

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.



Product name: ZF LifeguardFluid 7.3 DCT

ZF Aftermarket

1. Product and company identification

1.1 Product identifier

Product name: ZF LifeguardFluid 7.3 DCT

Product number: 0671.090.534

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

Identified uses: Hydraulic/transmission fluid

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 number

24/7h Emergency information/ emergency number:

(+49) 89 19 240 (Poison emergency call – 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 (EU) 1272/2008 (CLP).

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

Environmental Hazards

Chronic hazards to the aquatic environment

Category 3

H412: Harmful to aquatic life with long lasting effects.

Hazard summary

No data available.

Physical Hazards:

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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: EUH208: Contains: Triisobutyl phosphate. 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 of synthetic base oils and severely refined base oil.

Chemical name	Identifier	Concentration *	REACH Registration No.
Hydrocarbons, low viscous	EC: 500-183-1	20,00% - <50,00%	01-2119486452-34
base oil, low viscous	EINECS: 276-738-4	20,00% - <50,00%	01-2119474889-13
Triisobutyl phosphate	EINECS: 204-798-3	0,10% - <1,00%	01-2119957118-32
Alkyl amine	EC: 620-540-6	0,10% - <0,25%	01-2119510877-33

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Solvent Naphtha, low viscous	EINECS: 265-198-5	0,10% - <1,00%	01-2119463588-24
prim. alkanolamine ether	EC: 939-485-7	0,01% - <0,10%	01-2119974116-35
hydroxyethyl-alkylamine	EINECS: 276-014-8	0,01% - <0,10%	01-2119957489-17

* 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
Hydrocarbons, low viscous	EC: 500-183-1	CLP: Asp. Tox. 1;H304
base oil, low viscous	EINECS: 276-738-4	CLP: Asp. Tox. 1;H304
Triisobutyl phosphate	EINECS: 204-798-3	CLP: Skin Sens. 1;H317
Alkyl amine	EC: 620-540-6	CLP: Skin Corr. 1C;H314, Eye Dam. 1;H318, Aquatic Acute 1;H400, Aquatic Chronic 1;H410, Acute Tox.4;H302; M-Factor (aquatic acute): 10; M-Factor (aquatic chronic): 1
Solvent Naphtha, low viscous	EINECS: 265-198-5	CLP: Asp. Tox. 1;H304, STOT SE 3;H336, Carc. 2;H351, Aquatic Chronic 2;H411
prim. alkanolamine ether	EC: 939-485-7	CLP: Acute Tox. 4;H302, Skin Corr. 1B;H314, Eye Dam. 1;H318, Aquatic Acute 1;H400, Aquatic Chronic 1;H410; M-Factor (aquatic acute): 100; M-Factor (aquatic chronic): 1
hydroxyethyl-alkylamine	EINECS: 276-014-8	CLP: Acute Tox. 4;H302, Skin Corr. 1C;H314, Eye Dam. 1;H318, Repr. 2;H361d, Aquatic Acute 1;H400, Aquatic Chronic 1;H410; M-Factor (aquatic acute): 10; M-Factor (aquatic chronic): 10

CLP: Regulation No. 1272/2008.

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

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IP 346 and are not classified as carcinogenic according to Note L of Annex VI of Regulation EC 1272/2008."

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.

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.

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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 firefighters:

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.

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 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

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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 Exposure Limits

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Triisobutyl phosphate - Vapor and aerosol.	AGW	50 mg/m ³	Germany. TRGS 900, Occupational Exposure Limits (AGW), as amended (09 2013)
Solvent Naphtha, low viscous	AGW	50 ml/m ³ 200 mg/m ³	Germany. TRGS 900, Occupational Exposure Limits (AGW), as amended
Solvent Naphtha, low viscous	AGW	100 mg/m ³	Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG), as amended (2011)

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

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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:

Safety glasses (EN 166) recommended during refilling.

**Skin protection
Hand Protection:**

Material: Nitrile butyl rubber (NBR).
Min. Breakthrough time: ≥ 480 min
Recommended thickness of the material: ≥ 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 breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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.

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9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state:	liquid
Color:	Amber
Odor:	Characteristic
Odor Threshold:	Not applicable for mixtures
pH:	Not applicable
Freezing point:	Not applicable for mixtures
Boiling Point:	Value not relevant for classification
Flash Point:	220 °C
Evaporation Rate:	Not applicable for mixtures
Flammability (solid, gas):	Value not relevant for classification
Flammability Limit - Upper (%)-:	Not applicable for mixtures
Flammability Limit - Lower (%)-:	Not applicable for mixtures
Vapor pressure:	Not applicable for mixtures
Vapor density (air=1):	Not applicable for mixtures
Density:	0.84 g/cm ³ (20 °C)
Solubility(ies)	
Solubility in Water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not applicable for mixtures
Autoignition Temperature:	Value not relevant for classification
Decomposition Temperature:	Value not relevant for classification
Kinematic viscosity:	35 mm ² /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

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.

