



SAFETY DATA SHEET

According to GHS rev. 7 and standard SS
586

ZF Lifeguard eFluid 2

Version number: 1

Issued: 2026-07-20

SECTION 1: Identification

Product identifier

Trade name

ZF Lifeguard eFluid 2

Article No.

0671.090.534

Recommended use of the chemical and restrictions on use

Product type

Mixture.

Use

Transmission fluid

Not suitable for use in

No uses advised against identified.

Supplier's details

SDS created by

Global Division B Product Compliance Mgmt. System (BWC)

Supplier

ZF Services (China) Co., Ltd

Address

NO.162 Luoxiu Road

Xuhui

200231, Shanghai

China

Telephone

+ 86 21 2350 0600; 400 810 9669

Web site

www.zf.com/contact

Contact person

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SAFETY DATA SHEET

According to GHS rev. 7 and standard SS
586

ZF Lifeguard eFluid 2

Version number: 1

Issued: 2026-07-20

Emergency phone number

+49 89 19 240

Available outside office hours

Yes

SECTION 2: Hazard identification

Classification of the substance or mixture and any national or regional information

The product is not classified as hazardous according to GHS rev.7.

Label elements, including precautionary statements

More information

Contains sensitizing component - Triisobutyl phosphate

Other hazards which do not result in classification

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.

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, known to have endocrine disrupting properties.

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



ZF Lifeguard eFluid

2

Version number: 1
Issued: 2026-07-20

SECTION 3: Composition/information on ingredients

Mixture

Chemical name	CAS No. EC No.	Concentration	Classification	H-phrases M factor acute M factor chronic	Specific concentration limits ATE	Note
base oil, low viscous	72623-87-1 276-738-4	20 - 50%	Asp. Tox. 1	H304 - -		-
Hydrocarbons, low viscous	68037-01-4 500-183-1 -	20 - 50%	Asp. Tox. 1	H304 - -		kinematic viscosity < 20.5 cSt 40 °C.
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7 265-157-1	1 - <10%	Asp. Tox. 1	H304 - -		ATE (oral): >5000 mg/kg; ATE (dermal): >5000 mg/kg; ATE (inhalation): 5 mg/kg
Triisobutyl phosphate	126-71-6 204-798-3	0.1 - <1%	Skin Sens. 1B	H317 - -		-
Amine aromatic , alkylated	68411-46-1 270-128-1 ,	0.1 - <1%	Repr. 2, Aquatic Chronic 3	H361f, H412 - -		-
Hydrocarbons, low viscous	- 919-284-0	0.1 - 1%	Asp. Tox. 1, STOT SE 3 - narcosis, Carc. 2, Aquatic Chronic 2	H304, H336, H351, H411, - -		M = 0



SAFETY DATA SHEET

According to GHS rev. 7 and standard SS
586

ZF Lifeguard eFluid 2

Version number: 1

Issued: 2026-07-20

Substance additional information

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.

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

SECTION 4: First-aid measures

Description of necessary first-aid measures

Instantly remove any clothing soiled by the product.

Inhalation

Supply fresh air, consult a doctor in case of discomfort.

Skin contact

Wash with soap and water.

Eye contact

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

Ingestion

Rinse mouth thoroughly.

Most important symptoms/effects, acute and delayed

May cause skin and eye irritation.

Indication of immediate medical attention and special treatment needed, if necessary

Get medical attention if symptoms occur.

SECTION 5: Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media

Do not use water jet.



SAFETY DATA SHEET

According to GHS rev. 7 and standard SS
586

ZF Lifeguard eFluid 2

Version number: 1

Issued: 2026-07-20

Specific hazards arising from the chemical (e.g. nature of any hazardous combustion products).

During fire, health hazardous gases may be formed.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters

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.

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

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

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

Environmental precautions

Prevent from spreading (e.g. by binding or oil barriers). Avoid release to the environment. Environmental manager must be informed of all major spillages. Prevent further leakage or spillage if safe to do so. Do not allow to enter drainage system, surface or ground water.

Methods and materials for containment and cleaning up

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

Reference to other sections

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

SECTION 7: Handling and storage

Precautions for safe handling

Preventive handling precautions

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.



SAFETY DATA SHEET

According to GHS rev. 7 and standard SS
586

ZF Lifeguard eFluid 2

Version number: 1

Issued: 2026-07-20

Conditions for safe storage, including any incompatibilities

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

Specific end use(s)

No data available.

Other

Storage class: 10.
Combustible liquid.

Note: This is a regulation from Germany that does not form a legal basis in other countries.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure limits

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

Appropriate engineering 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 air-borne levels to an acceptable level.

