

# SAFETY DATA SHEET



## Section 1. Identification

**GHS product identifier** : CITGO CITGARD® 1000 Full Synthetic Heavy Duty Engine Oil, SAE 5W-40  
**Synonyms** : Heavy duty motor oil  
**Material uses** : Heavy Duty Engine Oil  
**Code** : 622677001

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

Not applicable.

**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** : 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

**General** : Keep out of reach of children.

**Prevention** : Do not get in eyes, on skin, or on clothing.

**Response** : Wash with plenty of soap and water or use a recognized skin cleanser.

**Storage** : Store in accordance with all local, regional, national and international regulations. Store in a dry place and a closed container. Empty containers may contain material residues which can ignite with explosive force. Misuse of empty containers can be dangerous if used to store toxic, flammable, or reactive materials. Cutting or welding of empty containers can cause fire, explosion, or release of toxic fumes from residues. Do not pressurize or expose empty containers to open flame, sparks, or heat. Keep container closed and drum bungs in place. All label warnings and precautions must be observed. Return empty drums to a qualified reconditioner. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling, or disposing of empty containers and/or waste residues of this material.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations. Don't Pollute. Conserve Resources. Return used oil to collection centers.

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

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture  
**Other means of identification** : Heavy duty motor oil

### CAS number/other identifiers

**CAS number** : Not applicable.

Ingredient name	%	CAS number
Distillates (petroleum), hydrotreated heavy paraffinic	≥50 - ≤75	64742-54-7
1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	≤5	68649-12-7
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	≤5	163149-28-8
1-Dodecene, polymer with 1-decene, hydrogenated	≤5	151006-60-9
Dec-1-ene, homopolymer, hydrogenated	≤5	68037-01-4
Distillates (petroleum), solvent-dewaxed light paraffinic	≤3	64742-56-9
Distillates (petroleum), solvent-dewaxed heavy paraffinic	≤3	64742-65-0
Paraffin oils (petroleum), catalytic dewaxed heavy	≤3	64742-70-7
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)	≤3	9003-29-6
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate	≤3	125643-61-0
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts	<2.5	113706-15-3

\* = 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 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** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

**Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion** : Wash out mouth with water. 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. 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 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

## 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.

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.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
sulfur oxides  
phosphorus oxides  
metal oxide/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. 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. 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. 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. 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).
- 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), hydrotreated heavy paraffinic

**OSHA PEL (United States, 5/2018). [Oil mist, mineral]**

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

**ACGIH TLV (United States, 1/2023).**

**[Mineral Oil, pure, highly and severely refined]**

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

**NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]**

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).**

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

**ACGIH TLV (United States).**

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

**ACGIH TLV (United States, 1/2023).**

**[Mineral Oil, pure, highly and severely refined]**

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

**OSHA PEL (United States, 5/2018). [Oil mist, mineral]**

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

**NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]**

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

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

**OSHA PEL (United States, 5/2018). [Oil mist, mineral]**

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

**ACGIH TLV (United States, 1/2023).**

**[Mineral Oil, pure, highly and severely refined]**

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

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

1-Dodecene, polymer with 1-decene, hydrogenated

Distillates (petroleum), solvent-dewaxed light paraffinic

Distillates (petroleum), solvent-dewaxed heavy paraffinic

## Section 8. Exposure controls/personal protection

Paraffin oils (petroleum), catalytic dewaxed heavy

**NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]**

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, 1/2023).**

**[Mineral Oil, pure, highly and severely refined]**

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

**NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]**

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

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

**OSHA PEL (United States, 5/2018). [Oil mist, mineral]**

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

### 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

- : 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.

