocarbons some of which are known to produce skin cancer.
<b>Carcinogenicity</b>	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

<b>Route</b>	<b>ATE value</b>
Inhalation (dusts and mists)	4.1 mg/l

#### **Other information**

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 12. Ecological information

### Toxicity

<b>Product/ingredient name</b>	<b>Result</b>	<b>Species</b>	<b>Exposure</b>
Fuels, diesel	EL50 >1000 mg/l Nominal Fresh water	Micro-organism	40 hours
	NOELR 3.217 mg/l Nominal Fresh water	Micro-organism	40 hours
	Acute EL50 22 mg/l Nominal Fresh water	Algae	72 hours
	Acute EL50 210 mg/l Nominal Fresh water	Daphnia	48 hours
	Acute EL50 68 mg/l Nominal Fresh water	Daphnia	48 hours
	Acute ErL50 78 mg/l Nominal Fresh water	Algae	72 hours
	Acute LL50 65 mg/l Nominal Fresh water	Fish	96 hours
	Acute LL50 21 mg/l Nominal Fresh water	Fish	96 hours
	Acute NOELR 10 mg/l Nominal Fresh water	Algae	72 hours
	Acute NOELR 1 mg/l Nominal Fresh water	Algae	72 hours

## Section 12. Ecological information

Acute NOELR 46 mg/l Nominal water	Fresh	Daphnia	48 hours
Chronic NOEL 0.083 mg/l Nominal Fresh water		Fish	14 days
Chronic NOELR 0.2 mg/l Nominal Fresh water		Daphnia	21 days

**Conclusion/Summary** Toxic to aquatic life with long lasting effects.

### Persistence and degradability

Expected to be biodegradable.

Product/ingredient name	Test	Result	Dose	Inoculum
Fuels, diesel	OECD 301 F	60 % - Readily - 28 days	30 mg/l	-
	OECD 301 F	57.5 % - Not readily - 28 days	25 mg/l	-
	Equivalent to EPA OTS	35 % - Not readily - 28 days	5 mg/l	-
	796.3100			

**Conclusion/Summary** Persistent per IMO criteria

### Bioaccumulative potential

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

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.

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

**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 minimised 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. Vapour 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

### **Special Precautions for Landfill or Incineration**

Empty packages may contain some remaining product. Hazard warning labels are a guide to the safe handling of empty packaging and should not be removed.

## Section 14. Transport information

	ADG	IMDG	IATA
UN number	Not regulated.	UN3082	UN3082
UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.. Marine pollutant (Fuels, diesel)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fuels, diesel)
Transport hazard class(es)	-	9  	9  
Packing group	-	III	III
Environmental hazards	No.	Yes.	Yes.
Additional information	<p><b>Remarks</b> Combustible liquid Class C1 (AS 1940).</p>	<p>This product is not regulated as a dangerous good when transported in sizes of <math>\leq 5</math> L or <math>\leq 5</math> kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.</p> <p><b>Emergency schedules</b> F-A, S-F</p>	<p>This product is not regulated as a dangerous good when transported in sizes of <math>\leq 5</math> L or <math>\leq 5</math> kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.</p>

Special precautions for user Not available.

Transport in bulk according to IMO instruments Proper shipping name MARPOL Annex 1 rules apply for bulk shipments by sea.  
Category: gas oils, including ship's bunkers

## Section 15. Regulatory information

### Standard for the Uniform Scheduling of Medicines and Poisons

Not scheduled

Consumer products - This product is exempt per Appendix A of the SUSMP.

Industrial Products - Labelling requirements for SUSMP do not apply to a poison that is packed and sold solely for industrial, laboratory or manufacturing use. However, this product is labelled in accordance with NOSH National Code of Practice for labelling of workplace substances.

### Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

### Montreal Protocol

Ingredient name	List name	Status
Not listed.		

### Stockholm Convention on Persistent Organic Pollutants

Ingredient name	List name	Status
Not listed.		

### Rotterdam Convention on Prior Informed Consent (PIC)

## Section 15. Regulatory information

Ingredient name	List name	Status
Not listed.		

### International lists

#### National inventory

<b>REACH Status</b>	For the REACH status of this product please consult your company contact, as identified in Section 1.
<b>Australia inventory (AICS)</b>	<input checked="" type="checkbox"/> Contact local supplier or distributor.
<b>Canada inventory</b>	<input checked="" type="checkbox"/> Not determined.
<b>China inventory (IECSC)</b>	<input checked="" type="checkbox"/> Not determined.
<b>Japan inventory (ENCS)</b>	<input checked="" type="checkbox"/> Not determined.
<b>Korea inventory (KECI)</b>	<input checked="" type="checkbox"/> Not determined.
<b>Philippines inventory (PICCS)</b>	<input checked="" type="checkbox"/> Not determined.
<b>Taiwan Chemical Substances Inventory (TCSI)</b>	<input checked="" type="checkbox"/> Not determined.
<b>United States inventory (TSCA 8b)</b>	<input checked="" type="checkbox"/> Not determined.

## Section 16. Any other relevant information

### History

<b>Date of printing</b>	5/14/2021
<b>Date of issue/Date of revision</b>	5/14/2021
<b>Date of previous issue</b>	8/6/2019
<b>Version</b>	4
<b>Prepared by</b>	Product Stewardship
<b>Key to abbreviations</b>	ADG = Australian Dangerous Goods ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) NOHSC = National Occupational Health and Safety Commission REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006] STEL = Short term exposure limit SUSMP = Standard Uniform Schedule of Medicine and Poisons UN = United Nations TWA = Time weighted average VOC = Volatile Organic Compound SADT = Self-Accelerating Decomposition Temperature 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

### Procedure used to derive the classification

<b>Product name</b> Automotive Diesel Fuel	<b>Product code</b> 0000002718	<b>Page:</b> 13/14
<b>Version</b> 4 <b>Date of issue</b> 5/14/2021	<b>Format</b> Australia (Australia)	<b>Language</b> ENGLISH (ENGLISH)

## Section 16. Any other relevant information

Classification	Justification
FLAMMABLE LIQUIDS - Category 4	On basis of test data
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
CARCINOGENICITY - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

 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  
SHEETS

5) GASOLINE

# SAFETY DATA SHEET

Unleaded 91



## Section 1. Identification

**GHS product identifier** Unleaded 91  
**Other means of identification** regular unleaded petrol  
**Product code** 0000002733  
**SDS no.** 0000002733  
**Historic SDS no.** 875; 0000002889

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

**Use of the substance/mixture** Use only as a motor fuel for spark ignition engines. NOT for aviation use. Should NOT be used as a solvent nor cleaning agent.  
For specific application advice see appropriate Technical Data Sheet or consult our company representative.

**Manufacturer**  
**Supplier** BP Australia Pty Ltd  
Level 17, 717 Bourke Street  
Docklands, Victoria 3008  
ABN 53 004 085 616  
  
[www.bp.com.au](http://www.bp.com.au)

**EMERGENCY TELEPHONE NUMBER** Technical Helpline Number: 1300 139 700  
1800 638 556

## Section 2. Hazard(s) identification

**Classification of the substance or mixture** FLAMMABLE LIQUIDS - Category 1  
SKIN CORROSION/IRRITATION - Category 2  
GERM CELL MUTAGENICITY - Category 1B  
CARCINOGENICITY - Category 1B  
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3  
ASPIRATION HAZARD - Category 1

### GHS label elements

#### Hazard pictograms



#### Signal word

#### Hazard statements

DANGER

H224 - Extremely flammable liquid and vapour.  
H304 - May be fatal if swallowed and enters airways.  
H315 - Causes skin irritation.  
H336 - May cause drowsiness or dizziness.  
H340 - May cause genetic defects.  
H350 - May cause cancer.

#### Precautionary statements

#### General

P102 - Keep out of reach of children.

P101 - If medical advice is needed, have product container or label at hand.

**Product name** Unleaded 91

**Product code** 0000002733

**Page:** 1/17

**Version** 4.01 **Date of issue** 5/26/2021

**Format** Australia

(Australia)

**Language** ENGLISH

(ENGLISH)

## Section 2. Hazard(s) identification

<b>Prevention</b>	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P281 - Use personal protective equipment as required. P280 - Wear protective gloves, protective clothing and eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating or lighting equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing vapour. P264 - Wash hands thoroughly after handling.
<b>Response</b>	P308 + P313 - IF exposed or concerned: Get medical attention. P304 + P340, P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P362 - Take off contaminated clothing and wash before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of soap and water. P332 + P313 - If skin irritation occurs: Get medical attention.
<b>Storage</b>	P405 - Store locked up. P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool.
<b>Disposal</b>	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	Not applicable.
<b>Other hazards which do not result in classification</b>	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapour may cause flash fire or explosion.

## Section 3. Composition and ingredient information

**Substance/mixture** Mixture  
A complex mixture of volatile hydrocarbons containing paraffins, naphthenes, olefins and aromatics with carbon numbers predominantly between C4 and C12. May contain oxygenates. May also contain small quantities of proprietary performance additives.

Ingredient name	% (w/w)	CAS number
Gasoline	≥90	86290-81-5
Contains:		
Benzene	<1	71-43-2
Polycyclic aromatic hydrocarbons (PAHs)	<1	mixture
diisopropyl ether	<1	108-20-3
2-methylpropan-2-ol	<1	75-65-0
tert-butyl methyl ether	<1	1634-04-4

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

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

## Section 4. First aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	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.
<b>Inhalation</b>	If inhaled, remove to fresh air. Get medical attention. If exposure to vapour, mists or fumes causes drowsiness, headache, blurred vision or irritation of the eyes, nose or throat, remove immediately to fresh air. Keep patient warm and at rest. If any symptoms persist obtain medical advice.
<b>Skin contact</b>	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.
<b>Ingestion</b>	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.

### Most important symptoms/effects, acute and delayed

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

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

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

## Section 5. Firefighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	In case of fire, use water fog, foam, dry chemical or carbon dioxide extinguisher or spray.
<b>Unsuitable extinguishing media</b>	Do not use water jet.
<b>Specific hazards arising from the chemical</b>	Extremely flammable liquid and vapour. 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. Vapours can form explosive mixtures with air. Vapours are heavier than air and can spread along the ground or float on water surfaces to remote ignition sources. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. 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

## Section 5. Firefighting measures

<b>Hazardous thermal decomposition products</b>	quantities of water or other contaminants. Liquid will float and may reignite on surface of water. Combustion products may include the following: carbon oxides (CO, CO <sub>2</sub> ) (carbon monoxide, carbon dioxide)
<b>Special protective actions for fire-fighters</b>	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.
<b>Special protective equipment for fire-fighters</b>	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
<b>Hazchem code</b>	3YE

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	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 spilt material. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling. Eliminate all ignition sources.
<b>For emergency responders</b>	Entry into a confined space or poorly ventilated area contaminated with vapour, 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 spilt 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 material for containment and cleaning up

<b>Small spill</b>	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.
<b>Large spill</b>	Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Approach the 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 spilt 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 6. Accidental release measures

## Section 7. Handling and storage

### Precautions for safe handling

#### **Protective measures**

Do not fill container while it is in or on a vehicle. Static electricity may ignite vapour and cause fire. Place container on ground when filling and keep nozzle in contact with container.

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 swallow. Aspiration hazard if swallowed. Can enter lungs and cause damage. Never siphon by mouth. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container. Avoid contact of spilt 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.

#### **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 oxidising 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

Light hydrocarbon vapours 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 vapour 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 vapour, 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/vapour mixtures may form at ambient temperature. If product comes into contact with hot surfaces, or leaks occur from pressurised fuel pipes, the vapour or mists generated will create a flammability or

## Section 7. Handling and storage

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 and personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Gasoline	<b>ACGIH TLV (United States).</b> TWA: 300 ppm 8 hours. Issued/Revised: 5/1996 TWA: 890 mg/m <sup>3</sup> 8 hours. Issued/Revised: 5/1996 STEL: 500 ppm 15 minutes. Issued/Revised: 5/1996 STEL: 1480 mg/m <sup>3</sup> 15 minutes. Issued/Revised: 5/1996
Benzene	<b>Safe Work Australia (Australia).</b> TWA: 3.2 mg/m <sup>3</sup> 8 hours. Issued/Revised: 4/2003 TWA: 1 ppm 8 hours. Issued/Revised: 4/2003
Polycyclic aromatic hydrocarbons (PAHs)	<b>Safe Work Australia (Australia).</b> TWA: 0.2 mg/m <sup>3</sup> 8 hours.
diisopropyl ether	<b>Safe Work Australia (Australia).</b> STEL: 1300 mg/m <sup>3</sup> 15 minutes. Issued/Revised: 5/1995 STEL: 310 ppm 15 minutes. Issued/Revised: 5/1995 TWA: 1040 mg/m <sup>3</sup> 8 hours. Issued/Revised: 5/1995 TWA: 250 ppm 8 hours. Issued/Revised: 5/1995
2-methylpropan-2-ol	<b>Safe Work Australia (Australia).</b> STEL: 455 mg/m <sup>3</sup> 15 minutes. Issued/Revised: 5/1995 STEL: 150 ppm 15 minutes. Issued/Revised: 5/1995 TWA: 303 mg/m <sup>3</sup> 8 hours. Issued/Revised: 5/1995 TWA: 100 ppm 8 hours. Issued/Revised: 5/1995
tert-butyl methyl ether	<b>Safe Work Australia (Australia).</b> STEL: 275 mg/m <sup>3</sup> 15 minutes. Issued/Revised: 4/2002 STEL: 75 ppm 15 minutes. Issued/Revised: 4/2002 TWA: 92 mg/m <sup>3</sup> 8 hours. Issued/Revised: 4/2002 TWA: 25 ppm 8 hours. Issued/Revised: 4/2002

## Section 8. Exposure controls and personal protection

### 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.

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.

