

# SAFETY DATA SHEET

CITGO Rock Drill Oil 46



## Section 1. Identification

<b>GHS product identifier</b>	: CITGO Rock Drill Oil 46
<b>Synonyms</b>	: Pneumatic Tool Oil
<b>Code</b>	: 633212001
<b>MSDS #</b>	: 633212001
<b>Supplier's details</b>	: CITGO Petroleum Corporation P.O. Box 4689 Houston, TX 77210 sdsvend@citgo.com
<b>Emergency telephone number (with hours of operation)</b>	: Technical Contact: (800) 248-4684 Medical Emergency: (832) 486-4700 CHEMTREC Emergency: (800) 424-9300 (United States Only)

## 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>	: AQUATIC HAZARD (ACUTE) - Category 3 AQUATIC HAZARD (LONG-TERM) - Category 3
<b>GHS label elements</b>	
<b>Signal word</b>	: No signal word.
<b>Hazard statements</b>	: Harmful to aquatic life with long lasting effects.
<b>Precautionary statements</b>	
<b>General</b>	: Avoid contact with eyes, skin and clothing. Thoroughly wash exposed areas and clothing with soap and water. IF IN EYES: Rinse cautiously with water for several minutes. IF SWALLOWED: Do not induce vomiting. If you feel unwell, seek medical attention and show the label when possible. Keep out of reach of children.
<b>Prevention</b>	: Avoid release to the environment.
<b>Response</b>	: Not applicable.
<b>Storage</b>	: Store in a dry place and/or in closed container. Store in accordance with all local, regional, national and international regulations.
<b>Disposal</b>	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
<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>	: Pneumatic Tool Oil

### CAS number/other identifiers

<b>CAS number</b>	: Not applicable.
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## Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
Distillates (petroleum), solvent-dewaxed light paraffinic	≥25 - ≤50	64742-56-9
Distillates (petroleum), hydrotreated heavy paraffinic	≥25 - ≤50	64742-54-7
Distillates (petroleum), solvent-refined light paraffinic	≤3	64741-89-5
Distillates (petroleum), hydrotreated light paraffinic	≤3	64742-55-8
(Z)-octadec-9-enylamine	<0.25	112-90-3

\* = Various      \*\* = Mixture      \*\*\* = Proprietary

Any concentration shown as a range is to protect confidentiality or is due to process 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** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

#### Potential acute health effects

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

#### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : Treat symptomatically and supportively.
- 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.

## Section 4. First aid measures

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

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

### Specific hazards arising from the chemical

: In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

### Hazardous thermal decomposition products

: Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
phosphorus oxides

### Special protective actions for fire-fighters

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

### Special protective equipment for fire-fighters

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

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

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

#### For emergency responders

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

### Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

### Methods and materials for containment and cleaning up

#### Small spill

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

#### Large spill

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

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). 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, kept tightly closed when not in use. 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.

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

**Bulk Storage Conditions:** Maintain all storage tanks in accordance with applicable regulations. Use necessary controls to monitor tank inventories. Inspect all storage tanks on a periodic basis. Test tanks and associated piping for tightness. Maintain the automatic leak detection devices to assure proper working condition.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Distillates (petroleum), solvent-dewaxed light paraffinic

**ACGIH TLV (United States, 3/2016).**

TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction

**OSHA PEL (United States, 6/2016).**

TWA: 5 mg/m<sup>3</sup> 8 hours.

**NIOSH REL (United States, 10/2013).**

TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Mist  
STEL: 10 mg/m<sup>3</sup> 15 minutes. Form: Mist

**ACGIH TLV (United States, 3/2016).**

TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction

**OSHA PEL (United States, 6/2016).**

TWA: 5 mg/m<sup>3</sup> 8 hours.

**NIOSH REL (United States, 10/2013).**

TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Mist  
STEL: 10 mg/m<sup>3</sup> 15 minutes. Form: Mist

Distillates (petroleum), hydrotreated heavy paraffinic

Distillates (petroleum), solvent-refined light paraffinic

Distillates (petroleum), hydrotreated light paraffinic

**ACGIH TLV (United States, 3/2016).**

TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction

**OSHA PEL (United States, 6/2016).**

TWA: 5 mg/m<sup>3</sup> 8 hours.

**NIOSH REL (United States, 10/2013).**

TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Mist  
STEL: 10 mg/m<sup>3</sup> 15 minutes. Form: Mist

**ACGIH TLV (United States, 3/2016).**

TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction

**OSHA PEL (United States, 6/2016).**

TWA: 5 mg/m<sup>3</sup> 8 hours.

**NIOSH REL (United States, 10/2013).**

TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Mist  
STEL: 10 mg/m<sup>3</sup> 15 minutes. Form: Mist

## Section 8. Exposure controls/personal protection

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, vapor controls, 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 glasses equipped with side shields are recommended as minimum protection in industrial settings. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. 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 inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Avoid skin contact with liquid. Chemical-resistant 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. Leather gloves are not protective for liquid contact.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Avoid skin contact with liquid. 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. Leather boots are not protective for liquid contact.
- Respiratory protection** : Avoid inhalation of gases, vapors, mists or dusts. Use a properly fitted, air-purifying or supplied-air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Amber.
- Odor** : Mild petroleum odor
- pH** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: 185°C (365°F) [Pensky-Martens.]  
Open cup: 210°C (410°F) [Cleveland.]
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : 0.87

## Section 9. Physical and chemical properties

<b>Density lbs/gal</b>	: Estimated 7.25 lbs/gal
<b>Density gm/cm<sup>3</sup></b>	: Not available.
<b>Gravity, °API</b>	: Estimated 31 @ 60 F
<b>Solubility</b>	: Insoluble in the following materials: cold water.
<b>Flow time (ISO 2431)</b>	: Not available.
<b>Viscosity</b>	: Kinematic (40°C (104°F)): 0.46 cm <sup>2</sup> /s (46 cSt)
<b>Viscosity SUS</b>	: Estimated 213 SUS @104 F

