

# SAFETY DATA SHEET

CITGO CITGEAR® HD Synthetic Automotive  
Lubricant, SAE 80W-140



## Section 1. Identification

**GHS product identifier** : CITGO CITGEAR® HD Synthetic Automotive Lubricant, SAE 80W-140  
**Synonyms** : Not available.  
**Code** : 632498001

**Supplier's details** : CITGO Petroleum Corporation  
P.O. Box 4689  
Houston, TX 77210  
sdsvend@citgo.com

**Emergency telephone number (with hours of operation)** : Technical Contact: (800) 248-4684  
Medical Emergency: (832) 486-4700  
CHEMTREC Emergency: (800) 424-9300  
(United States Only)

## Section 2. Hazards identification

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

**Classification of the substance or mixture** : SKIN SENSITIZATION - Category 1  
AQUATIC HAZARD (ACUTE) - Category 3  
AQUATIC HAZARD (LONG-TERM) - Category 3

### GHS label elements

#### **Hazard pictograms**



**Signal word** : Warning

**Hazard statements** : May cause an allergic skin reaction.  
Harmful to aquatic life with long lasting effects.

### Precautionary statements

**Prevention** : Wear protective gloves. Avoid release to the environment. Avoid breathing vapor.  
Contaminated work clothing must not be allowed out of the workplace.

**Response** : IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

**Storage** : Not applicable.

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

**Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

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

### CAS number/other identifiers

**CAS number** : Not applicable.

## Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	≥50 - ≤75	68037-01-4
1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	≤10	68649-12-7
Distillates, petroleum, hydrotreated, light naphthenic	≤3	64742-53-6
Amines, C12-14-tert-alkyl	<1	68955-53-3
(Z)-octadec-9-enylamine	<0.25	112-90-3

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** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

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

## Section 4. First aid measures

- 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

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

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

## Section 6. Accidental release measures

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

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. 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

Ingredient name	Exposure limits
Distillates, petroleum, hydrotreated, light naphthenic	<p><b>ACGIH TLV (United States, 3/2016).</b> TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction</p> <p><b>OSHA PEL (United States, 6/2016).</b> TWA: 5 mg/m<sup>3</sup> 8 hours.</p> <p><b>NIOSH REL (United States, 10/2013).</b> TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Mist STEL: 10 mg/m<sup>3</sup> 15 minutes. Form: Mist</p>

- 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

## 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety 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** : Dark amber.
- Odor** : Mild petroleum odor
- pH** : Not available.
- Boiling point** : Not available.
- Flash point** : Open cup: 194°C (381.2°F) [Cleveland.]
- Evaporation rate** : <1 (n-butyl acetate. = 1)
- Lower and upper explosive (flammable) limits** : Lower: 1%  
Upper: 7%
- Vapor pressure** : <0.0013 kPa (<0.01 mm Hg) [room temperature]
- Vapor density** : >1 [Air = 1]
- Relative density** : 0.87
- Density lbs/gal** : Estimated 7.25 lbs/gal
- Density gm/cm<sup>3</sup>** : Not available.
- Gravity, °API** : Estimated 31 @ 60 F
- Solubility** : Insoluble in the following materials: cold water and hot water.
- Flow time (ISO 2431)** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): 2.89 cm<sup>2</sup>/s (289 cSt)
- Viscosity SUS** : Estimated 1339 SUS @104 F

## Section 10. Stability and reactivity

- Reactivity** : Not expected to be Explosive, Self-Reactive, Self-Heating, or an Organic Peroxide under US GHS Definition(s).
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated Amines, C12-14-tert-alkyl	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
	LC50 Inhalation Gas.	Rat	157 ppm	4 hours
	LD50 Dermal	Rabbit	1120 mg/kg	-
	LD50 Dermal	Rat	251 mg/kg	-
	LD50 Oral	Rat	300 mg/kg	-

- Conclusion/Summary** : **Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated sec-hexadecylnaphthalene:** Practically non-irritating to eyes. Practically non-irritating to the skin. **Distillates (petroleum), hydrotreated light naphthenic:** INHALATION (LC50) Acute: 9.6 mg/L (Female Rat). INHALATION (LC50) Acute: 10.5 mg/L (Male Rat). DRAIZE EYE Acute: Non-irritating (Rabbit). DRAIZE DERMAL Acute: Mild skin irritant (Rabbit). BUEHLER DERMAL Acute: Non-sensitizing (Guinea Pig). 28-Day DERMAL Sub-Chronic: Mild to moderate skin irritant (Rabbit & Rat).
- A life-time dermal application of severely hydrotreated light naphthenic oils produced skin masses on mice which correlated with the skin irritation response levels of the test animals. Additional studies attribute these masses to a weak promotional activity. These studies indicate that light naphthenic oils are not mutagenic, tumor initiators nor complete chemical carcinogens. These materials have not been determined to be carcinogenic by IARC, NTP or OSHA.