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.

### Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

### Individual protection measures

#### Hygiene measures

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

#### Eye/face protection

Chemical splash goggles.

#### Skin protection

#### Hand protection

Wear chemical resistant gloves.

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.

**Recommended:** Gloves made from fluoroelastomer resistant to hydrocarbons and a wide range of chemicals.

Wear a chemically resistant multi-layer laminate inner glove inside an outer nitrile glove. The purpose of the outer glove is to protect the inner glove from cuts and mechanical damage. The presence of aromatic hydrocarbons in the product will significantly shorten the length of time that nitrile gloves will provide protection. Do not re-use nitrile gloves if exposed to aromatic hydrocarbons.

#### Skin protection

Use of protective clothing is good industrial practice.

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.

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.

Wear suitable protective clothing.

Footwear highly resistant to chemicals.

When there is a risk of ignition wear inherently fire resistant protective clothes and gloves.

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.

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

## Section 8. Exposure controls and personal protection

	required. 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.
<b>Other skin protection</b>	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.
<b>Respiratory protection</b>	Use with adequate ventilation. 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. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.
	<b>Recommended:</b> Avoid breathing of vapours, mists or spray. Select and use respirators in accordance with AS/NZS 1715/1716. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist (Type P1) filters. Filter capacity and respirator type depends on exposure level.
<b>Refer to standards:</b>	Respiratory protection:AS/NZS 1715 and AS/NZS 1716 Gloves:AS/NZS 2161.1 Eye protection:AS/NZS 1336 and AS/NZS 1337

## Section 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Liquid. Clear and Bright
<b>Colour</b>	Pale colour. Yellow. to Red.
<b>Odour</b>	Hydrocarbon.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point</b>	Not available.
<b>Boiling point</b>	30 to 210°C (86 to 410°F)
<b>Flash point</b>	Closed cup: <-40°C (<-40°F)
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable. Based on - Physical state
<b>Lower and upper explosive (flammable) limits</b>	Lower: 1.4% Upper: 7.6%
<b>Vapour pressure</b>	30.1 to 100.3 kPa (225.6 to 752 mm Hg)
<b>Vapour density</b>	>1 [Air = 1]
<b>Relative density</b>	Not available.
<b>Density</b>	710 to 750 kg/m <sup>3</sup> (0.71 to 0.75 g/cm <sup>3</sup> )
<b>Solubility</b>	insoluble in water.
<b>Partition coefficient: n-octanol/water</b>	Not available.
<b>Auto-ignition temperature</b>	>350°C (>662°F)
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Kinematic: 0.4 to 0.55 mm <sup>2</sup> /s (0.4 to 0.55 cSt) at 40°C
<b>Remarks</b>	Reid vapor pressure (RVP): 55 to 100 kPa (40 °C)

## Section 10. Stability and reactivity

<b>Reactivity</b>	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
<b>Chemical stability</b>	The product is stable.
<b>Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
<b>Conditions to avoid</b>	Avoid all possible sources of ignition (spark or flame). Avoid excessive heat.
<b>Incompatible materials</b>	Reactive or incompatible with the following materials: oxidising materials.
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

<b>Product/ingredient name</b>	<b>Result</b>	<b>Species</b>	<b>Dose</b>	<b>Exposure</b>
Gasoline	LC50 Inhalation Vapour	Rat	>7630 mg/m <sup>3</sup>	4 hours
	LC50 Inhalation Vapour	Rat	Nominal >5610 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation Vapour	Rat	40.5 mg/m <sup>3</sup>	1 hours
	LD50 Dermal	Rabbit	2000 mg/kg	-
2-methylpropan-2-ol	LD50 Oral	Rat	8470 mg/kg	-
	LC50 Inhalation Vapour	Rat	>10000 ppm	4 hours
	LD50 Oral	Rabbit	3559 mg/kg	-
tert-butyl methyl ether	LD50 Oral	Rat	2743 mg/kg	-
	LC50 Inhalation Vapour	Rat	85 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-

#### Irritation/Corrosion

<b>Product/ingredient name</b>	<b>Result</b>	<b>Species</b>	<b>Score</b>	<b>Exposure</b>	<b>Observation</b>
Gasoline	Skin - Irritant	Rabbit	-	-	-
	Eyes - Non-irritating to the eyes.	Rabbit	-	-	-
tert-butyl methyl ether	Skin - Irritation	Rabbit	-	-	-
	Eyes - Non-irritating to the eyes.	Rabbit	-	-	-

#### **Skin**

Causes skin irritation.

#### **Skin**

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

#### Mutagenicity

<b>Product/ingredient name</b>	<b>Test</b>	<b>Experiment</b>	<b>Result</b>
Gasoline	Equivalent to OECD 476	Experiment: In vitro Subject: Mammal - species unspecified	Negative
	Equivalent to OECD 471	Experiment: In vitro	Negative
	EPA OPPTS 870.5395	Subject: Non-mammalian species Experiment: In vivo Subject: Unspecified Cell: Germ	Negative
	Equivalent to OECD 475	Experiment: In vivo	Negative

## Section 11. Toxicological information

tert-butyl methyl ether	EU B 13/14	Subject: Unspecified Cell: Germ Experiment: In vitro	Negative
	OECD 471	Subject: Non-mammalian species Experiment: In vitro	Negative
	OECD 476	Subject: Non-mammalian species Experiment: In vitro	Negative
	Equivalent to OECD 473	Subject: Non-mammalian species Experiment: In vitro	Negative
	Equivalent to OECD 486	Subject: Non-mammalian species Experiment: In vivo	Negative
	Equivalent to EPA OPPTS 870.5385	Subject: Unspecified Cell: Somatic Experiment: In vivo	Negative
	Equivalent to EPA OPPTS 798.5385	Subject: Unspecified Cell: Somatic Experiment: In vivo	Negative
		Subject: Unspecified Cell: Somatic	

**Conclusion/Summary** May cause genetic defects.

### Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Gasoline	Negative - Inhalation - Unspecified	Rat	-	113 weeks
	Negative - Dermal - Unspecified	Mouse	-	102 weeks
tert-butyl methyl ether	Positive - Inhalation - Unspecified	Rat	-	2 years

**Conclusion/Summary** May cause cancer

### Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
Gasoline	-	Negative	-	Rat	Inhalation	2 generation
tert-butyl methyl ether	-	-	Negative	Rat	Inhalation	14 days
	-	Negative	-	Rat	Inhalation	2 generation
	-	-	Negative	Rat	Inhalation	9 days

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Gasoline	Category 3	-	Narcotic effects
Benzene	Category 3	-	Respiratory tract irritation
diisopropyl ether	Category 3	-	Narcotic effects
	Category 3	-	Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Benzene	Category 1	-	blood system

## Section 11. Toxicological information

### Aspiration hazard

Name	Result
Gasoline	ASPIRATION HAZARD - Category 1

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

### Potential acute health effects

<b>Eye contact</b>	No known significant effects or critical hazards.
<b>Inhalation</b>	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
<b>Skin contact</b>	Causes skin irritation.
<b>Ingestion</b>	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

<b>Eye contact</b>	Adverse symptoms may include the following: pain or irritation watering redness
<b>Inhalation</b>	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
<b>Skin contact</b>	Adverse symptoms may include the following: irritation redness
<b>Ingestion</b>	Adverse symptoms may include the following: nausea or vomiting

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

<b>Eye contact</b>	Vapour, mist or fume may cause eye irritation. Exposure to vapour, mist or fume may cause stinging, redness and watering of the eyes.
<b>Inhalation</b>	Vapour, mist or fume may irritate the nose, mouth and respiratory tract.
<b>Skin contact</b>	Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
<b>Ingestion</b>	If swallowed, may irritate the mouth, throat and digestive system. If swallowed, may cause abdominal pain, stomach cramps, nausea, vomiting, diarrhoea, dizziness and drowsiness.
<b>General</b>	Solvent "sniffing" (abuse) or intentional overexposure to vapours can produce serious central nervous system effects, including unconsciousness, and possibly death.
<b>Carcinogenicity</b>	May cause cancer. Risk of cancer depends on duration and level of exposure.
<b>Mutagenicity</b>	May cause genetic defects.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value						
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## Section 11. Toxicological information

Inhalation (vapours)

1156.79 mg/l

### Other information

Gasoline - Excess exposure to vapors may produce headaches, dizziness, nausea, drowsiness, irritation of eyes, nose and throat and central nervous system depression. Aspiration of this material into the lungs can cause chemical pneumonia and can be fatal. Aspiration into the lungs can occur while vomiting after ingestion of this product. Inhalation of unleaded gasoline vapors did not produce birth defects in laboratory animals. Ingestion of this material can cause gastrointestinal irritation and diarrhea.

In a long-term inhalation study of whole unleaded gasoline vapors, exposure-related kidney damage and kidney tumors were observed in male rats. Similar kidney effects were not seen in female rats or in mice. At the highest exposure level (2056 ppm), female mice had an increased incidence of liver tumors. Results from subsequent scientific studies have shown that a broad variety of chemicals cause these kidney effects only in the male rat. Further studies have discovered the means by which the physiology of the male rat uniquely predispose it to these effects. Consequently, the Risk Assessment Forum of the Environmental Protection Agency has recognized that these responses are not predictive of a human health hazard. The liver tumors that were increased in the high-dose female mice are likewise of questionable significance because of their high spontaneous occurrence even without chemical exposure and because the rate of their occurrence is accelerated by a broad spectrum of chemicals not commonly considered to be carcinogens (e.g., phenobarbital). Thus, the significance of the mouse liver tumor response in terms of human health is questionable.

Gasoline is a complex mixture of hydrocarbons and contains benzene (typically no more than 2 volume%), toluene, and xylene. Chronic exposure to high levels of benzene has been shown to cause cancer (leukemia) in humans and other adverse blood effects (anemia). Benzene is considered a human carcinogen by IARC, NTP and OSHA. Over exposure to xylene and toluene can cause irritation to the upper respiratory tract, headache and narcosis. Some liver damage and lung inflammation were seen in chronic studies on xylene in guinea pigs but not in rats.

Solvent "sniffing" (abuse) or intentional overexposure to vapors can produce serious central nervous system effects, including unconsciousness, and possibly death.

Gasoline: Additional toxicity information on components.

Overexposure to n-hexane may cause progressive and potentially irreversible damage to the peripheral nervous system, particularly in the arms and legs. Studies in occupationally exposed individuals indicate that toluene exposure has been associated with impaired color vision and decreased performance in some neurobehavioral tests.

Prolonged high level exposure to toluene or xylene has caused some degree of hearing loss in experimental animals.

Inhalation of very high concentrations of gasoline vapors and some of its components can result in cardiac sensitization and irregular heartbeats, leading to potentially fatal changes in heart rhythms. Injection of adrenaline-like agents may enhance this effect.

Benzene: Acute toxicity of benzene results primarily from depression of the central nervous system (CNS). Inhalation of concentrations over 50 ppm can produce headache, lassitude, weariness, dizziness, drowsiness, or excitation. Exposure to very high levels can result in unconsciousness and death.

## Section 11. Toxicological information

Benzene: Long-term overexposure to benzene has been associated with certain types of leukemia in humans. In addition, the International Agency for Research on Cancer (IARC), the National Toxicology Program, and OSHA consider benzene to be a human carcinogen. Chronic exposures to high levels of benzene have been reported to cause adverse blood effects including anemia. Benzene exposure can occur by inhalation and absorption through the skin.

