

### Section 1. Identification

**GHS product identifier** : COPAL OGL 0

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

**Identified uses**

Lubricating grease

**Supplier's details** : TotalEnergies Marketing USA, Inc.  
1201 Louisiana St. Suite 1800  
Houston, TX 77002  
Phone: 713-483-5000  
ProductSafety@totalenergies.com

**Emergency telephone number (with hours of operation)** :  
1-866-928-0789 (For Emergencies, call CARECHEM 24/7 Domestic)  
1-215-207-0061 (For Emergencies, call CARECHEM 24/7 International)

### 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** : SERIOUS EYE DAMAGE - Category 1  
RESPIRATORY SENSITIZATION - Category 1  
SKIN SENSITIZATION - Category 1  
TOXIC TO REPRODUCTION - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

GHS label elements

**Hazard pictograms**



**Signal word** : Danger

**Hazard statements** : May cause an allergic skin reaction.  
Causes serious eye damage.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Suspected of damaging fertility or the unborn child.  
Causes damage to organs through prolonged or repeated exposure. (lungs)

Precautionary statements

**Prevention** : Obtain special instructions before use. Wear protective gloves, protective clothing and eye or face protection. Wear respiratory protection. Do not breathe dust. Do not eat, drink or smoke when using this product.

- Response** : IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
- Storage** : Not applicable.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : Avoid contact with skin and clothing. Wash thoroughly after handling.
- Hazards not otherwise classified** : Prolonged or repeated contact may dry skin and cause irritation.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	% (w/w)	CAS number
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	≤3	68442-22-8
benzoic acid	≤3	65-85-0
Naphthenic acids, zinc salts, basic	≤1	84418-50-8
methyl-1H-benzotriazole	≤0.3	29385-43-1

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

**Additional information** : Mineral oil of petroleum origin Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

**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** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. 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. 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. In the event of any complaints or symptoms, avoid further exposure.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash skin thoroughly with soap and water or use recognized skin cleanser. 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. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. 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** : Causes serious eye damage.

**Inhalation** : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin contact** : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.

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

### Over-exposure signs/symptoms

**Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
wheezing and breathing difficulties  
asthma  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
dryness  
cracking  
blistering may occur  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
stomach pains  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

## 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. If it is suspected that fumes are 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. 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 dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : No specific fire or explosion hazard.

**Hazardous thermal decomposition products** : Carbon monoxide  
carbon dioxide  
phosphorus oxides  
Zinc oxides  
sulfur oxides  
Hydrogen sulfide  
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. 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).

### Methods and materials for containment and cleaning up

**Small spill** : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. 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). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. 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. Store locked up. 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
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	None.
benzoic acid	None.
Naphthenic acids, zinc salts, basic	None.
methyl-1H-benzotriazole	None.

**Advisory OEL** : Mineral oil mist: USA: OSHA (PEL) TWA 5 mg/m<sup>3</sup>, NIOSH (REL) TWA 5 mg/m<sup>3</sup>, STEL 10 mg/m<sup>3</sup>, ACGIH (TLV) TWA 5 mg/m<sup>3</sup> (highly refined)

**Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, 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, 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.
- 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: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- 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.  
Hydrocarbon-proof gloves  
Fluorinated rubber  
nitrile rubber  
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
- 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** : Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces. In case of inadequate ventilation wear respiratory protection: Type A/P2 Warning ! filters have a limited use duration. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.

## Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature (20°C / 68°F) and pressure (1013 hPa) unless otherwise indicated

### Appearance

- Physical state** : Solid.
- Color** : Black. to Dark grey.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point** : Not available.
- Flash point** : Open cup: Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.



**TotalEnergies**

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**Lower and upper explosive (flammable) limits** : Not applicable.  
**Vapor pressure** : Not available.  
**Vapor density** : Not applicable.  
**Relative density** : 0.97  
**Density** : 0.97 g/cm<sup>3</sup>  
**Solubility** : Insoluble in the following materials: cold water and hot water.  
**Miscible with water** : No.

**Partition coefficient: n-octanol/water** : Not applicable.  
**Auto-ignition temperature** : Not applicable.  
**Decomposition temperature** : Not available.  
**Viscosity** : Kinematic (40°C (104°F)): Not applicable.  
**Flow time (ISO 2431)** : Not available.  
**Particle characteristics**  
**Median particle size** : Not available.

