SAFETY DATA SHEET

Prepared in accordance with the standards GB/T 16483-2008 and GB/T 17519-2013

ZF LifeguardFluid 8.2

Version number: 1

Issued: 2026-11-19

SECTION 1: Identification

Product identifier

Trade name

ZF LifeguardFluid 8.2

Article No.

0671.090.545

Recommended use of the chemical and restrictions on use

Product type

Mixture.

Use

Gear oil.

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

Global Division B Product Compliance Mgmt. System (BWC)

Email address

msds.zf-aftermarket@zf.com

Emergency phone number

400 810 9669; +86 0532 8388 9090 NRCC for hazardous mixtures necessary

Available outside office hours

Yes

SECTION 2: Hazard identification

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

Classification according to regulation: GB 30000.2-2013□GB 30000.29-2013

Classification

Hazardous to the aquatic environment — Acute hazard category 2

Hazard statements

H401

Description

This product is classified as a hazardous substance and does not require labeling. It complies with standards GB/T 16483-2008 and GB/T 17519-2013.

Label elements, including precautionary statements

Hazard statements

H401 Toxic to aquatic life.

Precautionary statements

P273 Avoid release to the environment.
P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations..

More information

Signal word: No signal word.
Hazard statements: No hazard statements.
Precautionary statements: Not applicable.
Response: Not applicable.
Storage: Not applicable.
Disposal: Not applicable.

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.

SECTION 3: Composition/information on ingredients

Mixture

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
Hydrocarbons, low viscous	- - - -	50 - <100%	Asp. Tox. 1	H304 - -		CAS: ☐☐ (Confidential)
Base oil, low viscous	- - - -	20 - <50%	Asp. Tox. 1	H304 - -		☐☐ (Confidential)
Amine aromatic , alkylated	- - - -	0.1 - <1%	Repr. 2, Aquatic Chronic 3	H361f, H412 - -		☐☐ (Confidential)
Alkyl amine	- - - -	0.01 - <1%	Acute Tox. 4 - oral, Skin Corr. 1C, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 2	H302, H314, H318, H400, H402 - -		☐☐ (Confidential)
prim. alkanolamine ether	- - - -	0 - <0.1%	Acute Tox. 4 - oral, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1	H302, H314, H318, H400, H410 M-acut=100 M-chro=1		☐☐ (Confidential) M(Chronic) =1 M=100

Product based on
Mixture containing severely refined base oils and additives.

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.

SECTION 4: First-aid measures

Description of necessary first-aid measures

Be aware of own risk during rescue!
Observe good industrial hygiene practices.
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.
Notes to doctor/physician: Treat symptomatically.

SECTION 5: Fire-fighting measures

Suitable (and unsuitable) 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.

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

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

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.

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.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure limits
Occupational exposure limits: See below OEL table.

National occupational exposure limits

Ingredient	CAS No. EC No.	Exposure limit ppm / mg/m³	Source	Remark	Year
Alkyl methacrylate	- -	- / 100	China. OELs (Occupational Exposure Limits for Hazardous Agents in the Workplace) (GBZ 2.1), as amended (03 2008)	PC-TWA	-

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: 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.

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.

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.

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.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state

Liquid

Colour

Amber.

Odour

Characteristic.

Odour threshold
Not applicable for mixtures.

Melting point / freezing point
Not applicable for mixtures.

Boiling point or initial boiling point and boiling range
Value not relevant for classification.

Flammability
Value not relevant for classification.

Lower and upper explosion limit
Not applicable for mixtures.

Flash point
> 200 °C
Method
DIN EN ISO 2592

Auto-ignition temperature
Value not relevant for classification.

Decomposition temperature
Value not relevant for classification.

pH
No data available

Kinematic viscosity
25 mm2/s (40 °C)

Solubility
No data available

Partition coefficient n-octanol/water
Not applicable for mixtures.

Vapour pressure
Not applicable for mixtures.

Density and/or relative density
0.83 g/cm3 (20 °C)

Relative vapour density
Not applicable for mixtures.

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.

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Duration of exposure	Test animals	Method / Guideline
Alkyl amine -	LD50	1350 mg/kg	Oral.	-	Rat.	OECD 401
Hydrocarbons, low viscous -	LC50	> 5 mg/l (dust/mist)	Inhalation:	4 hr	Rat.	-
Hydrocarbons, low viscous -	LD50	> 5000 mg/kg	Oral.	-	Rat.	-
base oil, low viscous -	LD50	> 5001 mg/kg	Oral.	-	Rat.	OECD 401
Amine aromatic , alkylated -	LD50	> 5000 mg/kg	Oral.	-	Rat.	OECD 401

Skin corrosion/irritation

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

Product / Substance name CAS / EC no.	Result	Duration of exposure	Species	Method / Guideline
Alkyl amine -	Causes severe skin burns.	14 d	Rabbit	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
Amine aromatic , alkylated -	Not irritating.	Rabbit	OECD 405

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 a skin sensitizer.	Guinea Pig	OECD 406
Alkyl amine -	Not a sensitizer.	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.