Inhalation and forced feeding studies of benzene in laboratory animals have produced a carcinogenic response in a variety of organs, including possibly leukemia, other adverse effects on the blood, chromosomal changes and some effects on the immune system. Exposure to benzene at levels up to 300 ppm did not produce birth defects in animal studies; however, exposure to higher dosage levels resulted in a reduction of body weight of the rat pups (fetotoxicity). Changes in the testes have been observed in mice exposed to benzene at 300 ppm, but reproductive performance was not altered in rats exposed to benzene at the same level. Aspiration of this material into the lungs can cause chemical pneumonia and can be fatal. Aspiration into the lungs can occur while vomiting after ingestion of this material.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Gasoline	Acute EC50 15.41 mg/l Nominal Fresh water	Micro-organism	40 hours
	Acute EL50 3.1 mg/l Nominal Fresh water	Algae	72 hours
	Acute EL50 3.7 mg/l Nominal Fresh water	Algae	96 hours
	Acute EL50 4.5 mg/l Nominal Fresh water	Daphnia	48 hours
	Acute LL50 10 mg/l Nominal Fresh water	Fish	96 hours
	Acute LL50 8.2 mg/l Nominal Fresh water	Fish	96 hours
	Acute NOELR 0.5 mg/l Nominal Fresh water	Algae	72 hours
	Acute NOELR 0.5 mg/l Nominal Fresh water	Daphnia	48 hours
	Chronic EL50 10 mg/l Nominal Fresh water	Daphnia	21 days
	Chronic EL50 >40 mg/l Nominal Fresh water	Daphnia	21 days
	Chronic EL50 10 mg/l Nominal Fresh water	Fish	21 days
	Chronic LL50 5.2 mg/l Nominal Fresh water	Fish	14 days
	Chronic NOELR 2.6 mg/l Nominal Fresh water	Daphnia	21 days
	Chronic NOELR 16 mg/l Nominal Fresh water	Daphnia	21 days
	Chronic NOELR 2.6 mg/l Nominal Fresh water	Fish	14 days
	Chronic NOELR 2.6 mg/l Nominal Fresh water	Fish	21 days
	Chronic PNEC >0.4 mg/kg	soil, plants	-
tert-butyl methyl ether	Acute EC50 472 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 200 mg/l Marine water	Crustaceans	96 hours
	Acute LC50 672 mg/l Fresh water	Fish	96 hours
	Acute LC50 574 mg/l Marine water	Fish	96 hours
	Chronic NOEC 26 mg/l Marine water	Crustaceans	28 days
	Chronic NOEC 51 mg/l Fresh water	Daphnia	21 days

## Section 12. Ecological information

### Conclusion/Summary

Toxic to aquatic life with long lasting effects.

### Persistence and degradability

Expected to be biodegradable. Non-persistent per IMO criteria

Product/ingredient name	Test	Result	Dose	Inoculum
tert-butyl methyl ether	not guideline	100 % - 1.25 days	-	-
	Modelled data	61 to 69 % - 151 days	-	-
	OECD 301 D	9.24 % - Not readily - 28 days	-	-
	OECD 301 D	1.8 % - Not readily - 28 days	-	-
	OECD 301 D	0 % - Not readily - 28 days	-	-
	Modelled data	0 % - 250 days	-	-
Product/ingredient name	Aquatic half-life		Photolysis	Biodegradability
Gasoline	-		-	Inherent

### Bioaccumulative potential

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

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Gasoline	2 to 7	-	high
Benzene	2.13	11	low
diisopropyl ether	2.4	-	low
2-methylpropan-2-ol	0.317	-	low
tert-butyl methyl ether	1.04	1.5	low

### Mobility in soil

#### Soil/water partition coefficient (K<sub>oc</sub>)

Not available.

#### Mobility

Spillages may penetrate the soil causing ground water contamination.

#### 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 minimised 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. Vapour 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

### Special Precautions for Landfill or Incineration

No additional special precautions identified.

## Section 14. Transport information

	ADG	IMDG	IATA
UN number	UN1203	UN1203	UN1203
UN proper shipping name	MOTOR SPIRIT or GASOLINE or PETROL	MOTOR SPIRIT or GASOLINE or PETROL. Marine pollutant	MOTOR SPIRIT or GASOLINE or PETROL
Transport hazard class(es)	3 	3  	3 
Packing group	II	II	II
Environmental hazards	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Additional information	<u>Hazchem code</u> 3YE <u>Initial emergency response guide</u> 14	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Emergency schedules</u> 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 IMO instruments Proper shipping name MARPOL Annex 1 rules apply for bulk shipments by sea.

Category: gasoline and spirits

## Section 15. Regulatory information

### Standard for the Uniform Scheduling of Medicines and Poisons

Not scheduled. When packed in containers having capacity of greater than 20 litres.

S5. When packed in containers having capacity of less than 20 litres.

### Model Work Health and Safety Regulations - Scheduled Substances

Ingredient name	Schedule
Benzene	Restricted carcinogen [All uses involving benzene as a feedstock containing more than 50% of benzene by volume; Restricted use - Genuine research or analysis; For spray painting if the substance contains more than 1% by volume]

### Montreal Protocol

Ingredient name	List name	Status
Not listed.		

### Stockholm Convention on Persistent Organic Pollutants

Ingredient name	List name	Status
Not listed.		

### Rotterdam Convention on Prior Informed Consent (PIC)

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## Section 15. Regulatory information

Ingredient name	List name	Status
Not listed.		

### International lists

#### National inventory

<b>REACH Status</b>	For the REACH status of this product please consult your company contact, as identified in Section 1.
<b>Australia inventory (AICS)</b>	Contact local supplier or distributor.
<b>Canada inventory</b>	Not determined.
<b>China inventory (IECSC)</b>	Not determined.
<b>Japan inventory (ENCS)</b>	Not determined.
<b>Korea inventory (KECI)</b>	At least one component is not listed.
<b>Philippines inventory (PICCS)</b>	Not determined.
<b>Taiwan Chemical Substances Inventory (TCSI)</b>	Not determined.
<b>United States inventory (TSCA 8b)</b>	Not determined.

## Section 16. Any other relevant information

### History

**Date of printing** 5/26/2021

**Date of issue/Date of revision** 5/26/2021

**Date of previous issue** 5/25/2021

**Version** 4.01

**Prepared by** Product Stewardship

**Key to abbreviations**

ADG = Australian Dangerous Goods  
ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
NOHSC = National Occupational Health and Safety Commission  
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]  
STEL = Short term exposure limit  
SUSMP = Standard Uniform Schedule of Medicine and Poisons  
UN = United Nations  
TWA = Time weighted average  
VOC = Volatile Organic Compound  
SADT = Self-Accelerating Decomposition Temperature  
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

### Procedure used to derive the classification

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**Product code** 0000002733 **Page:** 16/17

**Version** 4.01 **Date of issue** 5/26/2021

**Format** Australia

**Language** ENGLISH

(Australia)

(ENGLISH)

## Section 16. Any other relevant information

Classification	Justification
FLAMMABLE LIQUIDS - Category 1	On basis of test data
SKIN CORROSION/IRRITATION - Category 2	Calculation method
GERM CELL MUTAGENICITY - Category 1B	Expert judgment
CARCINOGENICITY - Category 1B	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

 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 SHEETS

## 6) CRACKED MEMBRANE

## Royston® 10A-65P Waterproofing Membrane

Royston® 10A-65P Waterproofing Membrane is a prefabricated reinforced laminate consisting of an impregnated woven fiberglass and polyester blend, high strength inner fabric reinforcement, sandwiched between two layers of a polymer modified bitumen. The Royston® 10A-65P Membrane was specially formulated to meet agency specifications that include elongation requirements. A unique 3- inch leading edge guarantees a positive compound-to-compound seal at the overlap. Transverse seals are easily made using Royston® Flex-Flo Adhesive Sealant (FFAS), Royston® 104 Caulkable Mastic (104CM) or via heat sealing.

FEATURES	BENEFITS
3" Leading edge	Adhesive to adhesive bond creating a water-tight seam
Uniform thickness	Factory made sheet ensures consistent mil thickness
Flexible	Allows for minor amount of movement related to thermal expansion/contraction, settlement or shrinkage
Cold applied	Eliminates dangers of hot liquids
Woven fiberglass/polyester reinforcement	Balance of high flexibility, high tensile strength and puncture resistance
65 mil thickness	Enhanced protection

### USES

#### Application

- General Purpose Waterproofing Membrane

#### Locations

- Bridges/Highways/Tunnels/Airport Runways
- Balconies
- Parking Garages

#### Substrate

- Concrete
- Asphalt
- Steel
- Wood

PHYSICAL PROPERTIES		
Properties	Test Method	Typical Values
Wearing Surface		Asphalt, concrete, terrazzo, block, backfill
Color		Black
Top Surface		1/4 mil mylar film
Thickness		70±5 mils
Weight		0.38 ± 0.05 lbs/ft <sup>2</sup>
Elongation at break, %	ASTM D 882	35%
Tensile Strength	ASTM D882	60 lbs/in
Permeability, perms	ASTM E96 Method B	0.05perms
Compound Softening Point	ASTM D36	225°F (107°C)
Compound Penetration	ASTM D5	55±15 @ 77°F 5 sec 100 needle
Puncture Resistance	ASTM E154	175 lbs.
Pliability	ASTM D146 <sup>2</sup>	No cracks or splits at 180° bend
Crack Cycling	ASTM C836 @ 32°F	Constant load @ 10 cycles No damage
Water Absorption	ASTM D1228 72 hours	.25% max.
Peel Adhesion	180° Peel after 1 hour, Primed Steel T Peel self/self after 1 hour	15 lb/in min. 3 lb/in min.
Reinforcement		Woven Glass Fiber/polyester blend 10x 20 mesh

**NOTES:**

1. ASTM D1000 Method using CRE Tester with a 4" jaw separation at a speed of 10"/min. PSI calculated from #/in. width at specified thickness.  
2. 1/2" Mandrel @ -10°F (-23.3°C)

## WHAT IT DOES

Royston® 10A-65P Waterproofing Membrane forms an impermeable barrier between the concrete decks and the surfacing material. It effectively prevents moisture, salts and deicing chemicals from infiltrating the underlying concrete surfaces, thus eliminating the damage to steel reinforcing and adverse effects of freeze-thaw cycles.

The driving of rubber tired trucks, pavers and other vehicles is permitted on the membrane covered bridge deck. The hot asphalt forms a strong bond to the bituminous compound during compaction.

## WHERE TO USE IT

Royston® 10A-65P Waterproofing Membrane should be used to cover concrete decking of new highway bridges prior to the application of the surfacing material. It may also be used during resurfacing of old bridges to prevent further ingress of corrosive agents. Also, excellent for use on parking decks, balconies, plazas and other locations where waterproofing is required.

## SURFACE PREPARATION

New Surface: Ensure that surface is clean, dry and free of any dirt, dust, debris or any other contaminant. Surface must be swept and blown clean prior to primer and membrane application.

Existing Surface: Should be profile milled using minimal tooth spacing (3/16" (4.75mm) or less). Ensure that the previous water proofing system has been completely removed. Grooves left in the concrete deck must be less than 3/16" (4.75mm). Surface must be swept and blown clean prior to primer and membrane application.

Milled Surface: If grooves in the concrete deck are 1/4" (6.35mm) or greater tenting will occur. A scratch coat of asphalt must be applied prior to the primer and membrane installation. All unstable locations in the deck must be patched/repaired prior to the application of the scratch coat. The asphalt scratch coat should be allowed to cool to ambient temperature (2-3 hours). Surface must be swept and blown clean prior to membrane application. No primer is required when applying the membrane to a fresh asphalt scratch course.

Existing Asphalt: If the membrane is being applied over the surface of existing asphalt that is less than one (1) year old, no primer is required. The existing asphalt surface must be clean prior to membrane installation. If the asphalt surface is greater than 1 year in age, use the appropriate primer.

## USE OF PRIMER

Reference the applicable Roybond Primer technical data sheet for application procedures and rates. Roybond Primers should be stirred before using and applied at a rate of approximately 200 sq. ft. per gallon (without dilution) by brush, squeegee, or short nap. The primer should be dry to the touch before application of the membrane. This will require 20 to 30 minutes depending on temperature and humidity. Brush out any puddles of primer to allow for uniform drying.

*Roybond 713A: Standard Primer*

*Roybond 713B: Low V.O.C. Primer*

*Roybond 740: Low temperature primer for use between 25°F (-4°C) and 45°F (7°C)*

*Roybond 750: Spray-able version of the 713A standard primer*

## APPLICATION

For best results, the membrane should be applied at surface and ambient temperatures of 25°F or higher. The membrane should be applied by hand rolling onto the application surface. The release film should be removed as the application proceeds. The membrane should be applied to the decking surface and terminated at the curb. If using Flex Flo Adhesive Sealant (FFAS), the membrane should be embedded in FFAS at all perimeter edges/termination points. A thin bead of FFAS or 104CM is to be applied on the surface of the membrane along all perimeter edges/termination points at the conclusion of the membrane installation.

