



SAFETY DATA SHEET

According to 8th revision of GHS and
Egyptian standard ES 8398:2020

ZF Lifeguard Hybrid 3

Version number: 1

Issued: 2026-07-07

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name

ZF Lifeguard Hybrid 3

Article No.

5961.308.374

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

Product type

Mixture.

Relevant identified uses

Lubricant.

Containers $\geq 20\text{l}$ for commercial use only

Not suitable for use in

No uses advised against identified.

1.3. Details of the supplier of the safety data sheet

SDS created by

Global Division B Product Compliance Mgmt. System (BWC)

Supplier

ZF Aftermarket

Address

ZF Friedrichshafen AG

Obere Weiden 12

97424 Schweinfurt

Germany

Telephone

+49 9721 475 60

Email

msds.zf-aftermarket@zf.com

Web site

www.zf.com/contact



SAFETY DATA SHEET

According to 8th revision of GHS and
Egyptian standard ES 8398:2020

ZF Lifeguard Hybrid 3

Version number: 1

Issued: 2026-07-07

Contact person

Global Division B Product Compliance Mgmt. System (BWC)

Email

msds.zf-aftermarket@zf.com

1.4. Emergency telephone number

+49 (0)89 19240 Information in German and English

Available outside office hours

Yes

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to 8th revision of GHS.

Classification

Aspiration hazard, hazard category 1

Hazard statements

H304

Description

Classification according to 8th revision of GHS.

2.2. Label elements

Labelling according to 8th revision of GHS

Hazard pictograms



Signal word

Danger

Hazard statements

H304 May be fatal if swallowed and enters airways.

Precautionary statements

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P331 Do NOT induce vomiting.



ZF Lifeguard Hybrid

3

More information

Labelling according to 8th revision of GHS.

Labelling: Base oil paraffinic

Ingestion: If ingested, material may be aspirated into the lungs and cause chemical pneumonitis.

Treat appropriately.

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.

The substance/mixture does not contain components considered 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 $\geq 0,1 \%$.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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
Base oil paraffinic	64742-54-7 265-157-1 01-2119484627-25 649-467-00-8	50 - <100%	Asp. Tox. 1	H304 - -		ATE (oral): >5000 mg/kg; ATE (dermal): >5000 mg/kg; ATE (inhalation): 5 mg/kg
Base oil, low viscous	64742-55-8 265-158-7 01-2119487077-29 649-468-00-3	20 - <50%	Asp. Tox. 1	H304 - -		-

**SAFETY DATA SHEET**

According to 8th revision of GHS and
Egyptian standard ES 8398:2020

ZF Lifeguard Hybrid

3

Version number: 1**Issued:** 2026-07-07

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrases M factor acute M factor chronic	Specific concentration limits ATE	Note
Alkarylamine, long-chained	- 701-385-4 - -	0.1 - <1%	Repr. 2	H361f - -		-
Alkyl amine	1218787-32-6 620-540-6 01-2119510877-33 -	0.01 - <0.1%	Acute Tox. 4 - oral, Skin Corr. 1C, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1	H302, H314, H318, H400, H410 - -		M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 1
Alkylamine, long chain	124-28-7 204-694-8 01-2119486676-20 -	0.01 - 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=10 M-chro=1		M(Chronic)=1 M=10
prim. alkanolamine ether	- 939-485-7 01-2119974116-35 -	0.001 - <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		M=100 M(Chronic)=1

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- / EUH-statements mentioned in this section, see section 16.



SAFETY DATA SHEET

According to 8th revision of GHS and
Egyptian standard ES 8398:2020

ZF Lifeguard Hybrid 3

Version number: 1

Issued: 2026-07-07

SECTION 4: First aid measures

4.1. Description of 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

Immediately call a POISON CENTER/doctor. Rinse mouth. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

4.3. Indication of any immediate medical attention and special treatment needed

Get medical attention if symptoms occur.

SECTION 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

Do not use water jet.

5.2. Special hazards arising from the substance or mixture

During fire, gases hazardous to health may be formed.



SAFETY DATA SHEET

According to 8th revision of GHS and
Egyptian standard ES 8398:2020

ZF Lifeguard Hybrid 3

Version number: 1

Issued: 2026-07-07

5.3. Advice for firefighters

Special protective equipment for fire-fighters

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

Special firefighting 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

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. 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.