General Information: 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.

Personal Protective Equipment Symbols



Eye / face protection

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



SAFETY DATA SHEET

According to GHS rev. 7 and standard SS
586

ZF Lifeguard eFluid 2

Version number: 1

Issued: 2026-07-20

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 break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Other skin protection

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.

Environmental exposure controls

No data available.

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 foot-wear that cannot be cleaned.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state

Liquid

Colour

Amber.

Odour

Characteristic.

Melting point / freezing point

Not determined.



SAFETY DATA SHEET

According to GHS rev. 7 and standard SS
586

ZF Lifeguard eFluid 2

Version number: 1

Issued: 2026-07-20

Boiling point or initial boiling point and boiling range

Not determined.

Flammability

Not determined.

Lower and upper explosion limit

No data available

Flash point

220 °C

Auto-ignition temperature

Not determined.

Decomposition temperature

Not determined.

pH

substance/mixture is non-soluble (in water).

Kinematic viscosity

35 mm²/s

Method

40°C

Solubility

No data available

Water solubility

Insoluble (water); not available (other solvents)

Partition coefficient n-octanol/water

Not applicable for mixtures.

Vapour pressure

Not applicable for mixtures.

Density and/or relative density

0.84 g/cm³

Method

@ 20°C

Relative vapour density

Not applicable for mixtures.



ZF Lifeguard eFluid 2

Version number: 1
Issued: 2026-07-20

Evaporation Rate

Not applicable for mixtures.

Explosive properties

Value not relevant for classification.

Oxidising properties

Value not relevant for classification.

Particle characteristics

Not applicable.

Other information

No data available.

SECTION 10: Stability and reactivity

Reactivity

Stable under normal use conditions.

Chemical stability

Stable under normal use conditions.

Possibility of hazardous reactions

Stable under normal use conditions.

Conditions to avoid

Stable under normal use conditions.

Incompatible materials

Strong oxidizing substances, strong acids and strong bases.

Hazardous decomposition products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

SECTION 11. Toxicological information

Information on the likely routes of exposure

Acute toxicity

Not classified for acute toxicity based on available data.



SAFETY DATA SHEET
According to GHS rev. 7 and standard SS
586

ZF Lifeguard eFluid

2

Version number: 1
Issued: 2026-07-20

Product / Sub- stance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Test animals	Method / Guideline
Hydrocarbons, low viscous -	LD50	> 5000 mg/kg	Oral	Rat.	-
base oil, low viscous -	LD50	> 5000 mg/kg	Oral.	Rat.	OECD 401
Base oil paraffinic -	LD50	> 5000 mg/kg	Oral.	Rat.	-
Amine aromatic , alkylated -	LD50	> 5000 mg/kg	Oral.	Rat.	OECD 401
Hydrocarbons, low viscous -	LD50	6318 mg/kg	Oral.	Rat.	OECD 423
Base oil paraffinic -	LD50	> 5000 mg/kg	Dermal	Rat.	-
Hydrocarbons, low viscous -	LC50	> 5 mg/l (dust/mist)	Inhalation.	-	-

Skin corrosion/irritation

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

Product / Substance name CAS / EC no.	Result	Method / Guideline
Base oil paraffinic -	Not irritating.	OECD 404

Serious eye damage/irritation

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

Product / Substance name CAS / EC no.	Result	Species	Method / Guideline
Base oil paraffinic -	Not irritating.	-	OECD 405
Amine aromatic , alkylated -	Not irritating.	Rabbit	OECD 405

**SAFETY DATA SHEET**

According to GHS rev. 7 and standard SS
586

ZF Lifeguard eFluid 2

Version number: 1**Issued:** 2026-07-20**Respiratory or skin sensitisation**

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

Product / Substance name CAS / EC no.	Result	Species	Method / Guideline
Amine aromatic , alkylated -	Not sensitizing.	Guinea Pig	OECD 406

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.

Product / Substance name CAS / EC no.	Exposure route	Species	Result	Other
Amine aromatic , alkylated -	Oral.	Rat.	CLP only - Suspected of damaging fertility.	OECD 421

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.

Base oil paraffinic : May be fatal if swallowed and enters airways.

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, known to have endocrine disrupting properties.

Other

No data available.