Each roll should be applied to overlap the previous roll by a minimum of 3-6 inches. Overlapping of the membranes typically results in the loss of 10% of the usable surface area, reducing the coverage area from 200 ft<sup>2</sup> to 180 ft<sup>2</sup> per roll. The overlap at the edge is self-sealing due to the placement of the spun bonded polyester mat providing compound-to-compound contact. The transverse joint lap at the end of each roll should be sealed by heating with a propane torch to melt the spun bonded polyester mat and fuse the surfaces together. Patching may also be done by the heat sealing method or with the use of Royston® 104CM or Royston® Flex-Flo Adhesive Sealant.

Narrow strips (curb strips) are available for easy application to curb areas. If a curb strip is required by the specifying agency or engineer, the membrane should be brought up the curb to a point 1/2 inch below the top of the overlay, or as otherwise indicated by the engineer. Care should be taken to avoid rupture of the membrane when molding it to irregular contours.

Membrane should not be applied if weather will not permit for the paving of asphalt on top of the membrane prior to rain. If inclement weather occurs prior to paving and water is able to migrate under the membrane, the removal, drying of the deck and reinstallation of the membrane is required.

For additional instructions, reference the most current version of the "Royston® Waterproofing Membrane Installation Guidelines".

## APPLICATION OF HOT ASPHALT OVERLAY

The asphalt MUST be between 290°F and 340°F at the time of application. Rubber tired pavers and trucks may be driven on the membrane provided care is taken to prevent sudden starts, stops or turns. As the hot asphalt is compacted, it bonds firmly to the surface of the membrane. A minimum of 1 1/2 inches (32mm) of compacted asphalt is required to ensure proper bond between overlay and substrate.

## AVAILABILITY

Rolls: 4' wide x 50' long (28 rolls per pallet)

**SHELF LIFE:** 1 year

**STORAGE CONDITIONS**

Must be stored in a cool shaded area between 35°F and 90°F.



## Contact Chase Construction Products

**Global Operations Center**  
295 University Avenue  
Westwood, MA 02090  
USA  
[www.chasecorp.com](http://www.chasecorp.com)

Toll Free (US only): 800-323-4182  
Tel: 781-332-0700  
Fax: 781-332-0701  
Email: [info@chasecorp.com](mailto:info@chasecorp.com)

### Warranty & Limitation of Seller's Liability

The information contained herein is provided for product selection only, and is not to be considered as a specification or performance data. Chase Construction Products (a division of Chase Corporation) warrants the product for a period of one (1) year from the date of initial shipment to the initial purchaser, that the products meet the parameters listed on the applicable Technical Data Sheet. Chase makes no warranty of any kind, expressed or implied, including that of merchantability, other than that products conform to Chase's current quality control standards at time of manufacture. If breach of warranty is established, the buyer's exclusive remedy shall be repayment of purchase price of the non-conforming product to replace the non-conforming product. The buyer expressly waives any claim to additional damages, including without limitation, incidental or consequential damages. Specific conditions of sale and Chase's limited warranty are set out in detail in Chase Corporation Terms and Conditions of Sale.

# SAFETY DATA SHEETS

7) MOTOR OIL

## SAFETY DATA SHEET

## MILES FULL SYNTHETIC MOTOR OIL 10W30



### Section 1 – Identification

#### 1.1 Product Identifiers:

**Product Name:** MILES FULL SYNTHETIC MOTOR OIL 10W30

#### 1.2 Product Usage:

Recommended Usage: Engine Oil

Restricted Usage: Not intended for any other usage

#### 1.3 Emergency Support:

CHEMTREC

United States +1(800) 424-9300

International +01 (703) 527-3887

#### 1.4 Supplier Information:

MILES PETROLEUM  
66 Marine St. Farmingdale, NY 11735  
United States

Phone: 631-694-4488

Fax : 631-337-9015

### Section 2 - Composition / Information on Ingredients

#### 2.1 Classification of the Substance or the Mixture

**GHS Rating(s):** No Classified Hazards

**Signal Word:** Not Applicable

## 2.2 Label Elements: No Classified Hazards

**Precautionary:** P201 Obtain Special Instructions Before Use.

P202 Do Not Handle Until All Safety Precautions Are Understood.

P281 Use Personal Protective Equipment As Required.

**Response:** P308 If Exposed Or Concerned: Get Medical Advice/attention.

**Storage:** P405 Store Locked Up.

**Disposal:** P501 Dispose Of Container According To Regional Regulations.

## 2.3 Other Hazards

**Hazards not otherwise classified (HNOC):** Avoid prolonged or repeated contact with motor oil. Use of good hygiene practices will reduce the likelihood of potential health effects. When exposed wash areas with soap and water and launder contaminated clothing.

## Section 3 - Hazards Identification

### 3.1 Substance Details

Chemical Name	CAS #	%Weight
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT PARAFFINIC	64742-55-8	5.5
LUBRICANT BASE OIL (PETROLEUM)	64742-54-7	70.0
CALCIUM LONG-CHAIN ALKARYL SULFONATE	Proprietary	2.0

INERT The remaining percentage are not listed as Physical or Health Hazards (29 CFR 1910.1200) 23.0

Products containing mineral oil with less than 3% DMSO extract as measured by IP-346.

## Section 4 - First Aid Measures

### 4.1 First Aid Measures

**Eye Contact:** Immediately flush eyes with plenty of water occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get Medical Attention.

**Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth to mouth resuscitation. Maintain an open airway. Get medical attention if symptoms occur.

**Ingestion:** Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. get medical attention if symptoms occur.

### 4.2 Symptoms & Effects

**To Physician:** Treat symptomatically. Contact poison specialist if product has been ingested.

**Specific Treatment:** No Specific Treatment.

### 4.3 Medical Attention

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

**Note to Doctor:** Aspiration during swallowing or vomiting may severely damage the lungs. If evacuation of stomach contents is necessary, use method least likely to cause aspiration.

## Section 5 - Fire Fighting

### 5.1 Extinguishing Media

**Suitable Media & Unsuitable Media:** CO<sub>2</sub>, Dry chemical, or Foam. Water can be used to cool and protect product. Do not use water jet as an extinguisher, it will spread the fire.

**5.2 Specific hazards arising from this product:** When heated, hazardous gases may be released including: sulfur dioxide. A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. This material creates a special hazard because it floats on water. This material is harmful to aquatic life. Any fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

### 5.3 Firefighters Advice

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

## Section 6 - Accidental Release Measures

### 6.1 Personal precautions, protective equipment

**General Measures:** No health affects expect from the cleanup of this material if contact can be avoided. Follow personal protective equipment recommendations found in section 8 of this SDS.

### 6.2 Environmental Precautions

**Non-Emergency Personnel:** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform authorities if the product has caused environmental pollution. Material may be harmful to the environment if released in large quantities.

## 6.3 Materials & Methods to Contain and Cleanup

**Reference Section 8:** Follow all protective equipment recommendations provided in Section 8.

**Spill Control Measures:** Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Dispose of according to Federal, State, Local, or Provincial regulations. Used fluid should be disposed of at a recycling center.

**Containment and Cleanup:** Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages with noncombustible, absorbent material e.g. sand earth vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via licensed waste disposal contractor. Contaminated absorbent material may pose the same threat hazard as the spilled product.

## Section 7 - Handling & Storage

### 7.1 Safe Handling

**Personal Protective Equipment:** Put on appropriate personal protective equipment (see section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, keep lid tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

### 7.2 Safe Storage

**Required conditions:** Odorous and toxic fumes may form from the decomposition of this product if stored at temperatures in excess of 113 deg F (45 deg C) for extended periods of time or if heat sources in excess of 250 deg F (121 deg C) are used. Store away from incompatible materials. See section 10 for incompatible materials.

### 7.3 Specific End Use

**Designed Purpose:** This product is designed for use as a Engine Oil.

## Section 8 - Exposure Control

### 8.1 United States Exposure Limits

CAS	Chemical Name	Exposure Limits	Source
64742-55-8	Distillates, petroleum, hydro treated light paraffinic	5mg/m3	NLM_CI
64742-54-7	Distillates, petroleum, hydro treated heavy paraffinic	5mg/m3	IUCLID

### 8.2 Exposure Controls

**Engineering Controls:** Material should be handled in enclosed vessels and equipment, in which case general room ventilation should be sufficient. Local exhaust ventilation should be used at points where dust, mist, vapors or gases can escape into the room air. No special requirements under ordinary conditions of use and with adequate ventilation.

**Environmental Exposure Controls:** General room ventilation should be satisfactory. Local exhaust ventilation may be necessary if misting is generated.

**Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

**Eye / Face Protection:** If contact is likely, safety glasses with side shields are recommended.

**Skin / Hand Protection:** Butyl rubber. Use nitride or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water. Use caution when opening man way covers of storage and transportation containers. 3-nitroaniline crystals may be present on the interior surface of these openings. 3-nitroaniline is toxic by dermal exposure.

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

## Section 9 - Physical & Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

Physical state :	Liquid
Color :	B&C
Odor :	Characteristic of Petroleum
Odor threshold :	No Data Available
pH :	No Data Available
Freezing Point :	No Data Available
Boiling Point / Range :	No Data Available
Flash Point COC :	201C
Evaporation rate:	No Data Available
Upper Explosive Limits (% air) :	No Data Available
Lower Explosive Limits (% air) :	No Data Available
Flammability (solid, gas) :	Not Applicable
Vapor pressure :	<1 mm Hg
Vapor density (air=1) :	> 1
Relative Density :	0.87
Auto-ignition temperature :	Not Determined
Decomposition temperature :	Not Determined
Solubility in water :	Negligible, 0-1%
Partition coefficient, n-octanol/water :	No Data Available
Viscosity @ 40C :	61 cst
Viscosity @ 100C:	10 cst

## Section 10 - Stability & Reactivity

### 10.1 Material Analysis

**Reactivity** : No Data Available

**Chemical stability** : Stable Under Normal Circumstances.

**Possibility of hazardous reactions** : Hazardous polymerization will not occur.

### 10.2 Environmental

**Conditions to avoid:** Temperatures above the high flash point of this combustible material in combination with sparks, open flames, or other sources of ignition.

**Incompatible materials:** Strong oxidizing agents

**Hazardous decomposition products:** Carbon monoxide, Smoke, Carbon monoxide, sulfur oxides, aldehydes, and other petroleum decomposition products in the case of incomplete combustion. Oxides of nitrogen, phosphorus, calcium, copper, magnesium, sodium, and hydrogen sulfide may also be present.

## Section 11 - Toxicological Information

### 11.1 Toxicological Effects

**Ingestion Toxicity** : No hazard in normal industrial use.

**Skin Contact** : This material is likely to be slightly irritating to skin based on animal data.

**Inhalation Toxicity** : Non-hazardous under Respiratory Sensitization category.

**Eye Contact** : The material is likely to be irritating to eyes based on animal data.

### 11.2 Inhalation Toxicity Data

CAS	Chemical Name	Test	Value	Species	Source
64742-55-8	Distillates, petroleum, hydro treated light paraffinic	Inhalation	3900mg/m3 4h	Rat	NLM_CIP

### 11.3 Dermal & Other Toxicity Data

CAS	Chemical Name	Test	Value	Species	Source
64742-55-8	Distillates, petroleum, hydro treated light paraffinic	LC50	5000mg/L 96h	Oncorhynchus	IUCLID
64742-54-7	Distillates, petroleum, hydro treated heavy paraffinic	LC50	5000mg/L 96h	Oncorhynchus	IUCLID

**Sensitizer:** No data available to indicate product or components may be a skin sensitizer.

**Mutagenicity:** No data available to indicate product or any components present at greater than 0.1% is mutagenic or genotoxic.

