



# ZF LifeguardFluid 7.7 DCT

**Version number:** 1  
**Issued:** 2026-01-22

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Trade name**

ZF LifeguardFluid 7.7 DCT

**Article No.**

AA02.914.175

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

**Product type**

Mixture.

**Relevant identified uses**

Gear oil.

**Not suitable for use in**

No uses advised against identified.

### 1.3. Details of the supplier of the safety data sheet

**SDS created by**

Global Division B Product Compliance Mgmt. System (BWC)

**Supplier**

ZF Aftermarket

Address

ZF Friedrichshafen AG

Obere Weiden 12

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Global Division B Product Compliance Mgmt. System (BWC)



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**Email**

msds.zf-aftermarket@zf.com

**1.4. Emergency telephone number**

+49 (0)89 19240 Information in German and English

**Available outside office hours**

Yes

## SECTION 2: Hazards identification

**2.1. Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008

**Classification**

Hazardous to the aquatic environment — Chronic hazard category 2

**Hazard statements**

H411

**Description**

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

**2.2. Label elements**

Labelling according to Regulation (EC) No 1272/2008

**Hazard pictograms**



**Hazard statements**

H411 Toxic to aquatic life with long lasting effects.

**Supplemental hazard statements**

EUH208 Contains 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl.. May produce an allergic reaction.



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### **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P103 Read carefully and follow all instructions.  
P273 Avoid release to the environment.  
P391 Collect spillage.  
P501 Dispose of contents/container to be accordance with all local, regional, national and international regulations..

### **More information**

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles: None.

### **2.3. Other hazards**

This substance/mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

Note: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

## **SECTION 3: Composition/information on ingredients**

### **3.2. Mixtures**

| Chemical name                                                    | CAS No.<br>EC No.<br>REACH No.<br>Index No.           | Concentration | Classification                                      | H-phrases<br>M factor<br>acute<br>M factor<br>chronic | Specific concentration limits<br>ATE                 | Note                                  |
|------------------------------------------------------------------|-------------------------------------------------------|---------------|-----------------------------------------------------|-------------------------------------------------------|------------------------------------------------------|---------------------------------------|
| Dec-1-ene, homopolymer, hydrogenated                             | 68037-01-4<br>500-183-1<br>01-2119486452-34-XXXX<br>- | ≥50 - ≤75%    | Asp. Tox. 1                                         | H304<br>-<br>-                                        |                                                      | kinematic viscosity < 20.5 cSt 40 °C. |
| olefin sulphide                                                  | 68937-96-2<br>273-103-3<br>01-2119540515-43<br>-      | 0 - ≤5%       | Skin Sens. 1B,<br>Aquatic Chronic 3                 | H317, H412<br>-<br>-                                  | Skin Sens. 1B, H317: C ≥ 46%                         | -                                     |
| Reaction products of 4-methyl-2-pentanol and diphosphorus penta- | -<br>931-384-6<br>01-2119493620-                      | 0 - ≤3%       | Acute Tox. 4 -<br>oral, Skin Sens. 1, Eye Irrit. 2, | H302, H317,<br>H319, H411<br>-                        | Skin Sens. 1, H317: C ≥ 9.39%<br>Eye Irrit. 2, H319: | -                                     |



