

# SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



**Product name: ZF Lifeguard Hybrid 4**

ZF Aftermarket

---

## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name: ZF Lifeguard Hybrid 4

Product number: 5961.308.625

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

Identified uses: Lubricant

Uses advised against: No uses advised against identified.

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

**ZF Friedrichshafen AG**  
**ZF Aftermarket**  
**Obere Weiden 12**  
**97424 Schweinfurt**  
**Germany**  
**+49 9721 475 60**  
**www.zf.com /contact**

### 1.4 Emergency telephone number

**24/7h Emergency telephone number (+49) 89 19 240**

---

## 2. Hazards identification

### 2.1 Classification of the substance or mixture

The product has been classified and labelled as hazardous according to regulation GB-CLP.

#### **Classification according to Regulation (EC) No 1272/2008 as amended.**

##### **Health Hazards**

Chronic hazards to the aquatic Environment H412: Harmful to aquatic life with long lasting effects

Category 3

##### **Hazard summary**

Physical Hazards No data available.



**SAFETY DATA SHEET**

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

**Product name: ZF Lifeguard Hybrid 4**

ZF Aftermarket

substituted hydrocarbyl sulphide	EINECS: 266-582-5	0,25% - <1,00%
Alkyl amine derivative	EC: 471-920-1	0,10% - <1,00%
Alkyl amine derivative	EC: 482-000-4	0,10% - <1,00%
olefin derivative	EINECS: 939-580-3	0,10% - <1,00%
Ca Sulfonate	EINECS: 274-263-7	0,10% - <1,00%
ethoxylated amine	EC: 620-540-6	0,01% - <1,00%
Heterocyclic N-compound	EINECS: 202-414-9	0,01% - <0,10%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

## Classification

Chemical name	Identifier	Classification
Base oil, low viscous	EINECS: 265-158-7	GBCLP: Asp. Tox. 1;H304
Alkoxysulfolane	EC: 800-172-4	GBCLP: Aquatic Chronic 2;H411
substituted hydrocarbyl sulphide	EINECS: 266-582-5	GBCLP: Aquatic Acute 1;H400, Aquatic Chronic 1;H410, Skin Sens. 1;H317
Alkyl amine derivative	EC: 471-920-1	GBCLP: Skin Sens. 1B;H317
Alkyl amine derivative	EC: 482-000-4	GBCLP: Aquatic Chronic 3;H412, Skin Sens. 1B;H317
olefin derivative	EINECS: 939-580-3	GBCLP: Skin Sens. 1B;H317
Ca Sulfonate	EINECS: 274-263-7	GBCLP: Skin Sens. 1B;H317
ethoxylated amine	EC: 620-540-6	GBCLP: Skin Corr. 1C;H314, Aquatic Acute 1;H400, Aquatic Chronic 2;H411, Acute Tox. 4;H302, Eye Dam. 1;H318; M-Factor (aquatic acute): 10; M-Factor (aquatic chronic): 1
Heterocyclic N-compound	EINECS: 202-414-9	GBCLP: Skin Corr. 1C;H314, Eye Dam. 1;H318, STOT RE 2;H373, Aquatic Acute 1;H400, Aquatic Chronic 1;H410, Acute Tox. 4;H302; M-Factor (aquatic acute): 10; M-Factor (aquatic chronic): 1

# SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



**Product name: ZF Lifeguard Hybrid 4**

ZF Aftermarket

GB-CLP

specific concentration limit

Chemical name	Identifier	specific concentration limit	Hazard class	Hazard Category	Hazard statements
substituted hydrocarbonyl sulphide	EINECS: 266-582-5	$\geq 14,21$ %	Skin sensitizer	1	H317
Alkyl amine derivative	EC: 471-920-1	$\geq 9,4$ %	Skin sensitizer	1B	H317
Ca Sulfonate	EINECS: 274-263-7	$\geq 10$ %	Skin sensitizer	1B	H317
ethoxylated amine	EC: 620-540-6	$\geq 50$ % $\geq 25$ %	Serious eye damage Serious eye irritation	1 2	H318 H319

For the wording of the listed hazard statements refer to section 16.

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 Note L of Annex VI of Regulation GB-CLP.

## 4. First aid measures

General: Instantly remove any clothing soiled by the product.

### 4.1 Description of first aid measures

Inhalation: Supply fresh air; consult doctor in case of symptoms.

Eye contact: Promptly wash eyes with plenty of water while lifting the eye lids.

Skin Contact: Wash with soap and water.

Ingestion: Rinse mouth thoroughly.

