ZF Lifeguard eFluid 1

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

1.1. Product identifier

Trade name

ZF Lifeguard eFluid 1

Article No.

5961.308.181

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

Product type

Mixture.

Relevant identified uses

Transmission fluid

Not suitable for use in

Not applicable.

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

97424 Schweinfurt
Germany

Telephone
+49 9721 475 60

Email
msds.zf-aftermarket@zf.com

Web site
www.zf.com/contact

Contact person

Global Division B Product Compliance Mgmt. System (BWC)

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
Aspiration hazard, hazard category 1

Hazard statements
H304

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

Signal word
Danger

Hazard statements
H304 May be fatal if swallowed and enters airways.

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.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
P405 Store locked up.
P501 Dispose of contents/container to in accordance with all local, regional, national and international regulations..

More information

Contains :
Distillates (petroleum), hydrotreated heavy paraffinic
Distillates (petroleum), hydrotreated light paraffinic

Supplemental label information: Not applicable.
Labelling element REACH Annex XVII: Not applicable.

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Com-mission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other hazards which do not result in classification: Hazard of slipping on spilt product.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Specific concentration limits ATE	Note
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7 265-157-1 01-2119484627-25 649-467-00-8	≥50 - ≤75%	Asp. Tox. 1	H304 - -		ATE (oral): >5000 mg/kg; ATE (dermal): >5000

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Specific concentration limits ATE	Note
						mg/kg; ATE (inhalation): 5 mg/kg
Distillates (petroleum), hydrotreated light paraffinic; Baseoil - unspecified; [A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C15 through C30 and produces a finished oil with a viscosity of less than 100 SUS at 100 °F (19cSt at 40 °C). It contains a relatively large proportion of saturated hydrocarbons.]	64742-55-8 265-158-7 01-2119487077-29 649-468-00-3	≥25 - ≤50%	Asp. Tox. 1	H304 - -		-
mineral oil	- - - -	0 - ≤3%	Asp. Tox. 1	- - -		-
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl	- 931-384-6 01-2119493620-38 -	0 - ≤0.3%	Acute Tox. 4 - oral, Skin Sens. 1, Eye Irrit. 2, Aquatic Chronic 2	H302, H317, H319, H411 - -	Skin Sens. 1, H317: C ≥ 9.39% Eye Irrit. 2, H319: 50% < C ≤ 100% ATE [Oral]: 500 mg/kg bw	-

Product based on
Please note that the mineral oils and petroleum distillates used in our products are severely refined and have a DMSO extract < 3% as measured by method IP 346 and are not classified as carcinogenic according to Nota L/ Nota N of Annex VI of Regulation EC 1272/2008.

Substance additional information
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.

Occupational exposure limits, if available, are listed in Section 8.
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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Inhalation
If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. 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 skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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. Remove dentures if any. 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. The exposed person may need to be kept under medical surveillance for 48 hours.

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

Inhalation
No specific data.

Skin contact
Skin irritation.
dryness
cracking

Eye contact
No specific data.

Ingestion
Nausea, vomiting.
breathing difficulty or shortness of breath

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

Notes to physician: The exposed person may need to be kept under medical surveillance for 48 hours.

Other

Specific treatments: No specific treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media
Do not use water jet.

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.

carbon monoxide
Carbon dioxide (CO2).
nitrogen oxides
phosphorus oxides
Sulphur oxides.
Hydrogen sulphide (H2S).
Mercaptans (thiols).

5.3. Advice for firefighters

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 British standard BS 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

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.

6.3. Methods and material for containment and cleaning up

Small spill: 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 spill: Stop leak if without risk Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Avoid creating dusty conditions and prevent wind dispersal. If emergency personnel are unavailable, contain spilt material. Suction or scoop the spill into appropriate disposal or recycling vessels, then cover spill area with oil absorbent. Dispose of via a licensed waste disposal contractor.

6.4. Reference to other sections

See Section 1 for emergency contact information.
For personal protection, see section 8.
For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Preventive handling precautions

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. Incompatible materials: See section 10.

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).

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.

7.2. Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Shelf life: 36 months. 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 unlabelled containers. Use
appropriate containment to avoid environmental contamination.