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| Chemical name                                                                                           | CAS No.<br>EC No.<br>REACH No.<br>Index No.                 | Concentration | Classification                                                             | H-phrase<br>M factor<br>acute<br>M factor<br>chronic | Specific concentration limits<br>ATE       | Note                                                                                                                       |
|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|---------------|----------------------------------------------------------------------------|------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| sulfide propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl | 38<br>-                                                     |               | Aquatic Chronic 2                                                          | -                                                    | 50% < C ≤ 100%<br>ATE [Oral]: 500 mg/kg bw |                                                                                                                            |
| Distillates (petroleum), hydrotreated heavy paraffinic                                                  | 64742-54-7<br>265-157-1<br>01-2119484627-25<br>649-467-00-8 | 0 - ≤3%       | Asp. Tox. 1                                                                | H304<br>-<br>-                                       |                                            | ATE (oral): >5000 mg/kg;<br>ATE (dermal): >5000 mg/kg;<br>ATE (inhalation): 5 mg/kg                                        |
| O,O,O-triphenyl phosphorothioate                                                                        | 597-82-0<br>209-909-9<br>01-2119979545-21-0000<br>-         | 0 - ≤1%       | Aquatic Chronic 1                                                          | H410<br>-<br>M-chro=10                               |                                            | PBT (persistent, bioaccumulative and toxic substance). Regulation (EC) No. 1907/2006, REACH Article 59(1). Candidate List. |
| Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate] | 1307863-78-0<br>800-362-7<br>01-2119974117-33<br>-          | 0 - ≤0.3%     | Skin Irrit. 2, Eye Irrit. 2, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 2 | H315, H319, H373, H400, H411<br>M-acut=10<br>-       |                                            | -                                                                                                                          |
| Amines, N-tallow alkyl-trimethylenedi-, C4-18-alkyl phosphates                                          | 68603-74-7<br>271-672-2<br>01-2120810847-50<br>-            | 0 - ≤0.3%     | Acute Tox. 4 - oral, Skin Irrit. 2, Eye Dam. 1, Aquatic Acute 1            | H302, H315, H318, H400<br>M-acut=1<br>-              | ATE [Oral]: 500 mg/kg bw                   | -                                                                                                                          |
| N-C16-18-alkyl-(even-numbered) C18 unsat-                                                               | 1219010-04-4<br>629-719-3                                   | 0 - ≤0.3%     | Acute Tox. 4 - oral, Skin Corr.                                            | H302, H314, H318, H372,                              | ATE [Oral]: 500 mg/kg bw                   | STOT RE 2, H373                                                                                                            |



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| Chemical name               | CAS No.<br>EC No.<br>REACH No.<br>Index No.  | Concentra-<br>tion | Classification                                                                                             | H-phrase<br>M factor<br>acute<br>M factor<br>chronic               | Specific concentra-<br>tion limits<br>ATE | Note                                              |
|-----------------------------|----------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------|
| urated) propane-1,3-diamine | 01-2119487014-41<br>-                        |                    | 1B, Eye Dam. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1                                              | H400, H410<br>M-acut=10<br>M-chro=1                                |                                           | (gastrointestinal tract, lymphatic system) - oral |
| amines, tallow alkyl        | 61790-33-8<br>263-125-1<br>-<br>612-286-00-X | 0 - ≤0.1%          | Acute Tox. 4 - oral, Asp. Tox. 1, Skin Corr. 1B, Eye Dam. 1, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1 | H302, H304, H314, H318, H373, H400, H410<br>M-acut=10<br>M-chro=10 | ATE [Oral]: 500 mg/kg bw                  | -                                                 |

### **Product based on**

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, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

### **Substance additional information**

For the complete text of H- / EUH-statements mentioned in this section, see section 16.

## **SECTION 4: First aid measures**

### **4.1. Description of first aid measures**

No action shall be taken involving any personal risk or without suitable training.

#### **Inhalation**

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.



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**Skin contact**

Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

**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.

**Ingestion**

Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink

**4.2. Most important symptoms and effects, both acute and delayed****Inhalation**

No specific data.

**Skin contact**

Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection.

**Eye contact**

No specific data.

**Ingestion**

No specific data.

**4.3. Indication of any immediate medical attention and special treatment needed**

No specific treatment.

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

## SECTION 5: Firefighting measures

**5.1. 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.



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### 5.2. Special hazards arising from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products: Aldehydes, Incomplete combustion products, Oxides of carbon, Smoke, Fume, sulfur oxides.

### 5.3. Advice for firefighters

#### Special protective equipment for fire-fighters

Use standard firefighting procedures and consider the hazards of other involved materials. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Assure an extended cooling down period to prevent reignition.

Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

NOTIFICATION PROCEDURES: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

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".

### 6.2. Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.



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### 6.3. Methods and material for containment and cleaning up

Small Spillages: Stop leak if without risk. Move containers from spill area. 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. Dispose of via a licensed waste disposal contractor.

Large Spillages: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Confine the spill immediately with booms. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants. Warn other shipping. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

### 6.4. Reference to other sections

See Section 8 of the SDS for Personal Protective Equipment. See Section 7 for information on safe handling See Section 13 for information on disposal.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### **Preventive handling precautions**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

Put on appropriate personal protective equipment. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid contact of spilt material and runoff with soil and surface waterways. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Empty containers retain product residue and can be hazardous.



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According to Regulation (EC) No 1907/2006

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### **General 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.

Static Accumulator : This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

### **7.2. 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.

Seveso Directive - Reporting thresholds:

Danger criteria:

Category: E2

Notification and MAPP threshold: 200 tonnes

Safety report threshold: 500 tonnes

### **7.3. Specific end use(s)**

No specific recommendations.

Industrial sector specific solutions: Not available.