**4.2** Most important symptoms and effects, both acute and delayed: May cause skin and eye irritation.

## SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



ZF Aftermarket

### Product name: ZF Lifeguard Hybrid 4

- |            |  |  |
|------------|--|--|
| <b>4.3</b> | Indication of any immediate medical attention and special treatment needed | Get medical attention if symptoms occur. |
|------------|--|--|

---

## 5. Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media:	CO <sub>2</sub> , fire extinguishing powder or fog like water spraying. Extinguish larger fires with alcohol resistant foam or spray water with suitable surfactant added.
-------------------------------	--

Unsuitable extinguishing media:	Water with a full water jet.
---------------------------------	------------------------------

- |            |  |   |
|------------|--|---|
| <b>5.2</b> | Special hazards arising from the substance or mixture: | During fire, gases hazardous to health may be formed. |
|------------|--|---|

### 5.3 Advice for firefighters

Special fire fighting procedures:	Move container from fire area if it can be done without risk. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations. Collect contaminated fire fighting water separately. It must not enter drains.
-----------------------------------	---

Special protective equipment for fire-fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
---	---

---

## 6. Accidental release measures

- |            |  |  |
|------------|--|--|
| <b>6.1</b> | Personal precautions, protective equipment and emergency procedures: | In case of spills, beware of slippery floors and surfaces. |
|------------|--|--|

- |            |                            |   |
|------------|----------------------------|---|
| <b>6.2</b> | Environmental Precautions: | Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent from spreading (e.g. by binding or oil barriers). Environmental manager must be informed of all major spillages. Do not |
|------------|----------------------------|---|

## SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



ZF Aftermarket

### Product name: ZF Lifeguard Hybrid 4

allow to enter drainage system, surface or ground water.

**6.3** Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acidbinders, universal binders, sawdust). Dispose of the material collected according to regulations. Stop the flow of material, if this is without risk.

**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.

---

## 7. Handling and storage

**7.1** Precautions for safe handling:

Prevent formation of aerosols. Do not eat, drink or smoke when working with the product. Take usual precautions when handling mineral oil products or chemical products. Observe good industrial hygiene practices. Provide adequate ventilation.

**7.2** Conditions for safe storage, including any incompatibilities:

Local regulations concerning handling and storage of waterpolluting products have to be followed. Do not heat up to temperatures close to the flash point.

**7.3** Specific end use(s):

Not applicable

Storage Class:

10, Combustible liquids

---

## 8. Exposure controls/personal protection

### 8.1 Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

### 8.2 Exposure controls

## SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



ZF Aftermarket

### Product name: ZF Lifeguard Hybrid 4

Appropriate engineering controls: Provide adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information: Wash hands before breaks and after work. Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. The usual precautionary measures should be adhered to in handling the chemicals or the mineral oil products.

Eye/face protection: Avoid contact with skin and eyes. Goggles/face shield are recommended. If risk of splashing, wear safety goggles or face shield.

Skin protection

Hand Protection: Material: Nitrile butyl rubber (NBR).  
Min. Breakthrough time:  $\geq 480$  min  
Recommended thickness of the material:  $\geq 0,38$  mm  
Avoid long-term and repeated skin contact. Suitable gloves can be recommended by the glove supplier. Use skin protection cream for preventive skin protection. Protective gloves, where permitted in acc. to safety directions. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

## SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



**Product name: ZF Lifeguard Hybrid 4**

ZF Aftermarket

Other:	Do not carry cleaning cloths impregnated with the product in trouser pockets. Wear suitable protective clothing
Respiratory Protection:	Ensure good ventilation/exhaustion at the workplace. Avoid breathing vapour/ aerosol.
Thermal hazards:	Not known.
Hygiene measures:	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.
Environmental Controls:	No data available.

---

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state:	liquid
Form:	liquid
Color:	Red
Odor:	Characteristic
Odor Threshold:	Not applicable for mixtures
pH:	Not applicable
Freezing point:	not determined
Boiling Point:	not determined
Flash Point:	210 °C
Evaporation Rate:	Not applicable for mixtures
Flammability (solid, gas):	not determined
Flammability Limit - Upper (%)-:	Not applicable for mixtures
Flammability Limit - Lower (%)-:	Not applicable for mixtures
Vapor pressure:	Not applicable for mixtures
Relative vapor density:	Not applicable for mixtures
Density:	0,84 g/cm <sup>3</sup> (15,00 °C)



## SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



ZF Aftermarket

### Product name: ZF Lifeguard Hybrid 4

Solubility(ies)	
Solubility in Water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not applicable for mixtures
Autoignition Temperature:	not determined
Decomposition Temperature:	not determined
Kinematic viscosity:	26 mm <sup>2</sup> /s (40 °C)
Explosive properties:	Value not relevant for classification
Oxidizing properties:	Value not relevant for classification