**Carcinogenicity:** Not expected to cause cancer. This product meets the IP-346 criteria of <3%.

**Reproductive Toxicity:** No data available if components greater than 0.1% may cause birth defects.

## Section 12 - Ecological Information

### 12.1 Aquatic Toxicity

**Acute Aquatic ecotoxicity** : Non-hazardous under Aquatic Acute Environment category.

**Chronic Aquatic ecotoxicity** : Non-hazardous under Aquatic Chronic Environment category.

**Persistence and degradability** : Biodegrades slowly.

**Bioaccumulative potential** : Bioconcentration may occur.

**Mobility in soil** : This material is expected to have essentially no mobility in soil.

**Results of PBT and vPvB assessment** : Not determined.

**Other adverse effects** : No data available.

### 12.2 Ecological Data

CAS	Chemical Name	Test	Value	Species	Source
64742-55-8	Distillates, petroleum, hydro treated light paraffinic	EC50	1000mg/L 48h	Daphnia magna	IUCLID
64742-54-7	Distillates, petroleum, hydro treated heavy paraffinic	EC50	1000mg/L 48h	Daphnia magna	IUCLID

## Section 13 - Disposal Considerations

### 13.1 Waste treatment

**Waste treatment methods:** Dispose of according to Federal, State, Local, or Provincial regulations.

**Disposal Methods:** Recycle used oil.

**Waste Disposal:** Use material is non-hazardous according to environmental regulations.

**Contaminated packaging:** Recycle containers whenever possible!

## Section 14 - Transportation Information

### 14.1 U.S. Department of Transportation (DOT)

**14.2. Shipping Description:** If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil) International Maritime Dangerous Goods (IMDG)

**14.2. DOT Compliance Note:** U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable International Civil Aviation Org. / International Air Transport Assoc.(ICAO/IATA)

**14.2. DOT Compliance Requirement:** U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 24

## Section 15 - Regulatory Information

Regulatory Agency	Chemical List Status
(TSCA) Toxic	
Substance Control Act: All components are either listed or not regulated	US TSCA Inventory. 64742-54-7

**WHMIS Hazard Class:** None

**Canada CPR:** This product has been classified in accordance with the hazard criteria. Controlled Products Regulations (CPR) and the SDS contains all the information required by the Regulations.

### CERCLA Sections

**302, 313, 372:** This material does not contain reportable chemicals.

**311, 312:** Acute Health Hazard No Pressure Hazard No Fire Hazard No

Chronic Health Hazard No Reactive Hazard No

**New Jersey Right to Know (NJ RTK):** This material does not contain reportable chemicals.

**Massachusetts Right to Know (MA RTK):** This material contains the following listed chemicals 64742-55-8

**Pennsylvania Right to Know (PA RTK):** This material does not contain reportable chemicals.

**Rhode Island Right to Know (RI RTK):** This material does not contain reportable chemicals.

## Section 16 - Other Information

**ACGIH** American Conference of Governmental Industrial Hygienists

**CFR** Code of Federal Regulations

**DOT** United States Department of Transportation

**GHS** Globally Harmonized System of Classification and Labeling of Chemicals

**NIOSH** National Institute for Occupational Safety and Health

**OSHA** Occupational Safety and Health Administration

**PEL** Permissible Exposure Limit

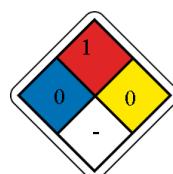
**RTK** Right-to-Know

**SARA** Short-term Exposure Limit 1

**TSCA** Toxic Substances Control Act 0 0

**WHMIS** Workplace Hazardous Materials Information System --

**NFPA: HEALTH** 0  
**FLAMMABILITY** 1  
**INSTABILITY** 0  
**SPECIAL** -



**Disclaimer:** This safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in the data sheet which we have received from outside sources and we believe the information to be correct, but cannot guarantee its accuracy or completeness.

Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product in a safe manner and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either expressed or implied.

Internal Use: 3E9

# SAFETY DATA SHEETS

## 8) STREET PAINT

# SAFETY DATA SHEET



## 1. Identification

**Product identifier** STREETBOND DURASHIELD PART A – SOLAR GRAY

**Other means of identification**

Product Code

**Recommended use** Pavement coating.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**Company name**

GAF  
1 Campus Drive  
Parsippany, NJ 07054 USA

**Telephone**

1-800-766-3411

**Emergency phone number**

CHEMTRIC [DAY OR NIGHT] 1-800-424-9300

Within USA and CANADA

1-800-424-9300

Outside USA and Canada:

1 703-741-5970

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Carcinogenicity

Category 1A

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

**Label elements**



**Signal word** Danger.

**Hazard statement** May cause cancer.

**Precautionary statement**

**Prevention** Wear protective gloves/protective clothing/eye protection/face protection.

**Response** If exposed or concerned: Get medical advice/attention.

**Storage** Not available.

**Disposal** Not available.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

## 3. Composition/information on ingredients

**Mixtures**

Chemical name	Common name and synonyms	CAS number	%
Calcium Carbonate		1317-65-3	30 to <40
Crystalline silica (quartz)		14808-60-7	30 to <40
Non-Hazardous Ingredients			30 to <40

## 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Upper respiratory tract irritation. Irritation of eyes and mucous membranes. Coughing. Skin irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Use water spray to cool unopened containers.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
<b>7. Handling and storage</b>	
<b>Precautions for safe handling</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Provide appropriate exhaust ventilation at places where dust is formed. Keep formation of airborne dusts to a minimum. Do not breathe dust. Avoid prolonged exposure. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

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

Components	Type	Value	Form
Calcium Carbonate (CAS 1317-65-3)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.

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

Components	Type	Value	Form
Crystalline silica (quartz) (CAS 14808-60-7)	TWA	50 mcg/m <sup>3</sup>	Total dust.

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

Components	Type	Value	Form
		0.1 mg/m <sup>3</sup> 2.4 mppcf	Respirable. Respirable.
<b>US. ACGIH Threshold Limit Values</b>			
Components	Type	Value	Form
Crystalline silica (quartz) (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.
<b>US. NIOSH: Pocket Guide to Chemical Hazards</b>			
Components	Type	Value	Form
Calcium Carbonate (CAS 1317-65-3)	TWA	5 mg/m <sup>3</sup>	Respirable.
Crystalline silica (quartz) (CAS 14808-60-7)	TWA	10 mg/m <sup>3</sup> 0.05 mg/m <sup>3</sup>	Total Respirable dust.
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).		
<b>Exposure guidelines</b>	Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.		
<b>Appropriate engineering controls</b>	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.		
<b>Individual protection measures, such as personal protective equipment</b>			
<b>Eye/face protection</b>	If contact is likely, safety glasses with side shields are recommended.		
<b>Skin protection</b>			
<b>Hand protection</b>	For prolonged or repeated skin contact use suitable protective gloves.		
<b>Other</b>	Wear suitable protective clothing.		
<b>Respiratory protection</b>	Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.		
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.		
<b>General hygiene considerations</b>	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**

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Not available.
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.

<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	14.99 lbs/gal
<b>Flammability class</b>	Not available.
<b>Percent volatile</b>	40.87 %
<b>Specific gravity</b>	1.8
<b>VOC</b>	13 g/l Material estimated 21 g/l Regulatory estimated

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Powerful oxidizers. Fluorine. Chlorine.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Irritation of eyes and mucous membranes. Upper respiratory tract irritation. Coughing. Skin irritation.

### Information on toxicological effects

<b>Acute toxicity</b>	Not available.
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.

### Respiratory or skinsensitization

<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	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

Crystalline silica (quartz)(CAS 14808-60-7) 1 Carcinogenic to humans.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

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

Crystalline silica (quartz)(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

Not classified.

### Aspiration hazard

Not available.

### Chronic effects

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 this product.

### Bioaccumulative potential

No data available.

### Mobility in soil

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

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 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. One or more components are not listed on TSCA.

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

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

### SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

<b>Hazard categories</b>	Immediate Hazard - No
	Delayed Hazard - Yes
	Fire Hazard - No
	Pressure Hazard - No
	Reactivity Hazard - No

### SARA 302 Extremely hazardous substance

Not listed.

### SARA 311/312 Hazardous chemical

### 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)

### US state regulations

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

Not listed.

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

Crystalline silica (quartz) (CAS 14808-60-7)

#### US. Massachusetts RTK - Substance List

Calcium Carbonate (CAS 1317-65-3)

Crystalline silica (quartz) (CAS 14808-60-7)

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

Calcium Carbonate (CAS 1317-65-3)

Crystalline silica (quartz) (CAS 14808-60-7)

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

Calcium Carbonate (CAS 1317-65-3)

Crystalline silica (quartz) (CAS 14808-60-7)

#### US. Rhode Island RTK

Not regulated.

#### US. California Proposition 65

Yes - Silica.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Crystalline silica (quartz)(CAS 14808-60-7)

Listed: October 1, 1988

**International Inventories**

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

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

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

<b>Issue date</b>	05-22-2020
<b>Version #</b>	01
<b>HMIS® ratings</b>	Health: 1* Flammability: 0 Physical hazard: 0
<b>NFPA ratings</b>	Health: 0 Flammability: 0 Instability: 0
<b>Disclaimer</b>	This information relates to the specific material designated and may not be valid for such material used on combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee, expressed or implied, is made as to its accuracy, reliability, or completeness. GAF cannot anticipate all conditions under which this information and product, or the products of other manufacturers in combination with this product, may be used. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his particular use. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license of valid patents.
<b>Revision Information</b>	New product.

# SAFETY DATA SHEETS

9) PROPANE

# SAFETY DATA SHEET

**Airgas**<sup>®</sup>  
an Air Liquide company

Propane

## Section 1. Identification

<b>GHS product identifier</b>	:	Propane
<b>Chemical name</b>	:	propane
<b>Other means of identification</b>	:	Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.
<b>Product type</b>	:	Liquefied gas
<b>Product use</b>	:	Synthetic/Analytical chemistry.
<b>Synonym</b>	:	Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.
<b>SDS #</b>	:	001045
<b>Supplier's details</b>	:	Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
<b>24-hour telephone</b>	:	1-866-734-3438

## Section 2. Hazards identification

<b>OSHA/HCS status</b>	:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
<b>Classification of the substance or mixture</b>	:	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Liquefied gas
<b>GHS label elements</b>		
<b>Hazard pictograms</b>	:	 
<b>Signal word</b>	:	Danger
<b>Hazard statements</b>	:	Extremely flammable gas. Contains gas under pressure; may explode if heated. May cause frostbite. May displace oxygen and cause rapid suffocation. May form explosive mixtures with air.
<b>Precautionary statements</b>		
<b>General</b>	:	Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position. Approach suspected leak area with caution.
<b>Prevention</b>	:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>Response</b>	:	Leaking gas fire: Do not extinguish, unless leak can be stopped safely. In case of leakage, eliminate all ignition sources.
<b>Storage</b>	:	Protect from sunlight. Store in a well-ventilated place.

## Section 2. Hazards identification

**Disposal** : Not applicable.

**Hazards not otherwise classified** : Liquid can cause burns similar to frostbite.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Substance

**Chemical name** : propane

**Other means of identification** : Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.

**Product code** : 001045

### CAS number/other identifiers

**CAS number** : 74-98-6

Ingredient name	%	CAS number
Propane	100	74-98-6

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

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

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

## Section 4. First aid measures

### Description of necessary first aid measures

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

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact** : Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Get medical attention if symptoms occur. In case of contact with liquid, warm frozen tissues slowly with lukewarm water and get medical attention. Do not rub affected area. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe. Ingestion of liquid can cause burns similar to frostbite. If frostbite occurs, get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. As this product rapidly becomes a gas when released, refer to the inhalation section.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

**Eye contact** : Liquid can cause burns similar to frostbite.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.

## Section 4. First aid measures

**Frostbite** : Try to warm up the frozen tissues and seek medical attention.  
**Ingestion** : Ingestion of liquid can cause burns similar to frostbite.

### Over-exposure signs/symptoms

**Eye contact** : Adverse symptoms may include the following:, frostbite  
**Inhalation** : No specific data.  
**Skin contact** : Adverse symptoms may include the following:, frostbite  
**Ingestion** : Adverse symptoms may include the following:, frostbite

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

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  
**Specific treatments** : No specific treatment.  
**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.  
**Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. For incidents involving large quantities, thermally insulated undergarments and thick textile or leather gloves should be worn.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

## Section 6. Accidental release measures

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

**Environmental precautions** : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

**Small spill** : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

**Large spill** : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Do not get in eyes or on skin or clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

### **Advice on general occupational hygiene**

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

### **Conditions for safe storage, including any incompatibilities**

: Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F). Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Propane	<p><b>NIOSH REL (United States, 10/2016).</b> TWA: 1800 mg/m<sup>3</sup> 10 hours. TWA: 1000 ppm 10 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b> TWA: 1800 mg/m<sup>3</sup> 8 hours. TWA: 1000 ppm 8 hours.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1800 mg/m<sup>3</sup> 8 hours. TWA: 1000 ppm 8 hours.</p> <p><b>ACGIH TLV (United States, 3/2019).</b> Oxygen Depletion [Asphyxiant]. Explosive potential.</p>

## Section 8. Exposure controls/personal protection

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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

**Individual protection measures**

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

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

**Skin protection**

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

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

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

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

**Thermal hazards** : If there is a risk of contact with the liquid, all protective equipment worn should be suitable for use with extremely low temperature materials.

