

# SAFETY DATA SHEET



Preferred Synthetic Blend 5W-20

## Section 1. Identification

**GHS product identifier** : Preferred Synthetic Blend 5W-20  
**Product code** : 302228280033  
**Other means of identification** : Not available.  
**Product type** : Liquid.

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

Identified uses	
Lubricating Oil Synthetic	
Uses advised against	Reason
None known.	

**Supplier's details** : Calumet Branded Products, LLC  
2780 Waterfront Pkwy E. Drive Suite 200  
Indianapolis, IN 46214  
USA  
Technical Services:317-328-5660

**Emergency telephone number** : 24 hr. CHEMTREC 1-800-424-9300 / International 1-703-527-3887

## 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

### GHS label elements

**Hazard pictograms** :



**Signal word** : Warning

**Hazard statements** : May cause an allergic skin reaction.

### Precautionary statements

**General** : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

**Prevention** : Wear protective gloves. Avoid breathing vapor.

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

Ingredient name	%	CAS number
Distillates (petroleum), hydrotreated heavy paraffinic	≥90	64742-54-7
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	≤6.8	72623-87-1
Distillates (petroleum), solvent-dewaxed heavy paraffinic	≤4.6	64742-65-0
Distillates (petroleum), solvent-dewaxed light paraffinic	≤4.6	64742-56-9
Distillates (petroleum), hydrotreated light paraffinic	≤3	64742-55-8
zinc O,O',O',O'-tetrakis(1,3-dimethylbutyl) bis(phosphorodithioate)	≤1.4	2215-35-2
dihydro-3-(octadecenyl)furan-2,5-dione	<1	28777-98-2
phenol, (tetrapropenyl) deriva-tives	≤0.1	74499-35-7

The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346

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

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

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

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention 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. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if 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.

## Section 4. First aid measures

- 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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  
**Specific treatments** : No specific treatment.  
**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. 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** : Do not use water jet.

**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. 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".

## Section 6. Accidental release measures

**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. 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. 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.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Distillates (petroleum), hydrotreated heavy paraffinic	<p><b>ACGIH TLV (United States, 1/2023). [Mineral Oil, pure, highly and severely refined]</b> TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction</p> <p><b>OSHA PEL (United States, 5/2018). [Oil mist, mineral]</b> TWA: 5 mg/m<sup>3</sup> 8 hours.</p> <p><b>NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]</b> TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Mist STEL: 10 mg/m<sup>3</sup> 15 minutes. Form: Mist</p>
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	<p><b>NIOSH REL (United States, 10/2020). [OIL MIST MINERAL]</b></p>

## Section 8. Exposure controls/personal protection

Distillates (petroleum), solvent-dewaxed heavy paraffinic

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  
**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  
**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]

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**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  
**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

None.

None.

None.

Distillates (petroleum), solvent-dewaxed light paraffinic

Distillates (petroleum), hydrotreated light paraffinic

zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis(phosphorodithioate)  
 dihydro-3-(octadecenyl)furan-2,5-dione  
 phenol, (tetrapropenyl) deriva-tives

### Biological exposure indices

No exposure indices known.

### 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, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

#### Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. 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.

## Section 8. Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties and safety characteristics

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

### Appearance

- Physical state** : Liquid.
- Color** : Bright Clear. Pale color. Orange.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point, initial boiling point, and boiling range** : Not available.
- Flash point** : Closed cup: 194 to 206°C (381.2 to 402.8°F) [Pensky-Martens]
- Evaporation rate** : Not available.
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Distillates (petroleum), hydrotreated heavy paraffinic	<0.07501	<0.01	ASTM D 5191			

- Relative vapor density** : Not available.
- Relative density** : 0.856
- Solubility(ies)** :
- | Media      | Result      |
|------------|-------------|
| cold water | Not soluble |
| hot water  | Not soluble |
- Solubility in water** : Not available.