7.3. Specific end use(s)

Not available.
Industrial sector specific solutions: Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits

No exposure limit value known.
Biological Limit Values (BLV): No exposure limit value known.

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.

Advisory OEL: Mineral oil mist: USA: OSHA (PEL) TWA 5 mg/m3, NIOSH (REL) TWA 5 mg/m3, STEL 10 mg/m3, ACGIH (TLV) TWA 5 mg/m3 (highly refined).

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.

DNEL/DMEL

Product/Substance name (CAS No./EC No.)	Type	Exposure	Value	Population	Effects
Distillates (petroleum), hydrotreated heavy paraffinic (-/-)	DNEL	Chronic (long term) Oral	0.74 mg/kg bw/day	Consumers	Systemic
Distillates (petroleum), hydrotreated heavy paraffinic (-/-)	DNEL	Chronic (long term) Dermal	0.97 mg/kg bw/day	Workers	Systemic
Distillates (petroleum), hydrotreated heavy paraffinic (-/-)	DNEL	Chronic (long term) Inhalation	1.19 mg/m³	Consumers	Local
Distillates (petroleum), hydrotreated heavy paraffinic (-/-)	DNEL	Chronic (long term) Inhalation	2.73 mg/m³	Workers	Systemic
Distillates (petroleum), hydrotreated heavy paraffinic (-/-)	DNEL	Chronic (long term) Inhalation	5.58 mg/m³	Workers	Local
Distillates (petroleum), hydrotreated light paraffinic (-/-)	DNEL	Chronic (long term) Oral	0.74 mg/kg bw/day	Consumers	Systemic
Distillates (petroleum), hydrotreated light paraffinic (-/-)	DNEL	Chronic (long term) Dermal	0.97 mg/kg bw/day	Workers	Systemic
Distillates (petroleum), hydrotreated light paraffinic (-/-)	DNEL	Chronic (long term) Inhalation	1.19 mg/m³	Consumers	Local
Distillates (petroleum), hydrotreated light paraffinic (-/-)	DNEL	Chronic (long term) Inhalation	2.73 mg/m³	Workers	Systemic
Distillates (petroleum), hydrotreated light paraffinic (-/-)	DNEL	Chronic (long term) Inhalation	5.58 mg/m³	Workers	Local
mineral oil (-/-)	DNEL	Chronic (long term) Inhalation	5.58 mg/m³	Workers	Local
mineral oil (-/-)	DNEL	Chronic (long term) Inhalation	2.73 mg/m³	Workers	Systemic
mineral oil (-/-)	DNEL	Chronic (long term) Oral	0.74 mg/kg bw/day	Consumers	Systemic
mineral oil (-/-)	DNEL	Chronic (long term) Dermal	0.97 mg/kg bw/day	Consumers	Systemic
mineral oil	DNEL	Chronic (long term)	1.19 mg/m³	Consumers	Local

Product/Substance name (CAS No./EC No.)	Type	Exposure	Value	Population	Effects
(-/-)		Inhalation			
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl (-/-)	DNEL	Chronic (long term) Dermal	12.5 mg/kg bw/day	Workers	Systemic
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl (-/-)	DNEL	Chronic (long term) Inhalation	4.28 mg/m³	Workers	Systemic
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl (-/-)	DNEL	Chronic (long term) Dermal	6.25 mg/kg bw/day	Consumers	Systemic
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl (-/-)	DNEL	Chronic (long term) Inhalation	1.09 mg/m³	Consumers	Systemic
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl (-/-)	DNEL	Chronic (long term) Oral	0.25 mg/kg bw/day	Consumers	Systemic
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl (-/-)	DNEL	Chronic (long term) Dermal	0.16 mg/cm²	Workers	Local

PNEC/PEC

Product/Substance name (CAS No./EC No.)	Type	Environmental compartment	Value
Distillates (petroleum), hydrotreated heavy paraffinic (-/-)	PNEC	Oral (Secondary Poisoning)	9.33 mg/kg dwt
mineral oil (-/-)	PNEC	Oral (Secondary Poisoning)	9.33 mg/kg dwt
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl (-/-)	PNEC	Freshwater	2.4 µg/l
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl (-/-)	PNEC	Marine water	240 ng/L
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl (-/-)	PNEC	Sediment (marine water)	1.29 µg/kg
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl (-/-)	PNEC	Soil	1.17 µg/kg
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl (-/-)	PNEC	Sewage Treatment Plant	24.33 mg/l
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl (-/-)	PNEC	Oral (Secondary Poisoning)	10 mg/kg

8.2. Exposure controls

Appropriate engineering controls

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

Personal Protective Equipment Symbols

Eye / face protection

In case of contact through splashing: safety glasses with side-shields, EN 166.