## Section 9. Physical and chemical properties

### Appearance

**Physical state** : Gas.

**Color** : Colorless.

**Odor** : Odorless.BUT MAY HAVE SKUNK ODOR ADDED.

**Odor threshold** : Not available.

**pH** : Not available.

**Melting point** : -187.6°C (-305.7°F)

**Boiling point** : -42.1°C (-43.8°F)

## Section 9. Physical and chemical properties

<b>Critical temperature</b>	: 96.55°C (205.8°F)
<b>Flash point</b>	: Closed cup: -104°C (-155.2°F) Open cup: -104°C (-155.2°F)
<b>Evaporation rate</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and oxidizing materials.
<b>Lower and upper explosive (flammable) limits</b>	: Lower: 1.8% Upper: 8.4%
<b>Vapor pressure</b>	: 109 (psig)
<b>Vapor density</b>	: 1.6 (Air = 1)
<b>Specific Volume (ft<sup>3</sup>/lb)</b>	: 8.6206
<b>Gas Density (lb/ft<sup>3</sup>)</b>	: 0.116 (25°C / 77 to °F)
<b>Relative density</b>	: Not applicable.
<b>Solubility</b>	: Not available.
<b>Solubility in water</b>	: 0.0244 g/l
<b>Partition coefficient: n-octanol/water</b>	: 1.09
<b>Auto-ignition temperature</b>	: 287°C (548.6°F)
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Not applicable.
<b>Flow time (ISO 2431)</b>	: Not available.
<b>Molecular weight</b>	: 44.11 g/mole
<b>Aerosol product</b>	
<b>Heat of combustion</b>	: -46012932 J/kg

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow gas to accumulate in low or confined areas.
<b>Incompatible materials</b>	: Oxidizers
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
<b>Hazardous polymerization</b>	: Under normal conditions of storage and use, hazardous polymerization will not occur.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Not available.

#### Irritation/Corrosion

Not available.

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : Liquid can cause burns similar to frostbite.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.

**Ingestion** : Ingestion of liquid can cause burns similar to frostbite.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following; frostbite

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following; frostbite

**Ingestion** : Adverse symptoms may include the following; frostbite

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

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

## Section 11. Toxicological information

### Potential chronic health effects

Not available.

<b>General</b>	: No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Not available.

## Section 12. Ecological information

### Toxicity

Not available.

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Propane	1.09	-	low

### Mobility in soil

<b>Soil/water partition coefficient (K<sub>oc</sub>)</b>	: Not available.
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<b>Other adverse effects</b>	: No known significant effects or critical hazards.
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## Section 13. Disposal considerations

### Disposal methods

<b>Disposal methods</b>	: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.
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## Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1978	UN1978	UN1978	UN1978	UN1978
UN proper shipping name	PROPANE SEE ALSO PETROLEUM GASES, LIQUEFIED	PROPANE	PROPANE SEE ALSO PETROLEUM GASES, LIQUEFIED (propane)	PROPANE	PROPANE
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

### Additional information

#### **DOT Classification**

: **Limited quantity**

Yes.

#### **Packaging instruction**

##### **Passenger aircraft**

Quantity limitation: Forbidden.

##### **Cargo aircraft**

Quantity limitation: 150 kg

#### **Special provisions**

19, T50

For domestic transportation only, UN1075 may be substituted for the UN number shown as long as the substitution is consistent on package markings, shipping papers, and emergency response information. See 49 CFR 172.102 Special Provision 19.

Containers of NON-ODORIZED liquefied petroleum gas must be marked either NON-ODORIZED or NOT ODORIZED as of September 30, 2006. [49 CFR 172.301(f), 326(d), 330(c) and 338(e)]

#### **TDG Classification**

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).

#### **Explosive Limit and Limited Quantity Index** 0.125

#### **ERAP Index** 3000

#### **Passenger Carrying Vessel Index** 65

#### **Passenger Carrying Road or Rail Index** Forbidden

#### **Special provisions** 29, 42

#### **IATA**

: **Quantity limitation** Passenger and Cargo Aircraft: Forbidden. Cargo Aircraft Only: 150 kg.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 14. Transport information

Transport in bulk according to IMO instruments : Not available.

## Section 15. Regulatory information

<b>U.S. Federal regulations</b>	:	TSCA 8(a) CDR Exempt/Partial exemption: Not determined Clean Air Act (CAA) 112 regulated flammable substances: propane
<b>Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)</b>	:	Not listed
<b>Clean Air Act Section 602 Class I Substances</b>	:	Not listed
<b>Clean Air Act Section 602 Class II Substances</b>	:	Not listed
<b>DEA List I Chemicals (Precursor Chemicals)</b>	:	Not listed
<b>DEA List II Chemicals (Essential Chemicals)</b>	:	Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

#### SARA 304 RQ

:

Not applicable.

### SARA 311/312

#### Classification

:

Refer to Section 2: Hazards Identification of this SDS for classification of substance.

### State regulations

#### Massachusetts

:

This material is listed.

#### New York

:

This material is not listed.

#### New Jersey

:

This material is listed.

#### Pennsylvania

:

This material is listed.

#### California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

#### Australia

:

This material is listed or exempted.

#### Canada

:

This material is listed or exempted.

#### China

:

This material is listed or exempted.

#### Europe

:

This material is listed or exempted.

## Section 15. Regulatory information

Japan	: Japan inventory (ENCS): This material is listed or exempted. Japan inventory (ISHL): This material is listed or exempted.
New Zealand	: This material is listed or exempted.
Philippines	: This material is listed or exempted.
Republic of Korea	: This material is listed or exempted.
Taiwan	: This material is listed or exempted.
Thailand	: Not determined.
Turkey	: This material is listed or exempted.
United States	: This material is active or exempted.
Viet Nam	: This material is listed or exempted.

## Section 16. Other information

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

Health	/	2
Flammability		4
Physical hazards		0

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

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

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



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

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

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE GASES - Category 1	Expert judgment
GASES UNDER PRESSURE - Liquefied gas	Expert judgment

### History

Date of printing	: 11/15/2020
Date of issue/Date of revision	: 11/15/2020
Date of previous issue	: 10/5/2020
Version	: 1.02

## Section 16. Other information

### Key to abbreviations

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

### References

### Other special considerations

- : Not available.
- : The information below is given to call attention to the issue of "Naturally occurring radioactive materials". Although Radon-222 levels in the product represented by this MSDS do not present any direct Radon exposure hazard, customers should be aware of the potential for Radon daughter build up within their processing systems, whatever the source of their product streams. Radon-222 is a naturally occurring radioactive gas which can be a contaminant in natural gas. During subsequent processing, Radon tends to be concentrated in Liquefied Petroleum Gas streams and in product streams having a similar boiling point range. Industry experience has shown that this product may contain small amounts of Radon-222 and its radioactive decay products, called Radon "daughters". The actual concentration of Radon-222 and radioactive daughters in the delivered product is dependent on the geographical source of the natural gas and storage time prior to delivery. Process equipment (i.e. lines, filters, pumps and reaction units) may accumulate significant levels of radioactive daughters and show a gamma radiation reading during operation. A potential external radiation hazard exists at or near any pipe valve or vessel containing a Radon enriched stream, or containing internal deposits of radioactive material due to the transmission of gamma radiation through its wall. Field studies reported in the literature have not shown any conditions that subject workers to cumulative exposures in excess of general population limits. Equipment emitting gamma radiation should be presumed to be internally contaminated with alpha emitting decay products which may be a hazard if inhaled or ingested. Protective equipment such as coveralls, gloves, and respirator (NIOSH/MHSA approved for high efficiency particulates and radionuclides, or supplied air) should be worn by personnel entering a vessel or working on contaminated process equipment to prevent skin contamination, ingestion, or inhalation of any residues containing alpha radiation. Airborne contamination may be minimized by handling scale and/or contaminated materials in a wet state.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

# SAFETY DATA SHEETS

10) YELLOW &  
WHITE TRAFFIC  
LINES

# SAFETY DATA SHEET

TM5627

## Section 1. Identification

**Product name** : SETFAST® TM5627 Solventborne Acrylic Traffic Marking Paint Yellow

**Product code** : TM5627

**Other means of identification** : Not available.

**Product type** : Liquid.

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

Paint or paint related material.

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

**National contact** : Sherwin-Williams Canada Inc.  
180 Brunel Road  
Mississauga, Ontario L4Z 1T5 Canada

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

**Product Information Telephone Number** : US / Canada: (800) 368-2026  
Mexico: Not Available

**Transportation Emergency Telephone Number** : US / Canada: (216) 566-2917  
Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

## Section 2. Hazards identification

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

### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

**Date of issue/Date of revision**

: 5/14/2024

**Date of previous issue**

: 4/18/2024

**Version** : 19

1/18

TM5627

SETFAST® TM5627 Solventborne Acrylic Traffic Marking Paint  
Yellow

SHW-85-NA-GHS-CA

## Section 2. Hazards identification

<b>Hazard statements</b>	: Highly flammable liquid and vapor. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May cause cancer. May cause damage to organs through prolonged or repeated exposure.
<b>Precautionary statements</b>	
<b>Prevention</b>	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash thoroughly after handling.
<b>Response</b>	: IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.
<b>Storage</b>	: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
<b>Disposal</b>	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release Crystalline Silica which has been shown to cause lung damage and cancer under long term exposure.  Please refer to the SDS for additional information. Keep out of reach of children. Do not transfer contents to other containers for storage.
<b>Hazards not otherwise classified</b>	: None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: Mixture
<b>Other means of identification</b>	: Not available.
<b>CAS number/other identifiers</b>	
<b>Ingredient name</b>	<b>% by weight</b>
Calcium Carbonate	36.85
Acetone	26.45
Xylene, mixed isomers	2.96
Titanium Dioxide	2.42
Ethylbenzene	0.52
Crystalline Silica, respirable powder	0.28

<b>Date of issue/Date of revision</b>	: 5/14/2024	<b>Date of previous issue</b>	: 4/18/2024	<b>Version</b>	: 19	2/18
TM5627	SETFAST® TM5627 Solventborne Acrylic Traffic Marking Paint Yellow	SHW-85-NA-GHS-CA				

## Section 3. Composition/information on ingredients

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 and hence require reporting in this section.**

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

## Section 4. First aid measures

### Description of necessary first aid measures

#### **Eye contact**

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

#### **Inhalation**

- : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

#### **Skin contact**

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

#### **Ingestion**

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

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

##### **Eye contact**

- : Causes serious eye irritation.

##### **Inhalation**

- : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

##### **Skin contact**

- : Causes skin irritation.

##### **Ingestion**

- : Can cause central nervous system (CNS) depression.

#### Over-exposure signs/symptoms

##### **Eye contact**

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

## Section 4. First aid measures

<b>Inhalation</b>	: Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
<b>Skin contact</b>	: Adverse symptoms may include the following: irritation redness
<b>Ingestion</b>	: No specific data.

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

<b>Notes to physician</b>	: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Specific treatments</b>	: No specific treatment.
<b>Protection of first-aiders</b>	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	: Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
<b>Unsuitable extinguishing media</b>	: Do not use water jet.

<b>Specific hazards arising from the chemical</b>	: Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.
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<b>Hazardous thermal decomposition products</b>	: Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
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<b>Special protective actions for fire-fighters</b>	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
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<b>Special protective equipment for fire-fighters</b>	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
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<b>Remark</b>	: Flammable liquid.
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## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

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

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

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

### Methods and materials for containment and cleaning up

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

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

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). 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 ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

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

## 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. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits (OSHA United States)

Ingredient name	CAS #	Exposure limits
Calcium Carbonate	1317-65-3	<b>OSHA PEL (United States, 5/2018).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>NIOSH REL (United States, 10/2020).</b> [calcium carbonate] TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 10 hours. Form: Total <b>ACGIH TLV (United States, 7/2023).</b> TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes. <b>NIOSH REL (United States, 10/2020).</b> TWA: 250 ppm 10 hours. TWA: 590 mg/m <sup>3</sup> 10 hours. <b>OSHA PEL (United States, 5/2018).</b> TWA: 1000 ppm 8 hours. TWA: 2400 mg/m <sup>3</sup> 8 hours.
Acetone	67-64-1	<b>OSHA PEL (United States, 5/2018).</b> [Xylenes] TWA: 100 ppm 8 hours. TWA: 435 mg/m <sup>3</sup> 8 hours. <b>ACGIH TLV (United States, 7/2023).</b> [p-xylene and mixtures containing p-xylene] <b>Ototoxicant.</b> TWA: 20 ppm 8 hours. <b>OSHA PEL (United States, 5/2018).</b> TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>ACGIH TLV (United States, 7/2023).</b> TWA: 2.5 mg/m <sup>3</sup> 8 hours. Form: respirable fraction, finescale particles <b>ACGIH TLV (United States, 7/2023).</b> <b>Ototoxicant.</b> TWA: 20 ppm 8 hours. <b>NIOSH REL (United States, 10/2020).</b> TWA: 100 ppm 10 hours. TWA: 435 mg/m <sup>3</sup> 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m <sup>3</sup> 15 minutes. <b>OSHA PEL (United States, 5/2018).</b> TWA: 100 ppm 8 hours. TWA: 435 mg/m <sup>3</sup> 8 hours.
Xylene, mixed isomers	1330-20-7	
Titanium Dioxide	13463-67-7	
Ethylbenzene	100-41-4	

