

SAFETY DATA SHEET

**Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II,
as amended by Commission Regulation (EU) 2020/878**



ZF ECOFLUID E

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

1.1 Product identifier

Product name : ZF ECOFLUID E

Product code : 0671.090.556
0671.090.557

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

Identified uses
Transmission oil

1.3 Details of the supplier of the safety data sheet

ZF Friedrichshafen AG
Löwentaler Straße 20
D-88046 Friedrichshafen
Tel. +49 7541 77 0
Fax +49 7541 77 90 8000
www.zf.com/contact

1.4 Emergency telephone number

24/7hEmergency telephone number:
+49(0) 89 19 240 Information in German and English

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Supplemental label elements : Contains N,N-bis(2-ethylhexyl)-((1,2,4-triazol-1-yl)methyl)amine. May produce an allergic reaction.
Safety data sheet available on request.

Annex XVII - Restrictions : Not applicable.

on the manufacture,
placing on the market and
use of certain dangerous
substances, mixtures and
articles

2.3 Other hazards

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

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

Other hazards which do not result in classification : Hazard of slipping on spilled product.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/substance	Identifiers	% (w/w)	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Distillates (petroleum), hydrotreated heavy paraffinic	REACH #: 01-2119484627-25 EC: 265-157-1 CAS: 64742-54-7 Index: 649-467-00-8	$\geq 50 - \leq 75$	Asp. Tox. 1, H304	-	[1]
Reaction Products of Diphosphorus Pentaoxide with Alcohols, C14-18 even, salted with Amines, C12-14, Tert-alkyl	REACH #: 01-2120120371-74 EC: 943-540-0	< 2.5	Skin Sens. 1B, H317 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	Skin Sens. 1B, H317: C $\geq 13\%$ M [Acute] = 1	[1]

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N,N-bis(2-ethylhexyl)-(1,2,4-triazol-1-yl)methyl amine	REACH #: 01-2119930450-49 EC: 401-280-0 CAS: 91273-04-0 Index: 613-072-00-9	<0.1	Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	M [Chronic] = 1	[1]
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Additional information : Mineral oil of petroleum origin. Product containing mineral oil with less than 3% DMSO extract as measured by IP 346 The product is made from synthetic base oils

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
dryness
cracking
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.



SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion products : carbon monoxide
carbon dioxide
Silicon Dioxide
hydrogen fluoride
fluorophosgen
nitrogen oxides
phosphorus oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.

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- Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Reportable hazardous constituent(s) contained in UVCB and/or multi-constituent substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

No exposure limit value known.

Biological Limit Values (BLV)

No exposure indices known.

- Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

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Advisory OEL : Mineral oil mist: USA: OSHA (PEL) TWA 5 mg/m³, NIOSH (REL) TWA 5 mg/m³, STEL 10 mg/m³, ACGIH (TLV) TWA 5 mg/m³ (highly refined)

DNELs/DMELs

Product/substance	Type	Exposure	Value	Population	Effects
Distillates (petroleum), hydrotreated heavy paraffinic	DNEL	Long term Oral	0.74 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.97 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.19 mg/m ³	General population	Local
	DNEL	Long term Inhalation	2.73 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	5.58 mg/m ³	Workers	Local
Reaction Products of Diphosphorus Pentaoxide with Alcohols, C14-18 even, salted with Amines, C12-14, Tert-alkyl	DNEL	Long term Dermal	0.1998 mg/cm ²	Workers	Local
	DNEL	Long term Dermal	0.1998 mg/cm ²	General population	Local
N,N-bis(2-ethylhexyl)-((1,2,4-triazol-1-yl)methyl)amine	DNEL	Long term Oral	0.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.43 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	0.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.76 mg/m ³	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Name	Method Detail
Distillates (petroleum), hydrotreated heavy paraffinic Reaction Products of Diphosphorus Pentaoxide with Alcohols, C14-18 even, salted with Amines, C12-14, Tert-alkyl	Secondary Poisoning	9.33 mg/kg	-
	Fresh water sediment	4.8 mg/kg dwt	-
	Marine water sediment	0.48 mg/kg dwt	-
	Soil	7.09 mg/kg dwt	-
	Sewage Treatment Plant	7.4 mg/l	-
	Fresh water	0.00075 mg/l	-
	Marine water	0.00075 mg/l	-
	Fresh water	1.38 µg/l	-
	Marine water	138 ng/l	-
	Fresh water sediment	567 µg/kg dwt	-
N,N-bis(2-ethylhexyl)-((1,2,4-triazol-1-yl)methyl)amine	Marine water sediment	56.7 µg/kg dwt	-
	Soil	200 µg/kg dwt	-
	Sewage Treatment Plant	1 mg/l	-

