

# SAFETY DATA SHEET

CITGO HyDurance® AW Synthetic Fluid 46



## Section 1. Identification

**GHS product identifier** : CITGO HyDurance® AW Synthetic Fluid 46  
**Synonyms** : Hydraulic Fluid; Synthetic Lubricant  
**Material uses** : Hydraulic  
**Code** : 633602001

**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** : ACUTE TOXICITY (inhalation) - Category 4  
AQUATIC HAZARD (LONG-TERM) - Category 4

### GHS label elements

**Hazard pictograms** :



**Signal word** : Warning

**Hazard statements** : Harmful if inhaled.  
May cause long lasting harmful effects to aquatic life.  
Injection of pressurized hydrocarbons can cause severe permanent tissue damage.  
Initial symptoms may be minor.

### Precautionary statements

**General** : 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.

**Prevention** : Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapor.

**Response** : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

**Storage** : Store in a dry place and/or in closed container. Store in accordance with all local, regional, national and international regulations.

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

**Hazards not otherwise classified** : Injection of petroleum hydrocarbons requires immediate medical attention.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture  
**Other means of identification** : Hydraulic Fluid; Synthetic Lubricant

### CAS number/other identifiers

**CAS number** : Not applicable.

Ingredient name	%	CAS number
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	≥50 - ≤75	68037-01-4
1-Dodecene polymer with 1-decene and 1-octene hydrogenated	≥25 - ≤50	163149-28-8
1-Dodecene, homopolymer, hydrogenated	≥10 - ≤25	151006-63-2

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 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 adverse health effects persist or are severe. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. 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** : Harmful if inhaled.
- Skin contact** : Injection of pressurized hydrocarbons can cause severe permanent tissue damage. Initial symptoms may be minor.
- 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.

## Section 4. First aid measures

**Ingestion** : No specific data.

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

- Notes to physician** : In the event of injection in underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal.
- Specific treatments** : Treat symptomatically and supportively.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that gas or vapor is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

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

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material may cause long lasting harmful effects to aquatic life. 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

**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). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

- 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

1-Dodecene polymer with 1-decene and 1-octene hydrogenated

**ACGIH TLV (United States).**

Inhalable Fraction: 5 mg/m<sup>3</sup> Form: Aerosol.

- 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.

- 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.

## Section 8. Exposure controls/personal protection

- Eyeface 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** : Light amber
- Odor** : Mild.
- pH** : Not available.
- Boiling point** : Not available.
- Flash point** : Open cup: 244°C (471.2°F) [Cleveland.]
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : <0.013 kPa (<0.1 mm Hg) [room temperature]
- Vapor density** : Not available.
- Relative density** : 0.85
- Density lbs/gal** : Estimated 7.09 lbs/gal
- Density gm/cm<sup>3</sup>** : Not available.
- Gravity, °API** : Estimated 35 @ 60 F
- Flow time (ISO 2431)** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): 0.46 cm<sup>2</sup>/s (46 cSt)
- Viscosity SUS** : Estimated 213 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	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat - Male, Female	1.17 mg/l	4 hours
1-Dodecene polymer with 1-decene and 1-octene hydrogenated	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-
1-Dodecene, homopolymer, hydrogenated	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-

- Conclusion/Summary** : **Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated**: Practically non-irritating to eyes. Practically non-irritating to the skin.  
**1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich**: Practically non-toxic by inhalation (LC<sub>50</sub> >5mg/L) based on testing of similar products in rats.  
**1-Dodecene, homopolymer, hydrogenated**: Practically non-irritating to eyes. Practically non-irritating to the skin.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
1-Dodecene polymer with 1-decene and 1-octene hydrogenated	Skin - Edema	Rabbit	0.7	4 hours 0.5ml	7 days
	Eyes - Redness of the conjunctivae	Rabbit	1	24 hours 0.5 ml	72 hours

- Skin** : **1-Dodecene polymer with 1-decene and 1-octene hydrogenated**: This product can cause mild skin irritation and inflammation.
- Eyes** : **1-Dodecene polymer with 1-decene and 1-octene hydrogenated**: Practically non-irritating to eyes.  
**1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich**: Practically non-irritating to eyes.
- Respiratory** : No additional information.

#### Sensitization



## Section 11. Toxicological information

Product/ingredient name	Route of exposure	Species	Result
1-Dodecene polymer with 1-decene and 1-octene hydrogenated	skin	Guinea pig	Not sensitizing

**Skin** : **1-Dodecene polymer with 1-decene and 1-octene hydrogenated**: Non-sensitizer to skin.

**Respiratory** : No additional information.

### Mutagenicity

Product/ingredient name	Test	Experiment	Result
1-Dodecene polymer with 1-decene and 1-octene hydrogenated	EU	Experiment: In vitro Subject: Bacteria Metabolic activation: with and without	Negative
	EU	Experiment: In vivo Subject: Mammalian-Animal	Negative

**Conclusion/Summary** : **1-Dodecene polymer with 1-decene and 1-octene hydrogenated**: No mutagenic effect.

### Carcinogenicity

Not available.