## Section 10. Stability and reactivity

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

**Chemical stability** : Stable under recommended storage and handling conditions (see Section 7).

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

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

**Incompatible materials** : Strong oxidizing agents

**Hazardous decomposition products** : Carbon monoxide  
carbon dioxide  
phosphorus oxides  
Zinc oxides  
sulfur oxides  
Hydrogen sulfide  
metal oxide/oxides

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity



Product/substance	Result	Species	Dose	Exposure	Test
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	LD50 Dermal	Rabbit	>2000 mg/kg	-	OECD 402
	LD50 Oral	Rat	>2000 mg/kg	-	Acute Dermal Toxicity EPA
benzoic acid	LC50 Inhalation Dusts and mists	Rat	12.3 mg/l	4 hours	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-	-
Naphthenic acids, zinc salts, basic	LD50 Oral	Rat	2360 mg/kg	-	-
	LC50 Inhalation Dusts and mists	Rat	>0.46 mg/l	4 hours	OECD 403
	LD50 Dermal	Rabbit	>2000 mg/kg	-	Acute Inhalation Toxicity OECD 402
methyl-1H-benzotriazole	LD50 Oral	Rat	>2000 mg/kg	-	Acute Dermal Toxicity OECD 423
	LD50 Dermal	Rabbit - Male, Female	>2000 mg/kg	-	Acute Oral toxicity - Acute Toxic Class Method OECD 402
	LD50 Oral	Rat	720 mg/kg	-	OECD 401

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**Irritation/Corrosion**

Product/substance	Result	Species	Score	Exposure	Test
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	Skin - Irritant	Rabbit	-	-	OECD 404
	Eyes - Severe irritant	Rabbit	-	-	Acute Dermal Irritation/Corrosion

**Skin** : Based on available data, the classification criteria are not met.

**Eyes** : Based on available data, the classification criteria are met.

**Respiratory** : Based on available data, the classification criteria are not met.

**Sensitization**

Product/substance	Route of exposure	Species	Result
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	skin	Guinea pig	Not sensitizing
Naphthenic acids, zinc salts, basic	skin	Guinea pig	Sensitizing

**Skin** : Based on available data, the classification criteria are met.

**Respiratory** : Based on available data, the classification criteria are met.

**Mutagenicity**





Product/substance	Test	Experiment	Result
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria Cell: Somatic	Negative
	OECD 476 <i>In vitro</i> Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Negative
	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 476	Experiment: In vitro Subject: Mammalian-Animal	Negative
methyl-1H-benzotriazole			

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**Carcinogenicity**

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**Reproductive toxicity**

Product/substance	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	Negative	Negative	Negative	Rat	Oral: 160 mg/kg NOAEL	-

**Conclusion/Summary** : Based on available data, the classification criteria are met.

**Teratogenicity**

Product/substance	Result	Species	Dose	Exposure
methyl-1H-benzotriazole	Positive - Oral	Rat	-	-

**Conclusion/Summary** : Based on available data, the classification criteria are met.

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Name	Category	Route of exposure	Target organs
benzoic acid	Category 1	inhalation	lungs

**Aspiration hazard**

Not available.

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

**Potential acute health effects**

- Eye contact** : Causes serious eye damage.
- Inhalation** : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation. 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** : Adverse symptoms may include the following:  
pain  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
wheezing and breathing difficulties  
asthma  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
dryness  
cracking  
blistering may occur  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
stomach pains  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**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**

Product/substance	Result	Species	Dose	Exposure
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts methyl-1H-benzotriazole	Sub-acute NOAEL Oral	Rat	160 mg/kg	-
	Sub-acute NOAEL Oral	Rat - Male, Female	150 mg/kg	-

**General** : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. 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** : Suspected of damaging fertility or the unborn child.

**Numerical measures of toxicity**

**Acute toxicity estimates**



**TotalEnergies**

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Product/substance	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
COPAL OGL 0	53973	74490	N/A	N/A	N/A
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	2500	2500	N/A	N/A	N/A
benzoic acid	2360	N/A	N/A	N/A	12.3
Naphthenic acids, zinc salts, basic	2500	2500	N/A	N/A	N/A
methyl-1H-benzotriazole	720	2500	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

Product/substance	Result	Species	Exposure	Test
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	Acute EC50 24 mg/l	Algae - Scenedesmus subspicatus	72 hours	OECD 201
benzoic acid	Acute EC50 23 mg/l	Daphnia - Daphnia Magna	48 hours	OECD 202
	Acute LC50 4.5 mg/l	Fish	96 hours	-
	Acute NOEC 0.4 mg/l	Daphnia - Daphnia Magna	21 days	-
	Acute EC50 33.1 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	-
methyl-1H-benzotriazole	Acute EC50 140 µg/l	Algae - Chlorella vulgaris - Exponential growth phase	72 hours	OECD
	Acute EC50 100 mg/l	Daphnia - Daphnia magna	48 hours	-
	Acute LC50 44.6 mg/l	Fish	96 hours	-
	Chronic NOEC 25 mg/l	Daphnia - Daphnia magna	21 days	-
	Chronic NOEC 120 mg/l	Fish - Oncorhynchus mykiss	28 days	-
	Acute EC50 75 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours	OECD 201
methyl-1H-benzotriazole	Acute EC50 8.58 mg/l	Crustaceans - Daphnia galatea	48 hours	OECD 202
	Acute LC50 55 mg/l	Fish - Cyprinodon variegatus	96 hours	OECD 203
	Acute LC50 38 mg/l Fresh water	Fish - Pimephales promelas	96 hours	-
	Chronic EC50 2.86 mg/l	Algae - Desmodesmus subspicatus	72 hours	OECD 201
	Chronic NOEC 0.4 mg/l	Crustaceans - Daphnia galatea	21 days	OECD 211