## Section 9. Physical and chemical properties and safety characteristics

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

<b>Auto-ignition temperature</b>	<b>Ingredient name</b>	<b>°C</b>	<b>°F</b>	<b>Method</b>
	zinc bis(O,O-diisooctyl) bis (dithiophosphate)	198	388.4	

**Decomposition temperature** : Not available.

**Viscosity** : Kinematic (40°C (104°F)): 45 to 46.2 mm<sup>2</sup>/s (45 to 46.2 cSt)

**Flow time (ISO 2431)** : Not available.

**Pour point** : -45°C (-49°F)

### Particle characteristics

**Median particle size** : Not applicable.

## Section 10. Stability and reactivity

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

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

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

**Conditions to avoid** : No specific data.

**Incompatible materials** : 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
Distillates (petroleum), hydrotreated heavy paraffinic	LC50 Inhalation Dusts and mists	Rat	5.7 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	LC50 Inhalation Dusts and mists	Rat	2.18 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Distillates (petroleum), solvent-dewaxed heavy paraffinic	LC50 Inhalation Dusts and mists	Rat	>5.53 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Distillates (petroleum), solvent-dewaxed light paraffinic	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Distillates (petroleum), hydrotreated light paraffinic	LC50 Inhalation Dusts and mists	Rat	>5.53 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
zinc O,O,O',O'-tetrakis	LC50 Inhalation Dusts and mists	Rat	>2 mg/l	1 hours

## Section 11. Toxicological information

(1,3-dimethylbutyl) bis (phosphorodithioate)	LD50 Dermal	Rabbit	>3160 mg/kg	-
	LD50 Oral	Rat	2600 mg/kg	-
dihydro-3-(octadecenyl)furan- 2,5-dione	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
zinc O,O,O',O'-tetrakis (1,3-dimethylbutyl) bis (phosphorodithioate)	Eyes - Moderate irritant	Rat	-	-	-
	Skin - Moderate irritant	Rat	-	-	-
dihydro-3-(octadecenyl)furan- 2,5-dione	Skin - Irritant	Rabbit	-	4 hours	-

### Sensitization

Product/ingredient name	Route of exposure	Species	Result
zinc O,O,O',O'-tetrakis (1,3-dimethylbutyl) bis (phosphorodithioate)	skin	Guinea pig	Not sensitizing
dihydro-3-(octadecenyl)furan- 2,5-dione	skin	Guinea pig	Sensitizing

### Mutagenicity

Product/ingredient name	Test	Experiment	Result
zinc O,O,O',O'-tetrakis (1,3-dimethylbutyl) bis (phosphorodithioate)	OECD 471 Bacterial Reverse Mutation Test	Subject: Bacteria	Negative

### Carcinogenicity

Not available.

### Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
zinc O,O,O',O'-tetrakis (1,3-dimethylbutyl) bis (phosphorodithioate)	-	-	-	Rat - Male, Female	Oral: 160 mg/kg	-

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Name	Result
Distillates (petroleum), solvent-dewaxed light paraffinic	ASPIRATION HAZARD - Category 1
Distillates (petroleum), hydrotreated light paraffinic	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

### Potential acute health effects

## Section 11. Toxicological information

- 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.

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

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

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

#### Short term exposure

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

#### Long term exposure

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

#### Potential chronic health effects

Not available.

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Reproductive toxicity** : 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)
Bel-Ray BRX Synthetic Blend 5W-20	274092.4	2663.3	N/A	N/A	N/A
Distillates (petroleum), hydrotreated heavy paraffinic	N/A	2500	N/A	N/A	5.7
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	N/A	2500	N/A	N/A	N/A
Distillates (petroleum), solvent-dewaxed heavy paraffinic	N/A	2500	N/A	N/A	N/A
Distillates (petroleum), solvent-dewaxed light paraffinic	N/A	2500	N/A	N/A	N/A
Distillates (petroleum), hydrotreated light paraffinic	N/A	2500	N/A	N/A	N/A
zinc O,O',O',O'-tetrakis(1,3-dimethylbutyl) bis (phosphorodithioate)	2600	2500	N/A	N/A	N/A
dihydro-3-(octadecenyl)furan-2,5-dione	2500	2500	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Distillates (petroleum), hydrotreated heavy paraffinic	Acute EC50 >100 mg/l	Daphnia	48 hours
	Acute IC50 >100 mg/l	Algae	72 hours
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	Acute LC50 >100 mg/l	Fish	96 hours
	Acute EC50 >100 mg/l	Algae	72 hours
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Acute EC50 >100 mg/l	Crustaceans	48 hours
	Acute LC50 >100 mg/l	Fish	96 hours
	Acute EC50 >100 mg/l	Algae	72 hours
Distillates (petroleum), solvent-dewaxed light paraffinic	Acute EC50 >100 mg/l	Daphnia	48 hours
	Acute LC50 >100 mg/l	Fish	96 hours
	Chronic NOEL >1 mg/l	Daphnia	21 days
	Acute LC50 4.5 mg/l	Fish	96 hours
Distillates (petroleum), hydrotreated light paraffinic	Acute EC50 >100 mg/l	Algae	72 hours
	Acute EC50 >100 mg/l	Daphnia	48 hours
zinc O,O',O',O'-tetrakis (1,3-dimethylbutyl) bis (phosphorodithioate)	Acute LC50 >100 mg/l	Fish	96 hours
	EC50 >100 mg/l	Aquatic plants	3 days
	EC50 23 mg/l	Daphnia	2 days
dihydro-3-(octadecenyl)furan-2,5-dione	LC50 4.5 mg/l	Fish	4 days
	NOEC 0.4 mg/l	Daphnia	21 days
	NOEC 1.8 mg/l	Fish	4 days
	Acute LC50 >10 mg/l	Fish	96 hours