ZF Lifeguard eFluid 2

Version number: 1
Issued: 2026-07-20

SECTION 12: Ecological information

Toxicity

Acute toxicity

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

Acute fish toxicity

Product / Sub- stance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline
Hydrocarbons, low viscous -	LC50	> 750 mg/l	96 hr.	Fish.	-
Base oil paraffinic -	LC50	> 100 mg/l	96 hr.	Fish.	-
Amine aromatic , alkylated -	LC50	> 100 mg/l	96 hr.	Fish.	OECD 203
Hydrocarbons, low viscous -	LC50	2 - 5 mg/l	96 hr.	Fish.	-

Acute algae toxicity

Product / Sub- stance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline
base oil, low viscous -	EC50	> 1000 mg/l	72 hr	Algae.	-
Base oil paraffinic -	EC50	> 100 mg/l	72 hr	Algae.	OECD 201
Amine aromatic , alkylated -	EC50	> 100 mg/l	72 hr	Algae.	OECD 201
Hydrocarbons, low viscous -	EC50	1 - 3 mg/l	72 hr	Algae.	OECD 201

Acute crustacean toxicity



ZF Lifeguard eFluid

2

Product / Sub- stance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline
Hydrocarbons, low viscous -	EC50	190 mg/l	48 hr.	Daphnia magna	-
base oil, low viscous -	EL50	> 10,000 mg/l	48 hr.	Daphnia magna	OECD 202
Base oil paraffinic -	EC50	> 100 mg/l	48 hr.	Daphnia magna	-
Amine aromatic , alkylated -	EC50	51 mg/l	48 hr.	Daphnia magna	OECD 202

Chronic toxicity

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

Product / Sub- stance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline
Base oil paraffinic -	NOEC	10 mg/l	21 days	Daphnia magna	OECD 211
base oil, low viscous -	NOEC	> 100 mg/	72 hr	Algae.	OECD 201
base oil, low viscous -	NOEC	> 1000 mg/l	14 days	Fish.	-
base oil, low viscous -	NOEC	10 mg/l	21 days	Daphnia magna	OECD 211

Persistence and degradability

Not applicable for mixtures.

Product / Substance name CAS / EC no.	Duration	Result
Hydrocarbons, low viscous -	28 days	58 %

Bioaccumulative potential

Not applicable for mixtures.



ZF Lifeguard eFluid

2

Mobility in soil

Mobility

Not applicable for mixtures.

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.

Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, known to have endocrine disrupting properties.

Other adverse effects

No data available.

SECTION 13: Disposal considerations

Disposal methods

Disposal considerations

Dispose in accordance with all applicable regulations.

Do not empty into drains; dispose of this material and its container in a safe way. When storing used products, ensure that the waste categories and mixing instructions are observed.

Waste code	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

UN number

Not regulated.

UN proper shipping name

ADR / RID / ADN proper shipping name

Not regulated.

Transport hazard class(es)

Label

Not regulated.



SAFETY DATA SHEET

According to GHS rev. 7 and standard SS
586

ZF Lifeguard eFluid 2

Version number: 1

Issued: 2026-07-20

ADR / RID Class

Not regulated.

ADR / RID Classification code

Not regulated.

ADR / RID hazard identification number

Not regulated.

IMDG Class

Not regulated.

IATA Class

Not regulated.

ADN Class

Not regulated.

ADN Class Code

Not regulated.

Packing group

Not regulated.

Environmental hazards

Not regulated.

IMDG Marine Pollutant

Not regulated.

Special precautions for user

Not regulated.

IMDG EmS

Not regulated.

Transport in bulk according to IMO instruments

Not regulated.

Other

Additional information ADR-RID

Not regulated.

Additional information IMDG

Not regulated.



ZF Lifeguard eFluid 2

Version number: 1
Issued: 2026-07-20

Additional information IATA (ICAO)

Not regulated.

Not regulated.

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

National regulations

No data available

Chemical safety assessment

No data available

SECTION 16: Other information

Phrase meaning

Skin Sens. 1B - Skin sensitisation, hazard category 1, sub-category 1B

Repr. 2 - Reproductive toxicity, hazard category 2

Aquatic Chronic 3 - Hazardous to the aquatic environment — Chronic hazard category 3

Asp. Tox. 1 - Aspiration hazard, hazard category 1

STOT SE 3 - narcosis - Specific Target Organ Toxicity — Single exposure, hazard category 3 - narcosis

Carc. 2 - Carcinogenicity, hazard category 2

Aquatic Chronic 2 - Hazardous to the aquatic environment — Chronic hazard category 2

H304 May be fatal if swallowed and enters airways.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

H351 Suspected of causing cancer.

H361f Suspected of damaging fertility

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

Other

Additional information

This Safety Data Sheet is based on our current knowledge and is intended to describe the product in terms of health, safety, and environmental requirements only.