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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Exposure limits

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

Occupational exposure limits: See below OEL table.

Recommended monitoring procedures: Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

##### National occupational exposure limits

| Ingredient                                             | CAS No.<br>EC No. | Exposure limit<br>ppm / mg/m <sup>3</sup> | Source                                                                             | Remark                                           | Year |
|--------------------------------------------------------|-------------------|-------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------|------|
| 1-decene, homopolymer hydrogenated                     | -<br>-            | - / 5 /                                   |                                                                                    | TWA 8 hours. Form: Aerosols (thoracic fraction). | -    |
| 1-dodecene, polymer with 1-octene, hydrogenated        | -<br>-            | - / 5 /                                   |                                                                                    | TWA 8 hours; Form: Aerosols (thoracic fraction). | -    |
| distillates (petroleum), hydrotreated heavy paraffinic | -<br>-            | - / 5 /                                   | ACGIH TLV (United States, 1/2024) [Mineral Oil, pure, highly and severely refined] | TWA 8 hours: Form: Inhalable fraction.           | 2024 |

##### DNEL/DMEL

| Product/Substance name<br>(CAS No./EC No.)  | Type | Exposure            | Value                 | Population | Effects |
|---------------------------------------------|------|---------------------|-----------------------|------------|---------|
| distillates (petroleum), hydrotreated heavy | DNEL | Chronic (long term) | 1.2 mg/m <sup>3</sup> | Consumers  | Local   |



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| Product/Substance name<br>(CAS No./EC No.)                         | Type | Exposure                          | Value                 | Population | Effects |
|--------------------------------------------------------------------|------|-----------------------------------|-----------------------|------------|---------|
| paraffinic<br>(-/-)                                                |      | Inhalation                        |                       |            |         |
| distillates (petroleum), hydrotreated heavy<br>paraffinic<br>(-/-) | DNEL | Chronic (long term)<br>Inhalation | 5.4 mg/m <sup>3</sup> | Workers    | Local   |

## PNEC/PEC

| Product/Substance name<br>(CAS No./EC No.)                      | Type | Environmental compartment  | Value              |
|-----------------------------------------------------------------|------|----------------------------|--------------------|
| distillates (petroleum), hydrotreated heavy paraffinic<br>(-/-) | PNEC | Oral (Secondary Poisoning) | 9.33 mg/kg<br>food |

## 8.2. Exposure controls

### Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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.

### Personal Protective Equipment Symbols



### 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. EN 166.



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**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. CEN standards EN 420 and EN 374 provide general requirements and lists of glove types.

**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.

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.

**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. European Committee for Standardization (CEN) standards EN 136, 140 and 405 provide respirator masks and EN 149 and 143 provide filter recommendations.

**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.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**Physical state**

Liquid

**Colour**

amber

**Odour**

Characteristic.



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### **Melting point / freezing point**

No data available

### **Boiling point or initial boiling point and boiling range**

>315.56°C (>600°F)

### **Flammability**

Ignitable

### **Lower and upper explosion limit**

Lower: 0.9%

Upper: 7%

### **Flash point**

Open cup: 180°C (356°F)

### **Method**

ASTM D-92

### **Auto-ignition temperature**

No data available

### **Decomposition temperature**

No data available

### **pH**

Not applicable.

### **Kinematic viscosity**

81 cSt [40 °C] [ASTM D 445]

14.2 cSt [100 °C] [ASTM D 445]

### **Solubility**

No data available

### **Water solubility**

negligible (water); not available (other solvents)

### **Partition coefficient n-octanol/water**

>3.5

### **Vapour pressure**

<0.1 mm Hg [20 °C]

### **Density and/or relative density**

No data available



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### Relative density

0.849

### **Method**

ASTM D4052

### Relative vapour density

>2 [Air = 1]

### Particle characteristics

Not applicable.

## 9.2. Other information

Pour point: -48°C [ASTM D97]

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

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

### 10.4. Conditions to avoid

Avoid excessive heat. Remove sources of ignition.