##### 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

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

### Appearance

<b>Physical state</b>	: Liquid.
<b>Color</b>	: Amber.
<b>Odor</b>	: Mild petroleum odor
<b>pH</b>	: Not available.
<b>Boiling point, initial boiling point, and boiling range</b>	: Not available.
<b>Flash point</b>	: Open cup: 234°C (453.2°F) [Cleveland]
<b>Lower and upper explosive (flammable) limits</b>	: Not available.
<b>Vapor pressure</b>	: Not available.
<b>Relative vapor density</b>	: Not available.
<b>Relative density</b>	: 0.86
<b>Density lbs/gal</b>	: Estimated 7.17 lbs/gal
<b>Density gm/cm<sup>3</sup></b>	: Not available.
<b>Gravity, °API</b>	: Estimated 33 @ 60 F
<b>Solubility</b>	: Insoluble in the following materials: cold water.
<b>Auto-ignition temperature</b>	: Lowest known value: 215°C (419°F) (Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)).
<b>Viscosity</b>	: Kinematic (40°C (104°F)): 88 mm <sup>2</sup> /s (88 cSt)
<b>Viscosity SUS</b>	: Estimated 408 SUS @104 F
<b>Flow time (ISO 2431)</b>	: Not available.
<b><u>Particle characteristics</u></b>	
<b>Median particle size</b>	: Not applicable.

## 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



## Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), hydrotreated heavy paraffinic	LD50 Dermal	Rat	>5000 mg/kg	-
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat - Male, Female	1.17 mg/l	4 hours
	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
1-Dodecene, polymer with 1-decene, hydrogenated	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5 mg/l	4 hours
	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
Distillates (petroleum), solvent-dewaxed light paraffinic	LD50 Oral	Rat	>5000 mg/kg	-
Distillates (petroleum), solvent-dewaxed heavy paraffinic	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

### Conclusion/Summary

**Distillates (petroleum), hydrotreated heavy 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.

**Distillates (petroleum), solvent-dewaxed 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), solvent-dewaxed heavy 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.

**reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate:** In subchronic studies, certain alkyl phenols have been associated with liver effects (cellular hypertrophy) following oral administration to rats. These liver effects were characterized by necrosis and fibrosis at doses of 250 mg/kg/day or higher. Also, effects on prothrombin index were reported, however this effect is not seen in all studies. Chronic studies did not find carcinogenic effects in rats or mice.

**Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isoocetyl) esters, zinc salts:** This material is an eye irritant.

### Irritation/Corrosion

## Section 11. Toxicological information

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

**Skin** : **1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated:** This product can cause mild skin irritation and inflammation.

**1-Dodecene, polymer with 1-decene, 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-Dodecene, polymer with 1-decene, hydrogenated:** Practically non-irritating to eyes.

**Respiratory** : No additional information.

### Sensitization

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

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

**1-Dodecene, polymer with 1-decene, 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	Negative
	EU	Experiment: In vivo Subject: Mammalian-Animal	Negative
1-Dodecene, polymer with 1-decene, hydrogenated	EU	Experiment: In vitro Subject: Bacteria	Negative
	EU	Experiment: In vivo Subject: Mammalian-Animal	Negative

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

**1-Dodecene, polymer with 1-decene, 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	-
1-Dodecene, polymer with 1-decene, hydrogenated	Negative	Negative	Negative	Rat - Male, Female	Oral: 1000 mg/kg	-



## Section 11. Toxicological information

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

### 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

Name	Result
1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	ASPIRATION HAZARD - Category 1
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	ASPIRATION HAZARD - Category 1
1-Dodecene, polymer with 1-decene, hydrogenated	ASPIRATION HAZARD - Category 1
Dec-1-ene, homopolymer, hydrogenated	ASPIRATION HAZARD - Category 1
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)	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.

## Section 11. Toxicological information

**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

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
CITGO CITGARD® 1000 Full Synthetic Heavy Duty Engine Oil, SAE 5W-40	199043.9	21558.2	N/A	N/A	N/A
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	N/A	2500	N/A	N/A	N/A
1-Dodecene, polymer with 1-decene, hydrogenated	N/A	2500	N/A	N/A	N/A
Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isoctyl) esters, zinc salts	2500	N/A	N/A	N/A	N/A

## 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
1-Dodecene, polymer with 1-decene, hydrogenated	Chronic NOEL 125 mg/l Fresh water	Crustaceans - Daphnia magna	21 days
	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
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)	Chronic NOEL 125 mg/l Fresh water	Crustaceans - Daphnia magna	21 days
	EC50 >1000 mg/l similar material	Daphnia	48 hours
	LC50 >1000 mg/l similar material	Fish	96 hours