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
zinc O,O',O',O'-tetrakis (1,3-dimethylbutyl) bis (phosphorodithioate)	OECD 301B Ready Biodegradability - CO <sub>2</sub> Evolution Test	1.5 % - 28 days	-	-
	OECD 301B Ready Biodegradability - CO <sub>2</sub> Evolution Test	1.5 % - Not readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Distillates (petroleum), hydrotreated heavy paraffinic	-	-	Not readily
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	-	-	Inherent
Distillates (petroleum), hydrotreated light paraffinic	-	-	Inherent
zinc O,O',O',O'-tetrakis (1,3-dimethylbutyl) bis (phosphorodithioate)	-	-	Not readily

## Section 12. Ecological information

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Distillates (petroleum), hydrotreated heavy paraffinic	>6	-	High
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	>6	-	High
Distillates (petroleum), solvent-dewaxed heavy paraffinic	2 to 6	-	High
Distillates (petroleum), hydrotreated light paraffinic	>6	-	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.

**RCRA classification** : Not Regulated

## Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
<b>UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.

**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** : **TSCA 4(a) proposed test rules:** dihydro-3-(octadecenyl)furan-2,5-dione  
**TSCA 8(a) PAIR:** Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts; diphenylamine; phenol, (tetrapropenyl) derivatives  
**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**Clean Water Act (CWA) 307:** zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis (phosphorodithioate); Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts; zinc bis(O,O-diisooctyl) bis(dithiophosphate)

## Section 15. Regulatory information

**Clean Air Act Section 112** : Not listed

**(b) Hazardous Air Pollutants (HAPs)**

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

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

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

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

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : SKIN SENSITIZATION - Category 1

#### Composition/information on ingredients

Name	%	Classification
Distillates (petroleum), solvent-dewaxed light paraffinic	≤4.6	ASPIRATION HAZARD - Category 1
Distillates (petroleum), hydrotreated light paraffinic	≤3	ASPIRATION HAZARD - Category 1
zinc O,O,O',O'-tetrakis (1,3-dimethylbutyl) bis (phosphorodithioate)	≤1.4	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A
dihydro-3-(octadecenyl)furan-2,5-dione	<1	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis (phosphorodithioate)	2215-35-2	≤1.4
<b>Supplier notification</b>	zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis (phosphorodithioate)	2215-35-2	≤1.4

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

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

**New Jersey** : The following components are listed: ZINC compounds

**Pennsylvania** : The following components are listed: ZINC COMPOUNDS

### California Prop. 65

This product is not known to contain California Prop 65 substances ≥1 ppm

### International lists

#### National inventory

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

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

**China** : Not determined.

**Eurasian Economic Union** : **Russian Federation inventory:** Not determined.

## Section 15. Regulatory information

<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: 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

### History

<b>Date of issue/Date of revision</b>	: 03/04/2024
<b>Date of previous issue</b>	: No previous validation
<b>Version</b>	: 1

### Key to abbreviations

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

▣ Indicates information that has changed from previously issued version.

### Notice to reader

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

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