## Section 8. Exposure controls/personal protection

Crystalline Silica, respirable powder	14808-60-7	<p><b>OSHA PEL Z3 (United States, 6/2016).</b> TWA: 250 mppcf / (%SiO<sub>2</sub>+5) 8 hours. Form: Respirable TWA: 10 mg/m<sup>3</sup> / (%SiO<sub>2</sub>+2) 8 hours. Form: Respirable</p> <p><b>OSHA PEL (United States, 5/2018). [Silica, crystalline]</b> TWA: 50 µg/m<sup>3</sup> 8 hours. Form: Respirable dust</p> <p><b>ACGIH TLV (United States, 7/2023). [Silica, crystalline]</b> TWA: 0.025 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction</p> <p><b>NIOSH REL (United States, 10/2020). [SILICA, CRYSTALLINE]</b> TWA: 0.05 mg/m<sup>3</sup> 10 hours. Form: respirable dust</p>
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### Occupational exposure limits (Canada)

Ingredient name	CAS #	Exposure limits
acetone	67-64-1	<p><b>CA Alberta Provincial (Canada, 3/2023).</b> OEL: 1200 mg/m<sup>3</sup> 8 hours. OEL: 1800 mg/m<sup>3</sup> 15 minutes. OEL: 500 ppm 8 hours. OEL: 750 ppm 15 minutes.</p> <p><b>CA British Columbia Provincial (Canada, 8/2023).</b> TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes.</p> <p><b>CA Ontario Provincial (Canada, 6/2019).</b> TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes.</p> <p><b>CA Quebec Provincial (Canada, 7/2023).</b> TWAEV: 250 ppm 8 hours. STEV: 500 ppm 15 minutes.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 750 ppm 15 minutes. TWA: 500 ppm 8 hours.</p>
Xylene	1330-20-7	<p><b>CA Alberta Provincial (Canada, 3/2023). [Dimethylbenzene]</b> OEL: 100 ppm 8 hours. OEL: 651 mg/m<sup>3</sup> 15 minutes. OEL: 150 ppm 15 minutes. OEL: 434 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 8/2023). [Xylene (o, m &amp; p isomers)]</b> TWA: 100 ppm 8 hours. STEL: 150 ppm 15 minutes.</p> <p><b>CA Quebec Provincial (Canada, 7/2023). [Xylene]</b> TWAEV: 100 ppm 8 hours. TWAEV: 434 mg/m<sup>3</sup> 8 hours. STEV: 150 ppm 15 minutes. STEV: 651 mg/m<sup>3</sup> 15 minutes.</p> <p><b>CA Ontario Provincial (Canada, 6/2019).</b></p>

## Section 8. Exposure controls/personal protection

Ethylbenzene	100-41-4	<p><b>[Xylene (o-, m-, p-isomers)]</b>          STEL: 150 ppm 15 minutes.          TWA: 100 ppm 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013). [Xylene]</b>          STEL: 150 ppm 15 minutes.          TWA: 100 ppm 8 hours.</p> <p><b>CA Alberta Provincial (Canada, 3/2023).</b>          OEL: 100 ppm 8 hours.          OEL: 434 mg/m<sup>3</sup> 8 hours.          OEL: 543 mg/m<sup>3</sup> 15 minutes.          OEL: 125 ppm 15 minutes.</p> <p><b>CA British Columbia Provincial (Canada, 8/2023).</b>          TWA: 20 ppm 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 6/2019).</b>          TWA: 20 ppm 8 hours.</p> <p><b>CA Quebec Provincial (Canada, 7/2023).</b>          TWAEV: 20 ppm 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b>          STEL: 125 ppm 15 minutes.          TWA: 100 ppm 8 hours.</p>
Quartz	14808-60-7	<p><b>CA British Columbia Provincial (Canada, 8/2023). [Silica, Crystalline - alpha quartz and Cristobalite]</b>          TWA: 0.025 mg/m<sup>3</sup> 8 hours. Form: Respirable</p> <p><b>CA Quebec Provincial (Canada, 7/2023). [Silica Crystalline -Quartz]</b>          TWAEV: 0.1 mg/m<sup>3</sup> 8 hours. Form: Respirable dust.</p> <p><b>CA Alberta Provincial (Canada, 3/2023).</b>          OEL: 0.025 mg/m<sup>3</sup> 8 hours. Form: Respirable particulate</p> <p><b>CA Ontario Provincial (Canada, 6/2019). [Silica, Crystalline (Quartz/Tripoli)]</b>          TWA: 0.1 mg/m<sup>3</sup> 8 hours. Form: Respirable particulate matter.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b>          TWA: 0.05 mg/m<sup>3</sup> 8 hours. Form: respirable fraction</p>

### Occupational exposure limits (Mexico)

Ingredient name	CAS #	Exposure limits
Acetone	67-64-1	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 500 ppm 8 hours. STEL: 750 ppm 15 minutes.
Xylene, mixed isomers	1330-20-7	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> [Xileno, mezcla] STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.

### Biological exposure indices (United States)

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## Section 8. Exposure controls/personal protection

Ingredient name	Exposure indices
Acetone	<b>ACGIH BEI (United States, 7/2023)</b> BEI: 25 mg/l, acetone [in urine]. Sampling time: end of shift.
Xylene, mixed isomers	<b>ACGIH BEI (United States, 7/2023) [xylenes (technical or commercial grades)]</b> BEI: 0.3 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift.
Ethylbenzene	<b>ACGIH BEI (United States, 7/2023)</b> BEI: 0.15 g/g creatinine, sum of mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: end of shift.

### Biological exposure indices (Canada)

No exposure indices known.

### Biological exposure indices (Mexico)

Ingredient name	Exposure indices
Acetone	<b>Official Mexican STANDARD NOM-047-SSA1-2011, Environmental Health-Biological exposure indices for personnel occupationally exposed to chemical substances. (Mexico, 6/2012)</b> BEI: 50 mg/L [non-specific]. The determinant is nonspecific, since it can be found after exposure to other chemicals., acetone [in urine]. Sampling time: at the end of the work shift.
Xylene, mixed isomers	<b>Official Mexican STANDARD NOM-047-SSA1-2011, Environmental Health-Biological exposure indices for personnel occupationally exposed to chemical substances. (Mexico, 6/2012) [xylenes (technical or commercial grade)]</b> BEI: 1.5 g/g creatinine, methyl hippuric acids [in urine]. Sampling time: at the end of the work shift.

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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

### Individual protection measures

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## Section 8. Exposure controls/personal protection

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

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

**Skin protection**

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

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

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

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

## Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

**Physical state** : Liquid.

**Color** : Yellow.

**Odor** : Not available.

**Odor threshold** : Not available.

**pH** : Not applicable.

**Melting point/freezing point** : Not available.

**Boiling point, initial boiling point, and boiling range** : 55°C (131°F)

**Flash point** : Closed cup: -17°C (1.4°F) [Pensky-Martens Closed Cup]

**Evaporation rate** : 5.6 (butyl acetate = 1)

**Flammability** : Flammable liquid.

**Lower and upper explosion limit/flammability limit** : Lower: 1%  
Upper: 12.8%

**Vapor pressure** : 24 kPa (180 mm Hg)

**Relative vapor density** : 2 [Air = 1]

**Relative density** : 1.37

**Solubility(ies)** :

## Section 9. Physical and chemical properties

Media	Result
cold water	Not soluble

**Partition coefficient: n-octanol/water** : Not applicable.

**Auto-ignition temperature** : Not available.

**Decomposition temperature** : Not available.

**Viscosity** : Kinematic (40°C (104°F)): >20.5 mm<sup>2</sup>/s (>20.5 cSt)

**Molecular weight** : Not applicable.

**Heat of combustion** : 8.643 kJ/g

## Section 10. Stability and reactivity

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

**Chemical stability** : The product is stable.

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

**Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

**Incompatible materials** : Reactive or incompatible with the following materials:  
oxidizing materials

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

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
Xylene, mixed isomers	LC50 Inhalation Gas.	Rat	6700 ppm	4 hours
Ethylbenzene	LD50 Oral	Rat	4300 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 ppm	-
	Eyes - Mild irritant	Rabbit	-	10 uL	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Mild irritant	Rabbit	-	395 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Xylene, mixed isomers	Eyes - Mild irritant	Rabbit	-	87 mg	-

## Section 11. Toxicological information

Titanium Dioxide	Eyes - Severe irritant Skin - Mild irritant Skin - Moderate irritant Skin - Moderate irritant Skin - Mild irritant	Rabbit Rat Rabbit Rabbit Human	- - - - -	24 hours 5 mg 8 hours 60 uL 100 % 24 hours 500 mg 72 hours 300 ug l	- - - - -
Ethylbenzene	Eyes - Severe irritant Skin - Mild irritant	Rabbit Rabbit	- -	500 mg 24 hours 15 mg	- -

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP	
Xylene, mixed isomers	-	3	-	
Titanium Dioxide	-	2B	-	
Ethylbenzene	-	2B	-	
Crystalline Silica, respirable powder	+	1		Known to be a human carcinogen.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Calcium Carbonate	Category 3	-	Respiratory tract irritation
Acetone	Category 3	-	Respiratory tract irritation
Xylene, mixed isomers	Category 3	-	Narcotic effects
	Category 3	-	Respiratory tract irritation
Ethylbenzene	Category 3	-	Narcotic effects
	Category 3	-	Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Xylene, mixed isomers	Category 2	-	-
Ethylbenzene	Category 2	-	-
Crystalline Silica, respirable powder	Category 1	inhalation	-

### Aspiration hazard

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## Section 11. Toxicological information

Name	Result
Xylene, mixed isomers	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

**Skin contact** : Causes skin irritation.

**Ingestion** : Can cause central nervous system (CNS) depression.

### Symptoms related to the physical, chemical and toxicological characteristics

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

**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness

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

**Ingestion** : No specific data.

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

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

**General** : May cause damage to organs through prolonged or repeated exposure.

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

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

## Section 11. Toxicological information

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral	145237.71 mg/kg
Dermal	84440.53 mg/kg

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 7200000 µg/l Fresh water Acute LC50 4.42589 ml/L Marine water  Acute LC50 7460000 µg/l Fresh water Acute LC50 5600 ppm Fresh water Chronic NOEC 4.95 mg/l Marine water Chronic NOEC 0.016 ml/L Fresh water Chronic NOEC 0.1 ml/L Fresh water  Chronic NOEC 5 µg/l Marine water	Algae - <i>Selenastrum sp.</i> Crustaceans - <i>Acartia tonsa</i> - Copepodid  Daphnia - <i>Daphnia cucullata</i> Fish - <i>Poecilia reticulata</i> Algae - <i>Ulva pertusa</i> Crustaceans - <i>Daphniidae</i> Daphnia - <i>Daphnia magna</i> - Neonate  Fish - <i>Gasterosteus aculeatus</i> - Larvae	96 hours 48 hours  48 hours 96 hours 96 hours 21 days 21 days  42 days
Xylene, mixed isomers	Acute LC50 8500 µg/l Marine water	Crustaceans - <i>Palaemonetes pugio</i>	48 hours
Titanium Dioxide	Acute LC50 13400 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
Ethylbenzene	Acute LC50 >1000000 µg/l Marine water Acute EC50 4900 µg/l Marine water Acute EC50 7700 µg/l Marine water Acute EC50 6.53 mg/l Marine water  Acute EC50 2.93 mg/l Fresh water	Fish - <i>Fundulus heteroclitus</i> Algae - <i>Skeletonema costatum</i> Algae - <i>Skeletonema costatum</i> Crustaceans - <i>Artemia sp.</i> - Nauplii Daphnia - <i>Daphnia magna</i> - Neonate	96 hours 72 hours 96 hours 48 hours  48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Xylene, mixed isomers	-	-	Readily
Ethylbenzene	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Xylene, mixed isomers	-	8.1 to 25.9	Low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

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

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## Section 13. Disposal considerations

### Disposal methods

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

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1263	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3 	3 	3 	3 	3 
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-  <u>ERG No.</u> 128	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).  <u>ERG No.</u> 128	-  <u>ERG No.</u> 128	-	<u>Emergency schedules</u> F-E, S- E

## Section 14. Transport information

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

**Transport in bulk according to IMO instruments** : Not available.

**Proper shipping name** : Not available.

## Section 15. Regulatory information

### International regulations

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### International lists

- Australia inventory (AIIC)**: Not determined.
- China inventory (IECSC)**: Not determined.
- Japan inventory (CSCL)**: Not determined.
- Japan inventory (ISHL)**: Not determined.
- Korea inventory (KECI)**: Not determined.
- New Zealand Inventory of Chemicals (NZIoC)**: Not determined.
- Philippines inventory (PICCS)**: Not determined.
- Taiwan Chemical Substances Inventory (TCSI)**: Not determined.
- Thailand inventory**: Not determined.
- Turkey inventory**: Not determined.
- Vietnam inventory**: Not determined.