**9.2** Other information: No data available.

---

## 10. Stability and reactivity

<b>10.1 Reactivity:</b>	Stable under normal use conditions.
<b>10.2 Chemical Stability:</b>	Stable under normal use conditions.
<b>10.3 Possibility of hazardous reactions:</b>	Stable under normal use conditions.
<b>10.4 Conditions to avoid:</b>	Stable under normal use conditions.
<b>10.5 Incompatible Materials:</b>	Strong oxidizing substances. Strong acids. Strong bases.
<b>10.6 Hazardous Decomposition Products:</b>	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

---

## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Oral Product:	Not classified for acute toxicity based on available data.
Specified substance(s) base oil, low viscous	LD 50 (Rat): > 5.000 mg/kg

## SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



ZF Aftermarket

### Product name: ZF Lifeguard Hybrid 4

substituted hydrocarbyl sulphide	LD 50 (Rat): > 5.000 mg/kg
Ca Sulfonate	LD 50 (Rat): > 5.000 mg/kg (OECD 401)
Heterocyclic N-compound	LD 50 (Rat): 1.265 mg/kg (OECD 401)

#### Dermal

Product: Not classified for acute toxicity based on available data.

#### Specified substance(s)

Base oil, low viscous LD 50 (Rabbit): > 5.000 mg/kg

Ca Sulfonate LD 50 (Rabbit): > 5.000 mg/kg (OECD 402)

#### Inhalation

Product: Not classified for acute toxicity based on available data.

#### Skin Corrosion/Irritation:

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

Specified substance(s):

Ca Sulfonate OECD 404 (Rabbit):  
Not irritant.

Heterocyclic N-compound OECD 404 (Rabbit):  
Corrosive.

#### Serious Eye Damage/Eye Irritation:

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

Specified substance(s):

Heterocyclic N-compound OECD 405 (Rabbit):  
Corrosive.

#### Respiratory or Skin Sensitization:

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

## SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



ZF Aftermarket

**Product name: ZF Lifeguard Hybrid 4**

	Respiratory sensitizer: Based on available data, the classification criteria are not met.
<b>Specified substance(s)</b> Ca Sulfonate	May cause sensitization by skin contact.
Heterocyclic N-compound	No sensitizing effect (guinea pig); OECD 406
<b>Germ Cell Mutagenicity</b> Product:	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b> Product:	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b> Product:	Based on available data, the classification criteria are not met.
<b>Specific Target Organ Toxicity - Single Exposure</b> Product:	Based on available data, the classification criteria are not met.
<b>Specific Target Organ Toxicity - Repeated Exposure</b> Product:	Based on available data, the classification criteria are not met.
<b>Aspiration Hazard</b> Product:	Based on available data, the classification criteria are not met.
<b>Other adverse effects:</b>	No data available.

---

## 12. Ecological information

### 12.1 Toxicity

Acute toxicity Product:	Based on available data, the classification criteria are not met.
----------------------------	---

## SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



ZF Aftermarket

### Product name: ZF Lifeguard Hybrid 4

Fish Specified substance(s)	
base oil, low viscous	LC 50 (Fish, 96 h): > 1.000 mg/l
Alkoxysulfolane	LC 50 (Fish, 96 h): 2,4 mg/l
olefin derivative	LC 50 (Fish, 96 h): > 101 mg/l
Ca Sulfonate	LC 50 (Fish, 96 h): > 1.001 mg/l (OECD 203)
ethoxylated amine	LC 50 (Fish, 96 h): 0,1 mg/l
Heterocyclic N-compound	LC 50 (Fish, 96 h): 0,3 mg/l (OECD 203)
Aquatic Invertebrates Specified substance(s)	
Base oil, low viscous	EC 50 (Water Flea, 48 h): > 1.000 mg/l
Alkoxysulfolane	EC 50 (Water Flea, 48 h): 4,6 mg/l
substitued hydrocarbyl sulphide	EC 50 (Water Flea, 48 h): 0,58 mg/l
Alkyl amine derivative	EC 50 (Water Flea, 48 h): 180 mg/l
olefin derivative	EC 50 (Water Flea, 48 h): > 101 mg/l
Ca Sulfonate	EC 50 (Water Flea, 48 h): > 1.001 mg/l
Heterocyclic N-compound	EC 50 (Water Flea, 48 h): 0,136 mg/l (OECD 202)
Chronic ToxicityProduct:	Based on available data, the classification criteria are not met.
Fish Specified substance(s)	
Alkoxysulfolane	NOEC (Fish, 96 d): 1 mg/l
Aquatic Invertebrates Specified substance(s)	

## SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



**Product name: ZF Lifeguard Hybrid 4**

ZF Aftermarket

Base oil, low viscous	NOEC (Water Flea, 21 d): 10 mg/l
Alkoxysulfolane	NOEC (Water Flea, 48 d): 0,63 mg/l
substituded hydrocarbyl sulphide	EC 50 (Water Flea, 21 d): 0,75 mg/l
Alkyl amine derivative	NOEC (Water Flea, 21 d): 56 mg/l
ethoxylated amine	NOEC (Water Flea, 21 d): 10 mg/l
Toxicity to Aquatic Plants Specified substance(s)	
base oil, low viscous	EC 50 (Alga, 72 h): > 1.000 mg/l
Alkoxysulfolane	NOEC (Alga, 72 h): 0,313 mg/l
substituded hydrocarbyl sulphide	NOEC (Alga, 96 h): 100 mg/l
olefin derivative	EC 50 (Alga, 72 h): > 101 mg/l
Ca Sulfonate	EC 50 (Alga, 72 h): > 1.000 mg/l
ethoxylated amine	NOEC (Alga, 72 h): 0,0156 mg/l
Heterocyclic N-compound	EC 50 (Alga, 72 h): 0,03 mg/l (OECD 201) NOEC (Alga, 72 h): 0,11 mg/l

### 12.2 Persistence and Degradability

Biodegradation Product: Specified substance(s)	Not applicable for mixtures
ethoxylated amine	63 % (28 d, OECD 301D)
Heterocyclic N-compound	(OECD 301B) The product is not biodegradable.

### 12.3 Bioaccumulative potential

Product:	Not applicable for mixtures
----------	-----------------------------

## SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



ZF Aftermarket

**Product name: ZF Lifeguard Hybrid 4**

### 12.4 Mobility in soil

Product: Not applicable for mixtures

### 12.5 Results of PBT and vPvB assessment

Product: The product does not contain any substances fulfilling the PBT/vPvB criteria.

### 12.6 Other adverse effects

No data available.

Water Hazard Class (WGK): WGK 2: significantly water-endangering.

---

## 13. Disposal considerations

### 13.1 Waste treatment methods

General information: Dispose in accordance with all applicable regulations.

Disposal methods: Discharge, treatment, or disposal may be subject to national, state, or local laws.

List of Waste (LoW) Codes 13 02 05\*: mineral-based non-chlorinated engine, gear and lubricating oils

---

## 14 Transport information

### ADR/RID

14.1 UN Number --  
14.2 UN Proper Shipping Name --  
14.3 Transport Hazard Class(es)  
Class: Non-dangerous goods  
Label(s): --  
Hazard No. (ADR): --  
Tunnel restriction code: --  
14.4 Packing Group: --  
14.5 Environmental hazards: --  
14.6 Special precautions for user: --

### IMDG

14.1 UN Number: --  
14.2 UN Proper Shipping Name: --

## SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



ZF Aftermarket

### Product name: ZF Lifeguard Hybrid 4

14.3 Transport Hazard Class(es)	
Class:	Non-dangerous goods
Label(s):	--
EmS No.:	--
14.4 Packing Group:	--
14.5 Environmental hazards:	--
14.6 Special precautions for user:	--

#### IATA

14.1 UN Number:	--
14.2 Proper Shipping Name:	--
14.3 Transport Hazard Class(es):	
Class:	Non-dangerous goods
Label(s):	--
14.4 Packing Group:	--
14.5 Environmental hazards:	--
14.6 Special precautions for user:	--

### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

---

## 15. Regulatory information

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

#### GB Regulations

The Ozone-Depleting Substances and Fluorinated Greenhouse Gases (Amendment etc.) (EU Exit) Regulations 2019      none

The Persistent Organic Pollutants (Amendment) (EU Exit) Regulations 2020      none

**15.2** Chemical safety assessme:      No Chemical Safety Assessment has been carried out.

---

## 16. Other information

## SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758



### Product name: ZF Lifeguard Hybrid 4

ZF Aftermarket

Revision Information:

Vertical lines in the margin indicate an amendment.

Wording of the H-statements in section 2 and 3

- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- 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.

Other information:

The classification complies with the current GB lists; however, it has been supplemented with expert literature information and information provided by/about our company. The following evaluation methods were used: On the basis of test data; Calculation Method; Bridging Principle "Substantially similar mixtures"; Expert Judgement

The data contained in this safety data sheet are based on our current knowledge and experience and are given to the best of our knowledge and belief. It characterizes the product only with regard to safety requirements for handling, transport and disposal. The data do not describe the product's properties (tech. product specification). Neither should any agreed property nor the suitability of the product for any specific technical application be deduced from the data contained in this safety data sheet. Modifications on this document are not allowed. The data are not transferable to other products. In the case of mixing the product with other products or in the case of processing, the data in this safety data sheet are not necessarily valid for the new-made material. It is the responsibility of the recipient of the product to observe federal, state and local law. Please contact us to obtain up-to-date safety data sheets. This document was issued electronically and has no signature