

SAFETY DATA SHEET

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



Trade name: ZF LifeguardFluid 8 ATF

ZF Aftermarket

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

1.1 Product identifier

Trade name: ZF LifeguardFluid 8 ATF

Product code: 5961.308.143
5961.308.147
5961.308.148
5961.308.149

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

Use of the Substance/Mixture: Gear oil

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 (0)89 19240 Information in German and English

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 GB-CLP

Environmental Hazards

Chronic hazards to the aquatic environment

Category 3

H412: Harmful to aquatic life with long lasting effects.

Hazard summary

SAFETY DATA SHEET

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



Trade name: ZF LifeguardFluid 8 ATF

ZF Aftermarket

| | |
|--|--|
| Physical Hazards: | No data available. |
| 2.2 Label elements | |
| Hazard Statement(s): | H412: Harmful to aquatic life with long lasting effects. |
| Precautionary statements: | |
| Prevention: | P273: Avoid release to the environment. |
| Disposal: | P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. |
| Supplemental label information: | GBH208: Contains: succinic acid derivative. May produce an allergic reaction. |

2.3 Other hazards

By handling of mineral oil products and chemical products no particular hazard is known when normal precautions (item 7) and personal protective equipment (item 8) are kept. The product may not be released into the environment without control.

3. Composition/information on ingredients

3.2 Mixtures

General information: Mixture containing severely refined base oils and additives.

| Chemical name | Identifier | Concentration * | UK-REACH Registration No. |
|--------------------------------|-------------------|------------------|---------------------------|
| base oil, low vis- cous | EINECS: 276-738-4 | 20,00% - <50,00% | |
| alkarylamine, long- chained | EINECS: 253-249-4 | 1,00% - <5,00% | |
| phenol derivative | Confidential | 1,00% - <5,00% | |

SAFETY DATA SHEET

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



Trade name: ZF LifeguardFluid 8 ATF

ZF Aftermarket

| | | | |
|--------------------------|-------------------|----------------|--|
| Alkyl thio phosphite | EC: 424-820-7 | 0,01% - <0,25% | |
| succinic acid derivative | EINECS: 299-434-3 | 0,10% - <1,00% | |

* 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: 276-738-4 | GBCLP: Asp. Tox. 1; H304 |
| alkarylamine, long-chained | EINECS: 253-249-4 | GBCLP: Aquatic Chronic 4; H413 |
| phenol derivative | Confidential | GBCLP: Aquatic Chronic 4; H413 |
| Alkyl thio phosphite | EC: 424-820-7 | GBCLP: Skin Corr. 1B; H314, Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Acute Tox. 4; H312, Eye Dam. 1; H318; M-Factor (aquatic acute): 10; M-Factor (aquatic chronic): 10 |
| succinic acid derivative | EINECS: 299-434-3 | GBCLP: Eye Irrit. 2; H319, Skin Sens. 1; H317, Aquatic Chronic 2; H411 |

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

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

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

SAFETY DATA SHEET

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



ZF Aftermarket

Trade name: ZF LifeguardFluid 8 ATF

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.

4.3 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: CO₂, 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.

5.2 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-fighter: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

In case of spills, beware of slippery floors and surfaces.

SAFETY DATA SHEET

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



ZF Aftermarket

Trade name: ZF LifeguardFluid 8 ATF

6.2 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 allow to enter drainage system, surface or ground water.

6.3 Methods and materials 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)

Specific use(s): Not applicable.

Storage Class: 10, Combustible liquids

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

SAFETY DATA SHEET

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



Trade name: ZF LifeguardFluid 8 ATF

ZF Aftermarket

None of the components have assigned exposure limits.

8.2 Exposure controls

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

Hand protection: Material: Nitrile butyl rubber (NBR).
Min. Breakthrough time: ≥ 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



Trade name: ZF LifeguardFluid 8 ATF

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

| | |
|------------------|---|
| Physical state: | liquid |
| Colour: | Green, Yellow |
| Odour: | Characteristic |
| Odour Threshold: | Not applicable for mixtures |
| pH: | substance/mixture is non-soluble (in water) |

| | | |
|---------------------------|-----------------------------|--|
| Freezing point | not determined | |
| Boiling point | not determined | |
| Flash point | 198 °C | |
| Evaporation rate | Not applicable for mixtures | |
| Flammability (solid, gas) | not determined | |
| Upper explosion limit | Not applicable for mixtures | |

SAFETY DATA SHEET

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



Trade name: ZF LifeguardFluid 8 ATF

ZF Aftermarket

| | | |
|--|---------------------------------------|--|
| Lower explosion limit | Not applicable for mixtures | |
| Vapour pressure | Not applicable for mixtures | |
| Relative vapour density | Not applicable for mixtures | |
| Relative density | 0,84 g/cm ³ (15°C) | |
| Solubility(ies) | | |
| Water solubility | Insoluble in water | |
| Solubility in other solvents | No data available. | |
| Partition coefficient: n-octanol/water | Not applicable for mixtures | |
| Autoignition temperature | not determined | |
| Decomposition Temperature: | not determined | |
| Viscosity, kinematic | 28,3mm ² /s (40°C) | |
| Explosive properties | Value not relevant for classification | |
| Oxidizing properties | Value not relevant for classification | |
| Particle characteristics | Not applicable | |

9.2 Other information

No data available.