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

### Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
1-Dodecene polymer with 1-decene and 1-octene hydrogenated	Negative	Negative	Negative	Rat - Male, Female	Oral: 1000 mg/ kg	-

**Conclusion/Summary** : **1-Dodecene polymer with 1-decene and 1-octene hydrogenated**: No known significant effects or critical hazards.  
**1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich**: A 2-generation reproductive toxicity study conducted on this material did not identify any effects on reproductive parameters. However, the study did identify a small increase in early offspring mortality at the high oral dose level. Based on studies with laboratory animals, oral maternal exposure to this component can result in developmental toxicity to the conceptus. The NOAELs established from these studies were 38 to 44 mg/kg-bw/day during pregnancy and 52 to 114 mg/kg-bw/day during lactation.

### Teratogenicity

Not available.

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

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

## Section 11. Toxicological information

- Inhalation** : Harmful if inhaled.
- Skin contact** : Injection of pressurized hydrocarbons can cause severe permanent tissue damage. Initial symptoms may be minor.
- 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

Product/ingredient name	Result	Species	Exposure
1-Dodecene polymer with 1-decene and 1-octene hydrogenated	Acute EC50 1000 mg/l Fresh water	Crustaceans - Daphnia magna	48 hours
	Acute LC50 >1000 mg/l Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEL 125 mg/l Fresh water	Crustaceans - Daphnia magna	21 days

**Conclusion/Summary** : **1-Dodecene polymer with 1-decene and 1-octene hydrogenated**: No known significant effects or critical hazards.

### Persistence and degradability

**Conclusion/Summary** : Not available.

### Bioaccumulative potential



## Section 12. Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	>6.5	-	high
1-Dodecene, homopolymer, hydrogenated	>6.5	-	high

### Mobility in soil

**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

	DOT Classification	IMDG	IATA
<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.

**Oil:** The product(s) represented by this SDS is (are) regulated as “oil” under 49 CFR Part 130. Shipments by rail or highway in packaging having a capacity of 3500 gallons or more or in a quantity greater 42,000 gallons are subject to these requirements. In addition, mixtures containing 10% or more of this product may be subject to these requirements.

**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.  
**Clean Water Act (CWA) 307**: ethylbenzene  
**Clean Water Act (CWA) 311**: ethylbenzene; xylene

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** : ACUTE TOXICITY (inhalation) - Category 4

#### Composition/information on ingredients

Name	%	Classification
1-Dodecene polymer with 1-decene and 1-octene hydrogenated	≥25 - ≤50	ACUTE TOXICITY (inhalation) - Category 4

### State regulations

**Massachusetts** : None of the components are listed.

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

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

**Pennsylvania** : The following components are listed: 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich

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

**⚠ WARNING:** This product can expose you to chemicals including Ethylbenzene, which is known to the State of California to cause cancer, and Di-isodecyl phthalate, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Ingredient name	%	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich ethylbenzene	<20	No.	Yes.	-	Yes.
	<0.001	Yes.	No.	Yes.	-

### International regulations

#### Inventory list

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

**Australia** : Not determined.

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

**China** : Not determined.

**Europe** : At least one component is not listed in EINECS but all such components are listed in ELINCS.  
Please contact your supplier for information on the inventory status of this material.

## Section 15. Regulatory information

<b>Japan</b>	: Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined.
<b>Malaysia</b>	: Not determined.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: Not determined.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>Viet Nam</b>	: Not determined.

## Section 16. Other information

### 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
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 4	Calculation method

### History

<b>Date of printing</b>	: 12/12/2018
<b>Date of issue/Date of revision</b>	: 12/12/2018
<b>Date of previous issue</b>	: 12/12/2018
<b>Version</b>	: 5

### 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

## Section 16. Other information

THE INFORMATION IN THIS SAFETY DATA SHEET (SDS) WAS OBTAINED FROM SOURCES WHICH WE BELIEVE ARE RELIABLE. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESSED OR IMPLIED REGARDING ITS CORRECTNESS OR ACCURACY. SOME INFORMATION PRESENTED AND CONCLUSIONS DRAWN HEREIN ARE FROM SOURCES OTHER THAN DIRECT TEST DATA ON THE SUBSTANCE ITSELF. THIS SDS WAS PREPARED AND IS TO BE USED ONLY FOR THIS PRODUCT. IF THE PRODUCT IS USED AS A COMPONENT IN ANOTHER PRODUCT, THIS SDS INFORMATION MAY NOT BE APPLICABLE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION OR PRODUCTS FOR THEIR PARTICULAR PURPOSE OR APPLICATION.

THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE, AND/OR DISPOSAL OF THE PRODUCT ARE BEYOND OUR CONTROL AND MAY BE BEYOND OUR KNOWLEDGE. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR ANY LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.

CITGO is a registered trademark of CITGO Petroleum Corporation