## Section 10. Stability and reactivity

<b>Reactivity</b>	: Not expected to be Explosive, Self-Reactive, Self-Heating, or an Organic Peroxide under US GHS Definition(s).
<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>	: No specific data.
<b>Incompatible materials</b>	: No specific data.
<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
Distillates (petroleum), solvent-dewaxed light paraffinic	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Distillates (petroleum), hydrotreated heavy paraffinic	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Distillates (petroleum), solvent-refined light paraffinic	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
Distillates (petroleum), hydrotreated light paraffinic	LC50 Inhalation Dusts and mists	Rat	3900 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-

<b>Conclusion/Summary</b>	: <b>Distillates (petroleum), solvent-dewaxed light paraffinic:</b> Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested. <b>Distillates (petroleum), hydrotreated heavy paraffinic:</b> Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory
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## Section 11. Toxicological information

reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects.

**Distillates (petroleum), solvent-refined light paraffinic:** Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested.

**Distillates (petroleum), hydrotreated light paraffinic:** Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects.

### Irritation/Corrosion

Not available.

**Skin** : No additional information.

**Eyes** : No additional information.

**Respiratory** : No additional information.

### Sensitization

Not available.

**Skin** : No additional information.

**Respiratory** : No additional information.

### Mutagenicity

Not available.

**Conclusion/Summary** : No additional information.

### Carcinogenicity

Not available.

**Conclusion/Summary** : **Distillates (petroleum), hydrotreated light paraffinic:** In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested.

### Classification

Product/ingredient name	OSHA	IARC	NTP
Distillates (petroleum), hydrotreated light paraffinic	None.	-	-

### Reproductive toxicity

Not available.

**Conclusion/Summary** : No additional information.

### Teratogenicity

Not available.

**Conclusion/Summary** : No additional information.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
(Z)-octadec-9-enylamine	Category 3	Not applicable.	Respiratory tract irritation

## Section 11. Toxicological information

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
(Z)-octadec-9-enylamine	Category 2	Not determined	gastrointestinal tract, immune system and liver

### Aspiration hazard

Name	Result
Distillates (petroleum), solvent-dewaxed light paraffinic	ASPIRATION HAZARD - Category 1
Distillates (petroleum), solvent-refined light paraffinic	ASPIRATION HAZARD - Category 1
Distillates (petroleum), hydrotreated light paraffinic	ASPIRATION HAZARD - Category 1
(Z)-octadec-9-enylamine	ASPIRATION HAZARD - Category 1

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

### Potential acute health effects

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

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

#### Short term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

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



## Section 12. Ecological information

### Toxicity

Not available.

**Conclusion/Summary** : Not available.

### Persistence and degradability

**Conclusion/Summary** : Not available.

### Bioaccumulative potential

Not available.

### Mobility in soil

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

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

## Section 13. Disposal considerations

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

## Section 14. Transport information

	<b>DOT Classification</b>	<b>IMDG</b>	<b>IATA</b>
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.
<b>UN proper shipping name</b>	-	-	-
<b>Transport hazard class(es)</b>	-	-	-
<b>Packing group</b>	-	-	-
<b>Environmental hazards</b>	No.	No.	No.

**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 Annex II of MARPOL and the IBC Code** : Not available.

## Section 15. Regulatory information

**U.S. Federal regulations** : **United States inventory (TSCA 8b)**: All components are listed or exempted.  
This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

### SARA 302/304

#### Composition/information on ingredients

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : Not applicable.

#### Composition/information on ingredients

Name	%	Classification
Distillates (petroleum), solvent-dewaxed light paraffinic	≥25 - ≤50	ASPIRATION HAZARD - Category 1
Distillates (petroleum), solvent-refined light paraffinic	≤3	ACUTE TOXICITY (dermal) - Category 4 ASPIRATION HAZARD - Category 1
Distillates (petroleum), hydrotreated light paraffinic	≤3	ACUTE TOXICITY (inhalation) - Category 4 ASPIRATION HAZARD - Category 1

### State regulations

**Massachusetts** : The following components are listed: Polymer

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

**New Jersey** : The following components are listed: Polymer

**Pennsylvania** : The following components are listed: Polymer

### California Prop. 65 Clear and Reasonable Warnings (2018)

**⚠ WARNING:** This product can expose you to Ethyl acrylate, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Ingredient name	%	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
ethyl acrylate	<0.001	Yes.	No.	-	-

### International regulations

#### Inventory list

**United States** : All components are listed or exempted.

**Australia** : All components are listed or exempted.

**Canada** : At least one component is not listed in DSL but all such components are listed in NDSL.

**China** : All components are listed or exempted.

**Europe** : All components are listed or exempted.

**Japan** : **Japan inventory (ENCS)**: Not determined.  
**Japan inventory (ISHL)**: Not determined.

**Malaysia** : Not determined.

**New Zealand** : All components are listed or exempted.

**Philippines** : All components are listed or exempted.

**Republic of Korea** : All components are listed or exempted.

## Section 15. Regulatory information

Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: Not determined.
Viet Nam	: Not determined.

## Section 16. Other information

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



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

### Procedure used to derive the classification

Classification	Justification
AQUATIC HAZARD (ACUTE) - Category 3	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method

### History

Date of printing	: 5/31/2018
Date of issue/Date of revision	: 5/31/2018
Date of previous issue	: 4/16/2018
Version	: 2

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
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References	: Not available.
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☑ Indicates information that has changed from previously issued version.

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