### 10.5. Incompatible materials

Strong oxidising agents.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

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



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| Product / Substance name<br>CAS / EC no.                                                                                                                                                   | Dose descriptor | Value / Dose | Exposure route |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------|----------------|
| ZF LifeguardFluid 7.7 DCT<br>-                                                                                                                                                             | ATEmix          | >5000 mg/kg  | Oral           |
| reaction products of 4-methyl-<br>2pentanol and diphosphorus<br>pentasulfide, propoxylated,<br>esterified with diphosphorus<br>pentaoxide, and salted by<br>amines, c12-14-tert-alkyl<br>- | LD50            | 500 mg/kg    | Oral           |
| n-c16-18 (even numbered) and<br>c18 (unsaturated) alkyl pro-<br>pane-1,3-diamine<br>-                                                                                                      | LD50            | 500 mg/kg    | Oral           |
| amines, n-tallow alkyltrimethyl-<br>enedi-, c4-18-alkyl phosphates<br>-                                                                                                                    | LD50            | 500 mg/kg    | Oral           |
| amines, tallow alkyl<br>-                                                                                                                                                                  | LD50            | 500 mg/kg    | Oral           |

### **Skin corrosion/irritation**

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

### **Serious eye damage/irritation**

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

### **Respiratory or skin sensitisation**

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

### **Germ cell mutagenicity**

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

### **Carcinogenicity**

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

### **Reproductive toxicity**

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

### **STOT-single exposure**

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

### **STOT-repeated exposure**

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



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### **Aspiration hazard**

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

### **Routes of exposure**

Not available.

## **11.2. Information on other hazards**

### **Endocrine disrupting properties**

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

### **Other information**

Synthetic base oils: Not expected to cause significant health effects under conditions of normal use, based on laboratory studies with the same or similar materials. Not mutagenic or genotoxic. Not sensitising in test animals and humans

## **SECTION 12: Ecological information**

### **12.1. Toxicity**

#### **Acute toxicity**

Toxic to aquatic life.

#### **Chronic toxicity**

Toxic to aquatic life with long lasting effects.

### **12.2. Persistence and degradability**

Not determined.

### **12.3. Bioaccumulative potential**

Not determined.

### **12.4. Mobility in soil**

#### **Mobility**

Base oil component -- Expected to partition to sediment and wastewater solids. Low solubility and floats and is expected to migrate from water to the land.

The product does not meet the criteria to be considered as a PMT or vPvM.

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| Product / Substance name<br>CAS / EC no. | KOC                      |
|------------------------------------------|--------------------------|
| O,O,O-triphenyl phosphorothioate<br>-    | 49128.4<br>log Koc: 4.69 |

**12.5. Results of PBT and vPvB assessment****Results of PBT and vPvB assessment**

This substance is not classified as PBT or vPvB.

| Product / Substance name<br>CAS / EC no.                                                                                                                                     | PBT / vPvB                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| 1-decene, homopolymer hydrogenated<br>-                                                                                                                                      | PBT: No.<br>vPvB: N/A      |
| olefin sulphide<br>-                                                                                                                                                         | PBT: No.<br>vPvB: N/A      |
| Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl<br>- | PBT: No.<br>vPvB: N/A      |
| Distillates (petroleum), hydrotreated heavy paraffinic<br>-                                                                                                                  | PBT: No.<br>vPvB: N/A      |
| O,O,O-triphenyl phosphorothioate<br>-                                                                                                                                        | PBT: Yes.<br>vPvB: N/A     |
| n-c16-18 (even numbered) and c18 (unsaturated) alkyl propane-1,3-diamine<br>-                                                                                                | PBT: Yes. (T)<br>vPvB: N/A |
| amines, n-tallow alkyltrimethylenedi-, c4-18-alkyl phosphates<br>-                                                                                                           | PBT: No.<br>vPvB: N/A      |
| amines, n-c16-c18-alkyl-(even numbered, c18 unsaturated) propane-1,3-diaminium di[(9z)-octadec-9-enoate]<br>-                                                                | PBT: Yes. (T)<br>vPvB: N/A |
| amines, tallow alkyl<br>-                                                                                                                                                    | PBT: Yes. (T)<br>vPvB: N/A |

**12.6. Endocrine disrupting properties**

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.



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### 12.7. Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal considerations

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.

Hazardous waste: Yes.

#### Packaging

The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

| Waste code | Waste description                           |
|------------|---------------------------------------------|
| 13 02 06*  | synthetic engine, gear and lubricating oils |

Please note - an asterisk (\*) next to a code denotes that it is HAZARDOUS WASTE.