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. 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. In case of prolonged contact with the product, it is recommended to wear gloves complying with ISO 21420 and EN 374 standards, protecting at least for 480 minutes and having a thickness of 0,38 mm at least. These values are indicative only. The level of protection is provided by the material of the glove, its technical characteristics, its resistance to the chemicals to be handled, the appropriateness of its use and its replacement frequency

Other skin protection

Wear work clothing with long sleeves.
Non-skid safety shoes or boots.

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/P1. 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.

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
Clear liquid.

Colour
Yellow.

Odour
Characteristic.

Melting point / freezing point
Technically not possible to measure.

Boiling point or initial boiling point and boiling range
>316°C
Method
EN ISO 3405

Flammability
Not applicable.

Lower and upper explosion limit
0.9%;
7%

Flash point
215°C
Method
Open cup [ASTM D 92]

Auto-ignition temperature
>215°C (>419°F)
Method
ASTM E 659

Decomposition temperature
Not applicable.

pH
Not applicable. Product is non-soluble (in water).

Kinematic viscosity
Not available [room temperature].
18 to 19.6 mm2/s [40°C]
Method
ASTM D 445

Viscosity, dynamic
Not available.

Solubility
Not soluble in water.

Water solubility
No.

Partition coefficient n-octanol/water
Not applicable.

Vapour pressure
<0.013 kPa (<0.1 mm Hg)

Density and/or relative density
0.833 to 0.839 g/cm³ [15°C (59°F)]
Method
ISO 12185

Relative density
0.833 to 0.839
Method
ISO 12185

Relative vapour density
No data available

Particle characteristics
Median particle size: Not applicable.

9.2. Other information
Vapour density: >2 [Air = 1]
Pour point: -48°C (-54.4°F)

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 under recommended storage and handling conditions (see Section 7).

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

10.4. Conditions to avoid
No specific data.

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.

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Duration of exposure	Test animals	Method / Guideline
Distillates (petroleum), hydrotreated heavy paraffinic -	LD50	>5000 mg/kg	Oral.	-	Rat [Male ; Female]	OECD [401 Read across]
Distillates (petroleum), hydrotreated heavy paraffinic -	LD50	>5000 mg/kg	Dermal	-	Rabbit [Male ; Female]	OECD [402 Read across]
Distillates (petroleum), hydro-	LC50	>5 mg/l (dust/mist)	Inhalation:	4 hr	Rat [Male ; Female]	OECD [403 Read across]

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Duration of exposure	Test animals	Method / Guideline
treated heavy paraffinic -						
Distillates (petroleum), hydrotreated light paraffinic -	LD50	>5000 mg/kg	Oral.	-	Rat	OECD [420]
Distillates (petroleum), hydrotreated light paraffinic -	LD50	>5000 mg/kg	Dermal	-	Rabbit	OECD [402]
Distillates (petroleum), hydrotreated light paraffinic -	LC50	>5 mg/l (dust/mist)	Inhalation:	4 hr	-	OECD [403]
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl -	LD50	2000 mg/kg	Oral.	-	Rat.	OECD [401]
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and	LD50	>2000 mg/kg	Dermal	-	Rabbit	-

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Duration of exposure	Test animals	Method / Guideline
salted by amines, C12-14-tert-alkyl -						
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl -	LC50	80.4 mg/l (vapours)	Inhalation:	1 hr	Rat.	-
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl -	LC50	20.1 mg/l (vapours)	Inhalation:	4 hr	Rat.	-
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by	LC50	5.1 mg/l (dust/mist)	Inhalation:	4 hr	Rat.	-

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Duration of exposure	Test animals	Method / Guideline
amines, C12-14-tert-alkyl -						

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.