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

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- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : In case of contact through splashing: safety glasses with side-shields, EN 166.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Hydrocarbon-proof gloves
nitrile rubber
Fluorinated rubber
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
In case of prolonged contact with the product, it is recommended to wear gloves complying with ISO 21420 and EN 374 standards, protecting at least for 480 minutes and having a thickness of 0,38 mm at least. These values are indicative only. The level of protection is provided by the material of the glove, its technical characteristics, its resistance to the chemicals to be handled, the appropriateness of its use and its replacement frequency
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Non-skid safety shoes or boots
- Respiratory protection** : None under normal use conditions. If these are not sufficient to maintain exposure below the OEL, suitable respiratory protection must be worn (Type A/P1).
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.
In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature (20°C / 68°F) and pressure (1013 hPa) unless otherwise indicated

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Yellow.
- Odor** : Not available.
- pH** : Not applicable. Product is non-soluble (in water).
- Melting point/freezing point** : Technically not possible to measure
- Initial boiling point and boiling range** : >316°C [ISO 3405]
- Flash point** : Open cup: 200°C [Cleveland Open Cup (COC)]
- Flammability** : Not applicable.
- Lower and upper explosion limit** : Lower: 0.9%
Upper: 7%

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Vapor pressure : <0.013 kPa [room temperature]
Not applicable. [50°C]
Vapor density : >2 [Air = 1]
Relative density : 0.839
Density : 0.839 g/cm³ [15°C]
Solubility(ies) :

Media	Result
water	Not soluble

Miscible with water : No.
Partition coefficient: n-octanol/ water : Not applicable.
Auto-ignition temperature : >200°C [ASTM E 659]
Decomposition temperature : Not applicable.
Viscosity : Kinematic (40°C): 23 mm²/s [ISO 3104]
Particle characteristics
Median particle size : Not applicable.

9.2 Other information

No other relevant physical and chemical parameters for the safe use of the product

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : Stable under recommended storage and handling conditions (see Section 7).
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.
- 10.5 Incompatible materials** : Strong oxidizing agents
- 10.6 Hazardous decomposition products** : carbon monoxide
carbon dioxide
Silicon Dioxide
hydrogen fluoride
fluorophosgen
nitrogen oxides
phosphorus oxides

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SECTION 11: Toxicological information
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11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**Acute toxicity**

Product/substance	Result	Species	Dose	Exposure	Test
Distillates (petroleum), hydrotreated heavy paraffinic	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5 mg/l	4 hours	OECD 403
	LD50 Dermal	Rabbit - Male, Female	>5000 mg/kg	-	Read across OECD 402
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-	Read across OECD 401
N,N-bis(2-ethylhexyl)-(1,2,4-triazol-1-yl)methyl amine	LD50 Dermal	Rat	>2000 mg/kg	-	Read across OECD 402
	LD50 Oral	Rat	2500 mg/kg	-	OECD 401

Acute toxicity estimates

Product/substance	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
N,N-bis(2-ethylhexyl)-((1,2,4-triazol-1-yl)methyl) amine	2500	N/A	N/A	N/A	N/A

Conclusion/Summary : Based on available data, the classification criteria are not met.

Irritation/Corrosion

Product/substance	Result	Species	Score	Exposure	Test
N,N-bis(2-ethylhexyl)-(1,2,4-triazol-1-yl)methyl amine	Skin - Edema	Rabbit	3.33	-	OECD 404
	Skin - Erythema/Eschar	Rabbit	2.66	-	OECD 404

Conclusion/Summary

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

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

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

Sensitization

Product/substance	Route of exposure	Species	Result
N,N-bis(2-ethylhexyl)-(1,2,4-triazol-1-yl)methyl amine	skin	Guinea pig	Sensitizing

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met. Contains sensitizer. May produce an allergic reaction.