## Section 16. Other information

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

Health	*	3
Flammability		3
Physical hazards		0

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

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

### Procedure used to derive the classification

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## Section 16. Other information

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 1A	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method

### History

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**Key to abbreviations** : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
N/A = Not available  
SGG = Segregation Group  
UN = United Nations

 Indicates information that has changed from previously issued version.

### Notice to reader

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

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SAFETY  
DATA  
SHEETS

11) ASPHALT &  
TAR REMOVER

# SAFETY DATA SHEET



PROSOCO  
Revision Number 2.01

Issuing Date 15-Jun-2020

Revision date 20-Jun-2022

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product identifier

**Product Name** Sure Klean® Asphalt & Tar Remover

### Other means of identification

**Product Code(s)** 20062  
**UN number** UN1263

### Recommended use of the chemical and restrictions on use

**Recommended use** Restricted to professional users.  
**Uses advised against** No information available

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

PROSOCO, Inc.  
3741 Greenway Circle  
Lawrence, Kansas 66046

#### **Emergency telephone number**

8:00 AM – 5:00 PM CST Monday-Friday 785-865-4200  
NON-BUSINESS HOURS (INFOTRAC) 800-535-5053

## 2. HAZARDS IDENTIFICATION

### Classification

Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Carcinogenicity	Category 2
Aspiration hazard	Category 1
Flammable liquids	Category 3

### Label elements

#### Emergency Overview

#### Warning

#### **Hazard statements**

Harmful in contact with skin  
Causes skin irritation  
Causes serious eye irritation  
Suspected of causing cancer  
May be fatal if swallowed and enters airways  
Flammable liquid and vapor



<b>Appearance</b> clear	<b>Physical state</b> Liquid	<b>Odor</b> Solvent
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**Precautionary Statements - Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Use personal protective equipment as required  
 Wash face, hands and any exposed skin thoroughly after handling  
 Wear eye/face protection  
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
 Keep container tightly closed  
 Ground/bond container and receiving equipment  
 Use explosion-proof electrical/ventilating/ type of /lighting equipment  
 Use only non-sparking tools  
 Take precautionary measures against static discharge

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 If eye irritation persists: Get medical advice/attention  
 Call a POISON CENTER or doctor/physician if you feel unwell  
 If skin irritation occurs: Get medical advice/attention  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 Do NOT induce vomiting  
 In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Precautionary Statements - Storage**

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

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)****Other information**

- May be harmful if swallowed

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical name	CAS No.	Weight-%	Trade Secret
Solvent Naptha (petroleum) light aromatic	64742-95-6	30 - 60	*
Distillates petroleum, hydrotreated light	64742-47-8	30 - 60	*
1,2,4-trimethylbenzene	95-63-6	10 - 30	*
Citrus Terpenes	94266-47-4	1 - 5	*
Cumene	98-82-8	0.1 - 1	*

\* The exact percentage (concentration) of composition has been withheld as a trade secret.

**4. FIRST AID MEASURES****Description of first aid measures****General advice**

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

<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
<b>Inhalation</b>	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Call a physician.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician.
<b>Self-protection of the first aider</b>	Remove all sources of ignition. Use personal protective equipment as required.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	Irritating to eyes and skin. ASPIRATION HAZARD IF SWALLOWED – CAN ENTER LUNGS AND CAUSE DAMAGE.
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**Indication of any immediate medical attention and special treatment needed**

<b>Note to physicians</b>	Treat symptomatically.
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**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Use. Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray (fog). Alcohol resistant foam.

**Unsuitable Extinguishing Media** Caution: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**

Keep product and empty container away from heat and sources of ignition. Risk of ignition.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Remove all sources of ignition. Take precautionary measures against static discharges. Pay attention to flashback. Ensure adequate ventilation, especially in confined areas. Evacuate personnel to safe areas. Use personal protective equipment as required. Avoid contact with eyes and skin.
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**Environmental precautions**

<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. See Section 12 for additional ecological information.
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**Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal.
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<b>Methods for cleaning up</b>	Dam up. Use only non-sparking tools. Take precautionary measures against static discharges. Soak up with inert absorbent material. Pick up and transfer to properly labeled
--------------------------------	---

containers.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Advice on safe handling**

Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

### Conditions for safe storage, including any incompatibilities

#### **Storage Conditions**

Keep away from heat. Keep container tightly closed in a dry and well-ventilated place. Keep in properly labeled containers. Keep out of the reach of children.

#### **Incompatible materials**

Incompatible with oxidizing agents. Incompatible with strong acids and bases.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **Exposure Guidelines**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
1,2,4-trimethylbenzene 95-63-6			TWA: 25 ppm TWA: 125 mg/m <sup>3</sup>
Cumene 98-82-8	TWA: 50 ppm	TWA: 50 ppm TWA: 245 mg/m <sup>3</sup> (vacated) TWA: 50 ppm (vacated) TWA: 245 mg/m <sup>3</sup> (vacated) S* S*	IDLH: 900 ppm TWA: 50 ppm TWA: 245 mg/m <sup>3</sup>

NIOSH IDLH *Immediately Dangerous to Life or Health*

#### **Other information**

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

### Appropriate engineering controls

#### **Engineering Controls**

Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

#### **Eye/face protection**

Wear safety glasses with side shields (or goggles).

#### **Skin and body protection**

Wear protective gloves and protective clothing.

#### **Respiratory protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

#### **General Hygiene Considerations**

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid	<b>Odor</b>	Solvent
<b>Appearance</b>	clear	<b>Odor threshold</b>	No information available
<b>Color</b>	colorless		
<b>Property</b>		<b>Values</b>	
<b>pH</b>	Not Applicable	<b>Remarks • Method</b>	
<b>Melting point / freezing point °F</b>	No information available		
<b>Boiling point / boiling range</b>	No information available		
<b>Flash point</b>	54 °C / 130 °F		
<b>Evaporation rate</b>	No information available		
<b>Flammability (solid, gas)</b>	No information available		
<b>Flammability Limit in Air</b>			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
<b>Vapor pressure</b>	No information available		
<b>Vapor density</b>	No information available		
<b>Specific gravity</b>	0.84		
<b>Water solubility</b>	No information available		
<b>Solubility in other solvents</b>	No information available		
<b>Partition coefficient</b>	No information available		
<b>Autoignition temperature</b>	No information available		
<b>Decomposition temperature</b>	No information available		
<b>Kinematic viscosity</b>	No information available		
<b>Dynamic viscosity</b>	No information available		

## 10. STABILITY AND REACTIVITY

## Reactivity

No data available

## Chemical stability

Stable under recommended storage conditions.

## Possibility of hazardous reactions

None under normal processing.

## Conditions to avoid

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## Heat, flames and sparks.

## Incompatible materials

Incompatible with oxidizing agents. Incompatible with strong acids and bases.

## **Hazardous decomposition products**

None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

### **Information on likely routes of exposure**

<b>Product Information</b>	No data available
<b>Inhalation</b>	Avoid breathing vapors or mists.
<b>Eye contact</b>	Avoid contact with eyes.
<b>Skin Contact</b>	Avoid contact with skin and clothing. Harmful in contact with skin.
<b>Ingestion</b>	Do not taste or swallow.

**Component Information**

Chemical name	LD50/Oral	LD50/Dermal	Inhalation LC50
Solvent Naptha (petroleum) light aromatic 64742-95-6	= 8400 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	= 3400 ppm ( Rat ) 4 h
Distillates petroleum, hydrotreated light 64742-47-8	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 5.2 mg/L ( Rat ) 4 h
1,2,4-trimethylbenzene 95-63-6	= 3280 mg/kg ( Rat )	> 3160 mg/kg ( Rabbit )	= 18 g/m <sup>3</sup> ( Rat ) 4 h
Cumene 98-82-8	= 1400 mg/kg ( Rat )	= 12300 µL/kg ( Rabbit )	> 3577 ppm ( Rat ) 6 h

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Irritating to eyes and skin. Harmful in contact with skin.

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

**Sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Cumene 98-82-8	-	Group 2B	Reasonably Anticipated	X

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** May be fatal if swallowed and enters airways.

**Numerical measures of toxicity - Product Information****Unknown acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	4568 mg/kg
ATEmix (dermal)	1867 mg/kg mg/l
ATEmix (inhalation-dust/mist)	10.3 mg/l

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Solvent Naptha (petroleum) light aromatic 64742-95-6	-	9.22: 96 h Oncorhynchus mykiss mg/L LC50	-	6.14: 48 h Daphnia magna mg/L EC50
Distillates petroleum, hydrotreated light 64742-47-8	-	2.2: 96 h Lepomis macrochirus mg/L LC50 static 2.4: 96 h Oncorhynchus mykiss mg/L LC50 static 45: 96 h Pimephales promelas mg/L LC50 flow-through	-	-
1,2,4-trimethylbenzene 95-63-6	-	7.19 - 8.28: 96 h Pimephales promelas mg/L LC50 flow-through	-	6.14: 48 h Daphnia magna mg/L EC50
Cumene 98-82-8	2.6: 72 h Pseudokirchneriella	6.04 - 6.61: 96 h Pimephales promelas mg/L LC50	-	7.9 - 14.1: 48 h Daphnia magna mg/L EC50 Static

	subcapitata mg/L EC50	flow-through 2.7: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 4.8: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 5.1: 96 h Poecilia reticulata mg/L LC50 semi-static		0.6: 48 h Daphnia magna mg/L EC50
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**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

Chemical name	Partition coefficient
1,2,4-trimethylbenzene 95-63-6	3.63
Cumene 98-82-8	3.7

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods**

<b>Disposal of wastes</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated packaging</b>	Do not reuse container.
<b>US EPA Waste Number</b>	D001

**14. TRANSPORT INFORMATION****DOT**

(If shipped in NON BULK packaging by ground transport) Non-Hazardous/Non-Regulated  
(Under 119 Gallons per container)

<b>UN number</b>	UN1263
<b>UN proper shipping name</b>	Paint related material
<b>Transport hazard class(es)</b>	3
<b>Packing group</b>	III

**IATA**

<b>UN number</b>	UN1263
<b>UN proper shipping name</b>	Paint related material
<b>Transport hazard class(es)</b>	3
<b>Packing group</b>	III

**IMDG**

<b>UN number</b>	UN1263
<b>UN proper shipping name</b>	Paint related material
<b>Transport hazard class(es)</b>	3
<b>Packing group</b>	III

## 15. REGULATORY INFORMATION

### International Inventories

TSCA	Complies
DSL/NDSL	Complies

### Legend:

TSCA - *United States Toxic Substances Control Act Section 8(b) Inventory*  
 DSL/NDSL - *Canadian Domestic Substances List/Non-Domestic Substances List*

### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	CAS No.	Weight-%	SARA 313 - Threshold Values %
1,2,4-trimethylbenzene - 95-63-6	95-63-6	10 - 30	1.0

### SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

### CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

### CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Cumene 98-82-8	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

### US State Regulations

#### **California Proposition 65**

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Cumene - 98-82-8	Carcinogen

### U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
1,2,4-trimethylbenzene 95-63-6	X	X	X
Xylene 1330-20-7	X	X	X
Cumene 98-82-8	X	X	X

## 16. OTHER INFORMATION

<b>NFPA</b>	<b>Health hazards</b> 2	<b>Flammability</b> 2	<b>Instability</b> 0	<b>Physical and chemical properties - Personal protection</b> X
<b>HMIS</b>	<b>Health hazards</b> 2	<b>Flammability</b> 2	<b>Physical hazards</b> 0	

**Prepared By** Regulatory Department  
**Issuing Date** 15-Jun-2020  
**Revision date** 20-Jun-2022

**Revision Note**  
For product produced after June 14, 2021

**Disclaimer**

The information contained on the Safety Data Sheet has been compiled from data considered accurate. This data is believed to be reliable, but it must be pointed out that values for certain properties are known to vary from source to source. PROSOCO, Inc. expressly disclaims any warranty express or implied as well as any liability for any injury or loss arising from the use of this information or the materials described. This data is not to be construed as absolutely complete since additional data may be desirable when particular conditions or circumstances exist. It is the responsibility of the user to determine the best precautions necessary for the safe handling and use of this product for his unique application. This data relates only to the specific material designated and is not to be used in combination with any other material. Many federal and state regulations pertain directly or indirectly to the product's end use and disposal of containers and unused material. It is the purchaser's responsibility to familiarize himself with all applicable regulations.

**End of Safety Data Sheet**