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

Routes of exposure
Not available.

Symptoms related to the physical, chemical and toxicological characteristics
Eye contact: No specific data.
Inhalation: No specific data.
Skin contact: Skin irritation. ; dryness ; cracking
Ingestion: Nausea, vomiting. breathing difficulty or shortness of breath

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Long term exposure: & Short term exposure:
Potential immediate effects: Not available.
Potential delayed effects: Not available.

Mixtures

Potential chronic health effects:
GENERAL. : No known significant effects or critical hazards.
Carcinogenicity: No known significant effects or critical hazards.
Germ cell mutagenicity: No known significant effects or critical hazards.
Reproductive Toxicity: No known significant effects or critical hazards.

Potential acute health effects:
Eye contact: No known significant effects or critical hazards.
Inhalation: No known significant effects or critical hazards.
Skin contact: Defatting to the skin. May cause skin dryness and irritation.
Ingestion: May be fatal if swallowed and enters airways. Chemical pneumonitis.

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

Not available.

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

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

Acute fish toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline
mineral oil -	LC50	>100 mg/l	96 hr	Fish - Pimephales promelas	-
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl -	LL50	24 mg/l	96 hr	Fish - Oncorhynchus mykiss	OECD 203

Acute algae toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline	Remark
Distillates (petroleum), hydrotreated heavy paraffinic -	EC50	>100 mg/l	72 hr	Algae - Pseudokirchneriella subcapitata	OECD [201]	growth rate
Distillates (petroleum), hydrotreated light paraffinic -	EC50	>100 mg/l	48 hr	Algae - Pseudokirchnerella subcapitata	OECD [201]	-
mineral oil -	EC50	>100 mg/l	72 hr	Algae - Scenedesmus quadricauda	-	-
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus	EC50	6.4 mg/l	96 hr	Algae - Pseudokirchneriella subcapitata	-	growth rate

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline	Remark
pentaoxide, and salted by amines, C12-14-tert-alkyl -						

Acute crustacean toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline	Remark
Distillates (petroleum), hydrotreated heavy paraffinic -	EC50	>10000 mg/l	48 hr	Crustaceans - Daphnia magna	OECD [202]	Mobility:
Distillates (petroleum), hydrotreated light paraffinic -	EC50	>10000 mg/l	48 hr	Daphnia - Daphnia magna	-	-
mineral oil -	EC50	>10000 mg/l	48 hr	Daphnia	-	-
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl -	EL50	91.4 mg/l	48 hr	Daphnia	OECD [202]	Mobility:

Chronical toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline	Remark
Distillates (petroleum), hydrotreated heavy paraffinic -	NOEL	>1000 mg/l	21 d	Crustaceans - Daphnia magna	-	Reproduction system
Distillates (petroleum), hydrotreated heavy paraffinic -	NOEL	>100 mg/l	72 hr	Algae - Pseudokirchneriella subcapitata	OECD [201]	growth rate
Distillates (petroleum), hydrotreated light paraffinic -	NOEL	>1000 mg/l	21 d	Fish - Oncorhynchus mykiss	-	-
Distillates (petroleum), hydrotreated light paraffinic -	NOEL	10 mg/l	21 d	Daphnia - Daphnia magna	OECD [211]	-
mineral oil -	NOEC	>10 mg/l	21 d	Daphnia	-	-
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl -	NOEC	0.12 mg/l	21 d	Daphnia	OECD [211]	Reproduction system
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide,	NOEC	1.7 mg/l	96 hr	Algae - Pseudokirchneriella subcapitata	OECD [201]	growth rate

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline	Remark
propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl -						

12.2. Persistence and degradability

Product / Substance name CAS / EC no.	Duration	Result	Degradation	Method / Guideline
Distillates (petroleum), hydrotreated heavy paraffinic -	28 d	Not readily.	31%	OECD 301F
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl -	28 d	-	3.8%	OECD [301B]
Distillates (petroleum), hydrotreated heavy paraffinic -	-	Not readily.	-	-
mineral oil -	-	Not readily.	-	-
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl	-	Not readily.	-	-

Product / Substance name CAS / EC no.	Duration	Result	Degradation	Method / Guideline
-				

12.3. Bioaccumulative potential

Product / Substance name CAS / EC no.	LogKow / LogPow	Bioconcentration factor (BCF)	Result
Distillates (petroleum), hydro-treated heavy paraffinic -	>4	-	Potential: High.
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl -	0.3 to 7.1	-	Potential: Low.