6.3. Methods and material 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.

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.

SECTION 7: Handling and storage

7.1. 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.

7.2. Conditions for safe storage, including any incompatibilities

Store locked up. 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.



SAFETY DATA SHEET

According to 8th revision of GHS and
Egyptian standard ES 8398:2020

ZF Lifeguard Hybrid 3

Version number: 1

Issued: 2026-07-07

7.3. Specific end use(s)

Not applicable.

Other

Storage class (TRGS 510): 10; Combustible liquids.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits

Occupational exposure limits: No exposure limit value known.

Biological Limit Values (BLV): No exposure indices known.

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 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 8th revision of GHS and
Egyptian standard ES 8398:2020

ZF Lifeguard Hybrid 3

Version number: 1

Issued: 2026-07-07

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.

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.

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

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

Colourless.

Odour

Characteristic.

Melting point / freezing point

-45 °C



SAFETY DATA SHEET

According to 8th revision of GHS and
Egyptian standard ES 8398:2020

ZF Lifeguard Hybrid 3

Version number: 1

Issued: 2026-07-07

Boiling point or initial boiling point and boiling range

Not determined.

Flammability

Not determined.

Lower and upper explosion limit

Not applicable for mixtures.

Flash point

202 °C

Auto-ignition temperature

Not determined.

Decomposition temperature

Not determined.

pH

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

Kinematic viscosity

17.5 mm²/s

Method

40°C

Solubility

Insoluble in water.

Partition coefficient n-octanol/water

Not applicable for mixtures.

Vapour pressure

Not applicable for mixtures.

Density and/or relative density

0.83 g/cm³

Method

15°C

Relative vapour density

Not applicable for mixtures.

Particle characteristics

Not applicable.



ZF Lifeguard Hybrid

3

Version number: 1
Issued: 2026-07-07

9.2. Other information
No data available.

SECTION 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.
- 10.5. Incompatible materials**
Strong oxidising substances, strong acids and strong bases.
- 10.6. Hazardous decomposition products**
Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: Toxicological information

- 11.1. Information on hazard classes.**
Acute toxicity
Based on available data, the classification criteria are not met.

Product / Sub- stance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Test animals	Method / Guideline
Alkylamine, long- chain -	LD50	1230 mg/kg	Oral	Rat	OECD 401
Alkyl amine -	LD50	1350 mg/kg	Oral	Rat	OECD 401
Alkylamine, long-	LD50	8000 mg/kg	Dermal	Rabbit	-



ZF Lifeguard Hybrid

3

Product / Sub- stance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Test animals	Method / Guideline
chain -					
Base oil paraffinic -	LD50	> 5000 mg/kg	Oral.	Rat.	-
Base oil paraffinic -	LD50	> 5000 mg/kg	Dermal	Rabbit	-
alkarylamine, long- chained -	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
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	Method / Guideline
Base oil paraffinic -	Not irritating.	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
Alkyl amine	No sensitizing effect	guinea pig	OECD 406



SAFETY DATA SHEET
According to 8th revision of GHS and
Egyptian standard ES 8398:2020

ZF Lifeguard Hybrid

3

Version number: 1
Issued: 2026-07-07

Product / Substance name CAS / EC no.	Result	Species	Method / Guideline
-			

Germ cell mutagenicity

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

Carcinogenicity

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

Repeated dose toxicity

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

May be fatal if swallowed and enters airways.

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

11.2. Information on other hazards

Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties at the level of 0.1% or higher.

Other information

No data available.