#### Irritation/Corrosion



## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Distillates, petroleum, hydrotreated, light naphthenic Amines, C12-14-tert-alkyl	Skin - Moderate irritant	Rabbit	-	24 hours 0.5 Milliliters	-
	Eyes - Severe irritant	Rabbit	-	0.1 Milliliters	-
	Skin - Severe irritant	Rabbit	-	0.5 Milliliters	-

**Skin** : **sec-hexadecylnaphthalene**: Practically non-irritating to the skin.

**Eyes** : **sec-hexadecylnaphthalene**: Practically non-irritating to eyes.

**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** : No additional information.

### 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

### 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, hydrotreated, light naphthenic (Z)-octadec-9-enylamine	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

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

### Potential acute health effects

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

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

**Skin contact** : May cause an allergic skin reaction.

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

## Section 11. Toxicological information

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

<b>Eye contact</b>	: No specific data.
<b>Inhalation</b>	: No specific data.
<b>Skin contact</b>	: Adverse symptoms may include the following: irritation redness
<b>Ingestion</b>	: No specific data.

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

#### Short term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

#### Long term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

#### Potential chronic health effects

Not available.

<b>General</b>	: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
<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.

## Section 12. Ecological information

### Toxicity

Not available.

<b>Conclusion/Summary</b>	: Not available.
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### Persistence and degradability

<b>Conclusion/Summary</b>	: <b>Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene):</b> This product is unlikely to biodegrade at a significant rate.
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### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	>6.5	-	high
1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	5	-	high
Amines, C12-14-tert-alkyl	2.9	-	low

### Mobility in soil



## Section 12. Ecological information

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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.

**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.  
**Clean Water Act (CWA) 307:** naphthalene; phenol  
**Clean Water Act (CWA) 311:** naphthalene; Phosphoric acid, solution; phenol  
 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

## Section 15. Regulatory information

### Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Phenol	<0.001	Yes.	500 / 10000	-	1000	-

**SARA 304 RQ** : 369822485.2 lbs / 167899408.3 kg [50981989.9 gal / 192987825.6 L]

### SARA 311/312

**Classification** : SKIN SENSITIZATION - Category 1

### Composition/information on ingredients

Name	%	Classification
Distillates, petroleum, hydrotreated, light naphthenic Amines, C12-14-tert-alkyl	≤3 <1	ASPIRATION HAZARD - Category 1  FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1A

### State regulations

- Massachusetts** : None of the components are listed.
- New York** : The following components are listed: Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)
- New Jersey** : None of the components are listed.
- Pennsylvania** : The following components are listed: Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)

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

**⚠ WARNING:** This product can expose you to chemicals including Ethyl acrylate, Naphthalene, which are 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.	-	-
naphthalene	<0.01	Yes.	No.	Yes.	-

### International regulations

#### Inventory list

- United States** : All components are listed or exempted.
- Australia** : Not determined.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Europe** : All components are listed or exempted.
- Japan** : **Japan inventory (ENCS):** At least one component is not listed.  
**Japan inventory (ISHL):** Not determined.
- Malaysia** : Not determined.
- New Zealand** : Not determined.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.
- Taiwan** : Not determined.
- Thailand** : Not determined.
- Turkey** : Not determined.

## Section 15. Regulatory information

**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
SKIN SENSITIZATION - Category 1	Calculation method
AQUATIC HAZARD (ACUTE) - Category 3	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method

### History

**Date of printing** : 11/21/2018

**Date of issue/Date of revision** : 4/13/2018

**Date of previous issue** : 11/14/2017

**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

**References** : Not available.

▣ Indicates information that has changed from previously issued version.

### Notice to reader

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