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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 available data.

Specified substance(s)

Hydrocarbons, low viscous

LD 50 (Rat): > 5.000 mg/kg

base oil, low viscous

LD 50 (Rat): > 5.001 mg/kg (OECD 401)

Alkyl amine

LD 50 (Rat): 1.350 mg/kg (OECD 401)

hydroxyethyl-alkylamine

LD 50 (Rat): 1.500 mg/kg

Dermal
Product:

Not classified for acute toxicity based on available data.

Specified substance(s)

Solvent Naphtha, low viscous

LD 50 (Rabbit): > 31,600 mg/kg

Inhalation
Product:

Not classified for acute toxicity based on available data.

Specified substance(s)

Hydrocarbons, low viscous

LC 50 (Rat, 4 h): > 5 mg/l
Dusts, mists and fumes

Skin Corrosion/Irritation

Product:

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

Serious Eye Damage/Eye Irritation

Product:

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

Respiratory or Skin Sensitization

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)

Alkyl amine

No sensitizing effect (guinea pig);
OECD 406

hydroxyethyl-alkylamine

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 Hazard

Product:

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

Other adverse effects:

No data available.

12. Ecological information

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12.1 Toxicity

Acute toxicity

Product:

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

Fish

Specified substance(s)

Hydrocarbons, low viscous

LC 50 (Fish, 96 h): > 750 mg/l

base oil, low viscous

LC 50 (Fish, 96 h): > 100 mg/l (OECD 203)

Alkyl amine

LC 50 (Fish, 96 h): 0,1 mg/l (OECD 203)

hydroxyethyl-alkylamine

LC 50 (Fish, 96 h): 0,1 mg/l (OECD 203)

Aquatic Invertebrates

Specified substance(s)

Hydrocarbons, low viscous

EC 50 (Water Flea, 48 h): 190 mg/l

Alkyl amine

EC 50 (Water Flea, 48 h): 0.043 mg/l (OECD 202)

Solvent Naphtha, low viscous

EC 50 (Water Flea, 48 h): 3 - 10 mg/l

hydroxyethyl-alkylamine

EC 50 (Water Flea, 48 h): 0,48 mg/l (OECD 202)

Chronic Toxicity

Product:

Based on available data, the classification criteria are 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)

Alkyl amine

EC 10 (Water Flea, 21 d): 0.0107 mg/l (OECD 211)

hydroxyethyl-alkylamine

EC 10 (Water Flea, 21 d): 0,279 mg/l (OECD 211)

Toxicity to Aquatic Plants

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Specified substance(s) Hydrocarbons, low viscous	EC 50 (Alga, 72 h): > 1.000 mg/l
base oil, low viscous	NOEC (Alga, 72 h): > 100 mg/l (OECD 201)
Alkyl amine	EC 50 (Alga, 72 h): 0,0538 mg/l (OECD 201) NOEC (Alga, 72 h): 0,0156 mg/l
hydroxyethyl-alkylamine	EC 50 (Alga, 72 h): 0,107 mg/l (OECD 201) EC 10 (Alga, 72 h): 0,0092 mg/l (OECD 201)

12.2 Persistence and Degradability

Biodegradation Product:	Not applicable for mixtures
Specified substance(s) Alkyl amine	63 % (28 d, OECD 301D) Readily biodegradable
hydroxyethyl-alkylamine	> 60 % (28 d, OECD 301B) Readily biodegradable

12.3 Bioaccumulative potential

Product: Not applicable for mixtures

12.4 Mobility in soil

Product: Not applicable for mixtures

12.5 Results of PBT and vPvB assessment

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 2: significantly water-endangering.

13. Disposal considerations

13.1 Waste treatment methods

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General information:	Dispose in accordance with all applicable regulations.
Disposal methods:	Discharge, treatment, or disposal may be subject to national, state, or local laws.
European Waste 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:	--

ADN

14.1 UN Number:	--
14.2 UN 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:	--

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.:	--
14.4 Packing Group:	--
14.5 Environmental hazards:	--
14.6 Special precautions for user:	--

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IATA

14.1 UN Number:	--
14.2 UN 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

EU Regulations

Regulation (EC) No. 2037/2000
Substances that deplete the ozone layer: none

Regulation (EC) No. 850/2004 on
persistent organic pollutants: none

National Regulations

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

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

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.

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- H318 Causes serious eye damage.
- H336 May cause drowsiness or dizziness.
- H351 Suspected of causing cancer.
- H361d Suspected of damaging the unborn child.
- 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 EU lists; however, it has been supplemented with expert literature information and information provided by/about our company. It was derived from the test data and/or the application of the conventional method.

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.