### Other

Special precautions:

## SECTION 14: Transport information

### 14.1. UN number

UN 3082

### 14.2. UN proper shipping name

#### ADR / RID / ADN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (o,o,otriphenyl phosphorothioate, phosphoric acid esters, amine salt)

#### IMDG proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (o,o,otriphenyl phosphorothioate, phosphoric acid esters, amine salt)



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### **IATA proper shipping name**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (o,o,otriphenyl phosphorothioate, phosphoric acid esters, amine salt)

### **14.3. Transport hazard class(es)**

#### **Label**

9

ADR/RID/ADN



9

Environmental hazard

### **ADR / RID hazard identification number**

90

### **ADN Class**

This product is not regulated as a dangerous good when transported in sizes of  $\leq 5$  L or  $\leq 5$  kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.  
Special provisions: 274, 335, 375, 601

### **14.4. Packing group**

III

### **14.5. Environmental hazards**

Yes.

### **14.6. 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.

### **14.7. Maritime transport in bulk according to IMO instruments**

Not applicable.

### **Other**

#### **Additional information ADR-RID**

This product is not regulated as a dangerous good when transported in sizes of  $\leq 5$  L or  $\leq 5$  kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.  
Limited quantity: 5 L  
Special provisions: 274, 335, 601, 375.



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### **Additional information IMDG**

This product is not regulated as a dangerous good when transported in sizes of  $\leq 5$  L or  $\leq 5$  kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Emergency schedules: F-A, S-F

Special provisions: 274, 335, 969

### **Additional information IATA (ICAO)**

This product is not regulated as a dangerous good when transported in sizes of  $\leq 5$  L or  $\leq 5$  kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Limited quantity: Passenger and Cargo Aircraft: 450 L. Packaging instructions: 964. Cargo Aircraft Only: 450 L. Packaging instructions: 964. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y964.

Special provisions: A97, A158, A197, A215

## SECTION 15: Regulatory information

### **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

#### **EU regulations**

Annex XIV - List of substances subject to authorization: None of the components are listed.

Substances of very high concern (SVHC): O,O,O-triphenyl phosphorothioate

Intrinsic property: PBT

References: D(2024) 7663-DC

Revision: 1/21/2025

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles: None.

Other EU regulations:

Explosive precursors: Not applicable.

Seveso Directive: Yes.

Industrial emissions (integrated pollution prevention and control) - Air: Listed

Industrial emissions (integrated pollution prevention and control) - Water: Not listed

Ozone depleting substances: Not listed.

Prior Informed Consent (PIC): Not listed.

Persistent Organic Pollutants: Not listed.

#### **National regulations**

Product/ingredient name: distillates (petroleum), hydrotreated heavy paraffinic.

List name: ACGIH TLV.

Name on list: Mineral Oil, pure, highly and severely refined.

Classification: A

Notes: -



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### **Other regulations, limitations and legal regulations**

Australia inventory (AIIC): All components are listed or exempted.

Canada inventory (DSL/NDL): Restrictions Apply

China inventory (IECSC): All components are listed or exempted.

Japan inventory (CSCL): All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

Korea inventory (KECI): All components are listed or exempted.

Taiwan Chemical Substances Inventory (TCSI): All components are listed or exempted.

United States inventory (TSCA 8b): All components are active or exempted.

### **15.2. Chemical safety assessment**

This product contains substances for which Chemical Safety Assessments are still required.



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### SECTION 16: Other information

#### **Phrase meaning**

Aquatic Chronic 2 - Hazardous to the aquatic environment — Chronic hazard category 2  
Skin Irrit. 2 - Skin irritation, hazard category 2  
Eye Irrit. 2 - Eye irritation, hazard category 2  
STOT RE 2 - Specific Target Organ Toxicity — Repeated exposure, hazard category 2  
Aquatic Acute 1 - Hazardous to the aquatic environment — Acute hazard category 1  
Acute Tox. 4 - oral - Acute toxicity, oral, hazard category 4  
Asp. Tox. 1 - Aspiration hazard, hazard category 1  
Skin Corr. 1B - Skin corrosion, hazard category 1B  
Eye Dam. 1 - Serious eye damage, hazard category 1  
Aquatic Chronic 1 - Hazardous to the aquatic environment — Chronic hazard category 1  
Skin Sens. 1 - Skin sensitisation, hazard category 1  
Skin Sens. 1B - Skin sensitisation, hazard category 1, sub-category 1B  
Aquatic Chronic 3 - Hazardous to the aquatic environment — Chronic hazard category 3  
STOT RE 1 - Specific Target Organ Toxicity — Repeated exposure, hazard category 1  
H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H372 Causes damage to organs through prolonged or repeated exposure .  
H373 May cause damage to organs through prolonged or repeated exposure  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.  
EUH208 Contains 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, c12-14-tert-alkyl.. May produce an allergic reaction.

#### **Other**

##### **Additional information**

###### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.