### Persistence and degradability

Product/substance	Test	Result	Dose	Inoculum
methyl-1H-benzotriazole	OECD 301D	4 % - Not readily - 28 days	-	Activated sludge



Product/substance	Aquatic half-life	Photolysis	Biodegradability
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	-	-	Not readily
benzoic acid	-	-	Readily
Naphthenic acids, zinc salts, basic	-	-	Inherent
methyl-1H-benzotriazole	-	-	Not readily

**Bioaccumulative potential**

Product/substance	LogK <sub>ow</sub>	BCF	Potential
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	1.67	-	low
benzoic acid	1.88	-	low
Naphthenic acids, zinc salts, basic	-	60960	high
methyl-1H-benzotriazole	1.1	-	low

**Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility in soil** : Given its physical and chemical characteristics, the product has no soil mobility. The product is insoluble and floats on water. Loss by evaporation is limited.

**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	ICAO/IATA
<b>UN/ID No</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.

Additional information

**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:** methyl-1H-benzotriazole
- TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
- Clean Water Act (CWA) 307:** Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts; Naphthenic acids, zinc salts; Naphthenic acids, zinc salts, basic
- Clean Water Act (CWA) 311:** benzoic acid

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**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** :

- SERIOUS EYE DAMAGE - Category 1
- RESPIRATORY SENSITIZATION - Category 1
- SKIN SENSITIZATION - Category 1
- TOXIC TO REPRODUCTION - Category 2
- SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
- HNOC - Defatting irritant

Composition/information on ingredients

Name	%	Classification
Phosphorodithioic acid, mixed O, O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	≤3	SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1
benzoic acid	≤3	COMBUSTIBLE DUSTS SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
Naphthenic acids, zinc salts, basic	≤1	RESPIRATORY SENSITIZATION - Category 1 SKIN SENSITIZATION - Category 1
methyl-1H-benzotriazole	≤0.3	ACUTE TOXICITY (oral) - Category 4 TOXIC TO REPRODUCTION - Category 2

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	Phosphorodithioic acid, mixed O,O-bis (2-ethylhexyl and iso-Bu) esters, zinc salts	68442-22-8	≤3
<b>Supplier notification</b>	Phosphorodithioic acid, mixed O,O-bis (2-ethylhexyl and iso-Bu) esters, zinc salts	68442-22-8	≤3

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; GRAPHITE (NATURAL)DUST; GRAPHITE, SYNTHETIC; OIL MIST, MINERAL; OIL MIST, MINERAL; BENZOIC ACID; MOLYBDENUM DISULFIDE

#### New York

: The following components are listed: Benzoic acid

#### New Jersey

: The following components are listed: GRAPHITE (NATURAL); GRAPHITE; ZINC compounds; MINERAL OIL (UNTREATED and MILDLY TREATED); MINERAL OIL (UNTREATED and MILDLY TREATED); BENZOIC ACID

#### Pennsylvania

: The following components are listed: GRAPHITE; GRAPHITE (SYNTHETIC); ZINC COMPOUNDS; BENZOIC ACID

### California Prop. 65

To the best of our knowledge, this product does not contain any substances known to the State of California to cause cancer, developmental and/or reproductive harm

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

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

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

#### Australia inventory (AIIC)

: All components are listed or exempted.

<b>Canada inventory (DSL/NDSL)</b>	: All components are listed or exempted.
<b>China inventory (IECSC)</b>	: All components are listed or exempted.
<b>Europe inventory (EINECS/ELINCS/NLP)</b>	: All components are listed or exempted.
<b>Japan inventory</b>	: <b>Japan inventory (CSCL)</b> : All components are listed or exempted. : <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand Inventory of Chemicals (NZIoC)</b>	: At least one component is not listed.
<b>Philippines inventory (PICCS)</b>	: All components are listed or exempted.
<b>Korea inventory (KECI)</b>	: All components are listed or exempted.
<b>Taiwan Chemical Substances Inventory (TCSI)</b>	: All components are listed or exempted.
<b>Thailand inventory</b>	: Not determined.
<b>Turkey inventory</b>	: Not determined.
<b>United States inventory (TSCA 8b)</b>	: All components are listed or exempted.
<b>Vietnam inventory</b>	: Not determined.

The information stated in this section relates solely to the conformity of the chemical product with the countries Inventories. The information used to confirm the inventory status of this product may be based on additional data to the chemical composition shown in Section 3. Other regulations may apply for importation or marketing authorizations.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	*	3
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### 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
SERIOUS EYE DAMAGE - Category 1	Calculation method
RESPIRATORY SENSITIZATION - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	Calculation method

**History**

- Date of revision** : 2022/04/28
- Date of previous revision** : No previous validation
- Version** : 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

**References**

- : Not available.

📌 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.