10. Stability and reactivity

SAFETY DATA SHEET

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



Trade name: ZF LifeguardFluid 8 ATF

ZF Aftermarket

| | |
|---|---|
| 10.1 Reactivity | Stable under normal use conditions. |
| 10.2 Chemical stability: | Stable under normal use conditions. |
| 10.3 Possibility of hazardous reactions: | Stable under normal use conditions. |
| 10.4 Conditions to avoid: | Stable under normal use conditions. |
| 10.5 Incompatible materials: | Strong oxidizing substances. Strong acids. Strong bases. |
| 10.6 Hazardous decomposition products: | 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
Specified substance(s) available data.

base oil, low viscous
LD 50 (Rat): > 5.001 mg/kg (OECD 401)

alkarylamine, longchain
LD 50 (Rat): > 5.001 mg/kg (OECD 423)

succinic acid derivative
LD 50 (Rat, Male): > 10.000 mg/kg

Dermal
Product: ATEmix: 202.669 mg/kg

Specified substance(s)
Alkyl thio phosphite
LD 50 (Rat): > 501 mg/kg

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)
alkarylamine, longchaine
OECD 404 (Rabbit):
Not irritant.

phenol derivative
OECD 404 (Rabbit):
Not irritant.

SAFETY DATA SHEET

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



Trade name: ZF LifeguardFluid 8 ATF

ZF Aftermarket

Serious eye damage/eye irritation

Product:

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

Specified substance(s)

alkarylamine, longchained

OECD 405 (Rabbit):
Not irritant.

phenol derivative

OECD 405 (Rabbit):
Not irritant.

Respiratory or skin sensitisation

Product:

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

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

Specified substance(s)

alkarylamine, longchaine

No sensitizing effect (guinea pig); OECD
406

phenol derivative

No sensitizing effect (guinea pig); OECD
406

Germ cell mutagenicity

Product:

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

Carcinogenicity

Product:

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

Reproductive toxicity

Product:

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

Specific Target Organ Toxicity - Single Exposure

Product:

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

Specific Target Organ Toxicity - Repeated Exposure

Product:

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

Aspiration 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



Trade name: ZF LifeguardFluid 8 ATF

ZF Aftermarket

Other Adverse Effects:

No data available

12. Ecological information

12.1 Toxicity

| | |
|--|---|
| Acute toxicity Product: | Based on available data, the classification criteria are not met. |
| Fish Specified substance(s) base oil, low viscous | LC 50 (Fish, 96 h): > 100 mg/l (OECD 203) |
| alkarylamine, longchained | LC 50 (Fish, 96 h): > 101 mg/l (OECD 203) |
| Alkyl thio phosphite | LC 50 (Fish, 96 h): 1,5 mg/l (OECD 203) |
| succinic acid derivative | LC 50 (Fish, 96 h): > 100 mg/l (OECD 203) |
| Aquatic Invertebrates Specified substance(s) alkarylamine, longchain | EC 50 (Water Flea, 48 h): > 101 mg/l (OECD 202) |
| phenol derivative | EC 50 (Water Flea, 48 h): > 101 mg/l |
| Alkyl thio phosphite | EC 50 (Water Flea, 48 h): 0,09 mg/l (OECD 202) |
| succinic acid derivative | EL50 (Water Flea, 48 h): 9,5 mg/l (OECD 202) |
| Chronic Toxicity Product: | Based on available data, the classification criteria are not met. |
| Fish Specified substance(s) base oil, low viscous | NOEC (Fish, 14 d): > 1.000 mg/l |
| Aquatic Invertebrates Specified substance(s) base oil, low viscous | NOEC (Water Flea, 21 d): 10 mg/l (OECD 211) |
| phenol derivative | NOEC (Water Flea, 21 d): >= 1 mg/l |

SAFETY DATA SHEET

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



Trade name: ZF LifeguardFluid 8 ATF

ZF Aftermarket

| | |
|---|--|
| Alkyl thio phosphite | NOEC (Water Flea, 21 d): 0,14 mg/l |
| Toxicity to Aquatic Plants Specified substance(s) base oil, low viscous | NOEC (Alga, 72 h): > 100 mg/l (OECD 201) |
| alkarylamine, longchained | EC 50 (Alga, 72 h): 600 mg/l (OECD 201) |
| Alkyl thio phosphite | EC 50 (Alga, 72 h): 0,31 mg/l |
| succinic acid derivative | EL50 (Alga, 72 h): > 100 mg/l (OECD 201) |

12.2 Persistence and degradability

| | |
|---|--|
| Biodegradability Product: | Not applicable for mixtures |
| Specified substance(s) alkarylamine, longchained | 1 % (28 d, OECD 301B) Not easily biodegradable |

12.3 Bioaccumulative potential

| | |
|--|--------------------------------------|
| Product: | Not applicable for mixtures |
| Specified substance(s) alkarylamine, longchaine | Bioconcentration Factor (BCF): 1.584 |

12.4 Mobility in soil

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

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

| | |
|---------------------------|--|
| | Harmful to aquatic life with long lasting effects. |
| Water Hazard Class (WGK): | WGK 1: slightly 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 |

SAFETY DATA SHEET

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



Trade name: ZF LifeguardFluid 8 ATF

ZF Aftermarket

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: --
14.3 Transport Hazard Class(es)
Class: Non-dangerous goods
Label(s): --
EmS No.: --
14.3 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 73/78 and the IBC Code:

Not applicable.

15. Regulatory information

SAFETY DATA SHEET

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



Trade name: **ZF LifeguardFluid 8 ATF**

ZF Aftermarket

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 assessment

No Chemical Safety Assessment has been carried out.

16. Other information

Revision Information:

Vertical lines in the margin indicate an amendment.

Wording of the H-statements in section 2 and 3

- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- 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.
- H412 Harmful to aquatic life with long lasting effects.
- H413 May cause long lasting harmful effects to aquatic life.

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

SAFETY DATA SHEET

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



Trade name: ZF LifeguardFluid 8 ATF

ZF Aftermarket

Disclaimer:

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.