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

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

Acute fish toxicity



SAFETY DATA SHEET
According to 8th revision of GHS and
Egyptian standard ES 8398:2020

Version number: 1
Issued: 2026-07-07

ZF Lifeguard Hybrid

3

Product / Sub- stance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline
alkarylamine, long- chained -	LC50	> 100 mg/l	96 hr	Fish	OECD 203
Alkylamine, long- chain -	LC50	0.26 mg/l	96 hr	Fish	-
Alkyl amine -	LC50	0.1 mg/l	96 hr	Fish	OECD 203
Base oil paraffinic -	LC50	> 100 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 paraffinic -	EC50	> 100 mg/l	72 hr	Algae	OECD 201
alkarylamine, long- chained -	EC50	> 100 mg/l	70 hr	Algae	OECD 201
Alkylamine, long- chain -	EC50	0.0165 mg/l	72 hr	Algae	-
Alkyl amine -	EC50	0.0538 mg/l	72 hr	Algae	OECD 201

Acute crustacean toxicity

Product / Sub- stance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline
alkarylamine, long- chained -	EC50	> 100 mg/l	48 hr	Water Flea	OECD 202
Alkylamine, long-	EC50	0.0558 mg/l	48 hr	Water Flea	-



SAFETY DATA SHEET
According to 8th revision of GHS and
Egyptian standard ES 8398:2020

ZF Lifeguard Hybrid

3

Version number: 1
Issued: 2026-07-07

Product / Sub- stance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline
chain -					
Alkyl amine -	EC50	0.043 mg/l	48 hr	Water Flea	OECD 202
Base oil paraffinic -	EC50	> 100 mg/l	48 hr.	Water Flea.	-

Chronical toxicity

Product / Sub- stance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline	Remark
Alkylamine, long- chain -	NOEL	0.036 mg/l	21 d	Water Flea	-	-
Alkyl amine -	EC10	0.0107 mg/l	21 d	Water Flea	OECD 211	-
Alkyl amine -	NOEC	0.0156 mg/l	72 hr	Algae	-	-
Base oil par- affinic -	NOEC	10 mg/l	21 d.	Daphnia magna	OECD 211	Based on avail- able data, the classification cri- teria are not met.
Base oil par- affinic -	EC50	> 100 mg/l	72 hr	Algae.	OECD 201	Based on avail- able data, the classification cri- teria are not met.

12.2. Persistence and degradability

Not applicable for mixtures.

Product / Substance name CAS / EC no.	Duration	Result	Degradation	Method / Guideline
Alkylamine, longchain	28 d	The product is readily	68 %	OECD 301D



ZF Lifeguard Hybrid

3

Product / Substance name CAS / EC no.	Duration	Result	Degradation	Method / Guideline
-		biodegradable.		
Alkyl amine -	28 d	The product is readily biodegradable.	63%	OECD 301D
Base oil paraffinic -	-	Not readily.	-	-

Decay/transformation

Not applicable for mixtures.

12.3. Bioaccumulative potential

Not applicable for mixtures.

12.4. Mobility in soil

Mobility

Not applicable for mixtures.

12.5. 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.

12.6. Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties at the level of 0.1% or higher.

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal considerations

Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor.

The competence of the collector or contractor should be established beforehand.

Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Waste code	Waste description
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils



ZF Lifeguard Hybrid

3

Version number: 1
Issued: 2026-07-07

Please note - an asterisk (*) next to a code denotes that it is HAZARDOUS WASTE.

SECTION 14: Transport information

14.1. UN number

Not regulated.

14.2. UN proper shipping name

ADR / RID / ADN proper shipping name

Not regulated.

14.3. Transport hazard class(es)

Label

Not regulated.

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.

14.4. Packing group

Not regulated.

14.5. Environmental hazards

Not regulated.



SAFETY DATA SHEET

According to 8th revision of GHS and
Egyptian standard ES 8398:2020

ZF Lifeguard Hybrid 3

Version number: 1

Issued: 2026-07-07

IMDG Marine Pollutant

Not regulated.

14.6. Special precautions for user

Not regulated.

IMDG EmS

Not regulated.

14.7. Maritime transport in bulk according to IMO instruments

Not regulated.

SECTION 15: Regulatory information

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

National regulations

No data available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Phrase meaning

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

Repr. 2 - Reproductive toxicity, hazard category 2

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 1 - Hazardous to the aquatic environment — Chronic hazard category 1

Skin Corr. 1B - Skin corrosion, hazard category 1B

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.

H410 Very toxic to aquatic life with long lasting effects.



SAFETY DATA SHEET

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Egyptian standard ES 8398:2020*

ZF Lifeguard Hybrid 3

Version number: 1

Issued: 2026-07-07

Other

Additional information

Disclaimer:

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.