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

### Persistence and degradability

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

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Dec-1-ene, homopolymer, hydrogenated	-	-	Readily

### Bioaccumulative potential

## Section 12. Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	5	-	high
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	>6.5	-	high
1-Dodecene, polymer with 1-decene, hydrogenated	>6.5	-	high
Dec-1-ene, homopolymer, hydrogenated	>6.5	-	high
Butene, homopolymer (products derived from either/ or But-1-ene/But-2-ene)	7.6 to 7.8	314 to 1882	high
reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	9.2	260	low

### 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. 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.

## Section 14. Transport information

**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.

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

## Section 15. Regulatory information

**U.S. Federal regulations :** **United States inventory (TSCA 8b):** All components are active or exempted.  
**Clean Water Act (CWA) 307:** Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts; toluene; Nickel; lead powder; Cadmium (Non-pyrophoric); benzene; benzene  
**Clean Water Act (CWA) 311:** fumaric acid; toluene; ethylenediamine; cyclohexane; vinyl acetate; benzene; benzene  
 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

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
ethylenediamine	<0.01	Yes.	10000	1337.1	5000	668.5
vinyl acetate	<0.001	Yes.	1000	129	5000	644.8

**SARA 304 RQ :** 55900273.9 lbs / 25378724.4 kg [7795755.5 gal / 29510144.6 L]

### SARA 311/312

**Classification :** Not applicable.

#### Composition/information on ingredients

Name	%	Classification
1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	≤5	ASPIRATION HAZARD - Category 1
1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	≤5	ASPIRATION HAZARD - Category 1
1-Dodecene, polymer with 1-decene, hydrogenated	≤5	ASPIRATION HAZARD - Category 1
Dec-1-ene, homopolymer, hydrogenated	≤5	ASPIRATION HAZARD - Category 1
Butene, homopolymer (products derived from either/or But-1-ene/ But-2-ene)	≤3	SKIN IRRITATION - Category 2 ASPIRATION HAZARD - Category 1
Phosphorodithioic acid, mixed O, O-bis(sec-Bu and isooctyl) esters, zinc salts	<2.5	SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1

### SARA 313

## Section 15. Regulatory information


	Product name	CAS number	%
Form R - Reporting requirements	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts lead powder	113706-15-3	<2
		7439-92-1	<0.0001
Supplier notification	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts lead powder	113706-15-3	<2
		7439-92-1	<0.0001

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

### State regulations

- Massachusetts** : The following components are listed: OIL MIST, MINERAL; OIL MIST, MINERAL; MINERAL OIL, PETROLEUM DISTILLATES, SOLVENT-DEWAXED LIGHT PARAFFINIC; OIL MIST, MINERAL; MINERAL OIL, PETROLEUM PARAFFIN OILS, CATALYTIC DEWAXED HEAVY
- New York** : The following components are listed: Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)
- New Jersey** : The following components are listed: ZINC compounds
- Pennsylvania** : The following components are listed: Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene); ZINC COMPOUNDS

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

 **WARNING:** This product can expose you to chemicals including Nickel, which is known to the State of California to cause cancer, and Ethylene Glycol, 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
ethanediol	<0.1	No.	Yes.	-	Yes.
toluene	<0.1	No.	Yes.	-	Yes.
Nickel	<0.001	Yes.	No.	-	-
vinyl acetate	<0.001	Yes.	No.	-	-
cobalt	<0.0001	Yes.	No.	-	-
lead powder	<0.0001	Yes.	Yes.	Yes.	Yes.
Cadmium (Non-pyrophoric)	<0.0001	Yes.	Yes.	Yes.	Yes.
benzene	trace	Yes.	Yes.	Yes.	Yes.
benzene	trace	Yes.	Yes.	Yes.	Yes.

### International regulations

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

Not listed.

### Inventory list

- United States** : All components are active or exempted.
- Australia** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Japan** : **Japan inventory (CSCL):** All components are listed or exempted.  
**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** : All components are listed or exempted.

## Section 15. Regulatory information

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

### History

Date of printing	: 9/5/2025
Date of issue/Date of revision	: 9/5/2025
Date of previous issue	: 2/25/2025
Version	: 9.05

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

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



## Section 16. Other information

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