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.

Information on other hazards

Other information
No data available.

SECTION 12: Ecological information

Toxicity

Acute toxicity
Based on available data, the classification criteria are met.

Acute fish toxicity

Product / Substance 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, low viscous -	LC50	> 100 mg/l	96 hr	Fish.	OECD 203
Amine aromatic , alkylated -	LC50	> 100 mg/l	96 hr	Fish.	OECD 203
Alkyl amine -	LC50	0.1 mg/l	96 hr	Fish.	OECD 203

Acute algae toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline
Hydrocarbons, low viscous -	EC50	> 1000 mg/l	72 hr	Algae.	-
Amine aromatic , alkylated -	EC50	> 100 mg/l	72 hr	Algae.	OECD 201
Alkyl amine -	EC50	0.0538 mg/l	72 hr	Algae.	OECD 201

Acute crustacean toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline
Hydrocarbons, low viscous -	EC50	190 mg/l	48 hr	Water Flea.	-
Amine aromatic , alkylated -	EC50	51 mg/l	48 hr	Daphnia magna	OECD 202

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline
Daphnia magna -	EC50	0.043 mg/l	48 hr	Water Flea.	OECD 202

Chronic toxicity

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

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline
base oil, low viscous -	NOEC	> 1000 mg/l	14 d	Fish.	-
base oil, low viscous -	NOEC	10 mg/l	21 d	Water Flea.	OECD 211
Alkyl amine -	EC10	0.0107 mg/l	21 d	Water Flea.	OECD 211
base oil, low viscous -	NOEC	> 100 mg/l	72 hr	Algae.	OECD 201
Alkyl amine -	NOEC	0.0156 mg/l	72 hr	Algae.	-

Persistence and degradability

Not applicable for mixtures.

Product / Substance name CAS / EC no.	Duration	Result	Degradation	Method / Guideline
Amine aromatic , alkylated -	-	Not readily degradable.	-	-
Alkyl amine -	28 d	The product is readily biodegradable.	63 %	OECD 301D

Bioaccumulative potential

Not applicable for mixtures.

Mobility in soil

Mobility

Not applicable for mixtures.

Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

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

Endocrine disrupting properties

No data available

Other adverse effects

No data available.

SECTION 13: Disposal considerations

Disposal methods

Disposal considerations

Dispose in accordance with all applicable regulations.
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.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.

SECTION 14: Transport information

UN number

UNRTDG: Not regulated.

UN proper shipping name

ADR / RID / ADN proper shipping name

Not Regulated

IMDG proper shipping name

Not Regulated

IATA proper shipping name

Not Regulated

Transport hazard class(es)

Label

Not regulated.

ADR / RID Class

Not regulated.

IMDG Class

Not regulated.

IATA Class

Not regulated.

ADN Class

Not regulated.

Packing group

Not regulated.

Environmental hazards

No.

IMDG Marine Pollutant

No.

Special precautions for user

Not applicable.

Transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

EU regulations

Not applicable.

National regulations

Decree No. 591 of the State Council of the People's Republic of China:Regulations on the Control over Safety of Hazardous Chemicals.; GB 6944: Classification and code of dangerous goods.;GB 12268: List of dangerous goods.GB 190: Packing symbol of dangerous goods.;GB 190: Packing symbol of dangerous goods.;GB 13690: General rule for Classification and hazard communication of chemicals.;GB 30000.(2-29): Rules for classification and labelling of chemicals - Part 2-29.;GB 15258-2009: General Rules for Preparation of precautionary label for chemicals.;GBZ 2.1: Occupational exposure limits for hazardous agents in the workplace.;Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Other regulations, limitations and legal regulations

Inventory list:
China inventory (IECSC): On or in compliance with the inventory.

Chemical safety assessment

No data available

SECTION 16: Other information

Phrase meaning

Aquatic Acute 2 - Hazardous to the aquatic environment — Acute hazard category 2
Asp. Tox. 1 - Aspiration hazard, hazard category 1
Repr. 2 - Reproductive toxicity, hazard category 2
Aquatic Chronic 3 - Hazardous to the aquatic environment — Chronic hazard category 3
Acute Tox. 4 - oral - Acute toxicity, oral, hazard category 4
Skin Corr. 1C - Skin corrosion, hazard category 1C
Eye Dam. 1 - Serious eye damage, hazard category 1
Aquatic Acute 1 - Hazardous to the aquatic environment — Acute hazard category 1
Aquatic Chronic 2 - Hazardous to the aquatic environment — Chronic hazard category 2
Skin Corr. 1B - Skin corrosion, hazard category 1B
Aquatic Chronic 1 - Hazardous to the aquatic environment — Chronic hazard category 1
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H361f Suspected of damaging fertility
H400 Very toxic to aquatic life.
H401 Toxic to aquatic life.
H402 Harmful to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

Other

Additional information

Disclaimer :

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.