12.4. Mobility in soil

Mobility

Not available.

Mobility in soil Soil/water partition coefficient (KOC): Not available.

Mobility in soil: Not available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB in a concentration >= 0,1 %.

Distillates (petroleum), hydrotreated heavy paraffinic :
PMT: No.
vPvM: N/A

Distillates (petroleum), hydrotreated light paraffinic :
PMT: No.
vPvM: N/A

mineral oil :
PMT: No.
vPvM: 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
PMT: No.
vPvM: N/A

Product / Substance name CAS / EC no.	PBT / vPvB
Distillates (petroleum), hydrotreated heavy paraffinic -	No.
Distillates (petroleum), hydrotreated light paraffinic -	No.
mineral oil -	No.
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl -	No.

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.

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.
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).

Hazardous waste: Yes.
In accordance with the European Waste Catalogue (EWC), waste codes are based on the application rather than the product itself. The waste code should be determined by the user based on the intended use of the product. The following waste codes are intended as recommendations only.

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.

Special precautions: 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Waste code	Waste description
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils

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

SECTION 14: Transport information

14.1. UN number

Not regulated.

14.2. UN proper shipping name

ADR / RID / ADN proper shipping name

Not regulated.

14.3. Transport hazard class(es)

Label

Not regulated.

ADR / RID Class

Not regulated.

IMDG Class

Not regulated.

IATA Class

Not regulated.

ADN Class

Not regulated.

14.4. Packing group

Not regulated.

14.5. Environmental hazards

No.

IMDG Marine Pollutant

Not regulated.

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 available.

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): None of the components are listed.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles:
Labeling: Not applicable.
Other EU regulations: Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.
Explosive precursors: Not applicable.
Regulation (EC) No 2024/590 on substances that deplete the ozone layer, ANNEX I REGULATED SUB-STANCES: Not listed.
Prior Informed Consent (PIC) (649/2012/EU): Not listed.
Stockholm Convention on Persistent Organic Pollutants (POP): Not listed.
Seveso Directive: This product is not controlled under the Seveso Directive.

National regulations

UK (GB)/REACH:
Annex XIV - List of substances subject to authorisation:
Annex XIV: None of the components are listed.
Substances of very high concern: None of the components are listed.
Ozone depleting substances: Not listed
Prior Informed Consent (PIC): Not listed
Persistent Organic Pollutants: Not listed.
Seveso Directive: This product is not controlled under the Seveso Directive.

Other regulations, limitations and legal regulations

International regulations:
Chemical Weapon Convention List Schedules I, II & III Chemicals: Not listed.
Montreal Protocol: Not listed.
Stockholm Convention on Persistent Organic Pollutants (POP): Not listed.
Rotterdam Convention on Prior Informed Consent (PIC): Not listed.
UNECE Aarhus Protocol on POPs and Heavy Metals: Not listed.
LU - Luxembourg prohibited chemicals in the workplace: Not listed.
Inventory list:
Australia inventory (AIIC): All components are listed or exempted.
Canada inventory (DSL/NDSL): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Europe inventory (EC): All components are listed or exempted.
Japan inventory: Japan inventory (CSCL): All components are listed or exempted. ISHL: 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.
Thailand inventory: Not determined.
Turkey inventory: Not determined.
United States inventory (TSCA 8b): All components are listed or exempted.
Vietnam inventory: Not determined.

15.2. Chemical safety assessment

Risk management measures and safety conditions of use are included in the relevant sections of the SDS.

Other

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

Phrase meaning

Asp. Tox. 1 - Aspiration hazard, hazard category 1
Acute Tox. 4 - oral - Acute toxicity, oral, hazard category 4
Skin Sens. 1 - Skin sensitisation, hazard category 1
Eye Irrit. 2 - Eye irritation, hazard category 2
Aquatic Chronic 2 - Hazardous to the aquatic environment — Chronic hazard category 2
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

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.