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

Mutagenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

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Teratogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)

Conclusion/Summary : Based on available data, the classification criteria are not met.

Aspiration hazard

Product/substance	Result
Distillates (petroleum), hydrotreated heavy paraffinic	ASPIRATION HAZARD - Category 1

Conclusion/Summary : Based on available data, the classification criteria are not met.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : Defatting to the skin. May cause skin dryness and irritation.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.
Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking
Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : Not available.
General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Reproductive toxicity : No known significant effects or critical hazards.

11.2 Information on other hazards

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**ZF ECOFLUID E****11.2.1 Endocrine disrupting properties**

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

11.2.2 Other information

Not available.

SECTION 12: Ecological information**12.1 Toxicity**

Product/substance	Result	Species	Exposure	Test
Distillates (petroleum), hydrotreated heavy paraffinic	Acute EC50 >100 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours	OECD 201
	Acute EC50 >10000 mg/l	Crustaceans - <i>Daphnia magna</i>	48 hours	OECD 202
	Chronic NOEL >100 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours	OECD 201
	Chronic NOEL >1000 mg/l	Crustaceans - <i>Daphnia magna</i>	21 days	-
Reaction Products of Diphosphorus Pentaoxide with Alcohols, C14-18 even, salted with Amines, C12-14, Tert-alkyl	Acute EC50 8.3 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours	-
	Acute NOEC 0.32 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours	-
N,N-bis(2-ethylhexyl)-(1,2,4-triazol-1-yl)methyl amine	Acute EC50 >1 mg/l	Algae - <i>Desmodesmus subspicatus</i>	72 hours	OECD 201
	Acute EC50 2.2 mg/l	Crustaceans - <i>Daphnia magna</i>	48 hours	OECD 202
	Acute LC50 1.1 mg/l	Fish - <i>Danio rerio</i>	96 hours	OECD 203
	Chronic NOEC 0.33 mg/l	Algae - <i>Desmodesmus subspicatus</i>	72 hours	OECD 201
	Chronic NOEC 0.07 mg/l	Crustaceans - <i>Daphnia magna</i>	21 days	OECD 211

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/substance	Test	Result	Dose	Inoculum
Distillates (petroleum), hydrotreated heavy paraffinic N,N-bis(2-ethylhexyl)-(1,2,4-triazol-1-yl)methyl amine	OECD 301F	31 % - Not readily - 28 days	-	Activated sludge
	OECD 301B	9 % - Not readily - 28 days	-	Activated sludge

Conclusion/Summary : Not available.

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Product/substance	Aquatic half-life	Photolysis	Biodegradability
Distillates (petroleum), hydrotreated heavy paraffinic Reaction Products of Diphosphorus Pentaoxide with Alcohols, C14-18 even, salted with Amines, C12-14, Tert-alkyl N,N-bis(2-ethylhexyl)- (1,2,4-triazol-1-yl)methyl) amine	-	-	Not readily
	-	-	Not readily
	-	-	Not readily

12.3 Bioaccumulative potential

Product/substance	LogK _{ow}	BCF	Potential
Distillates (petroleum), hydrotreated heavy paraffinic N,N-bis(2-ethylhexyl)- (1,2,4-triazol-1-yl)methyl) amine	>4	-	High
	5.3	5	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

Mobility in soil : Given its physical and chemical characteristics, the product generally shows low soil mobility. The product is insoluble and floats on water. Loss by evaporation is limited.

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

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According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: 13 02 05* 13 02 06*

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

ADR/RID	ADN	IMDG	ICAO/IATA	
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Other EU regulations

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

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Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Explosive precursors : Not applicable.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

Social Security Code, Articles L 461-1 to L 461-7 : Distillates (petroleum), hydrotreated heavy paraffinic RG 36; RG 84

Mineral oil	RG36
Synthetic oil	RG36

Reinforced medical surveillance : Decree n ° 2012-135 of January 30, 2012 relating to the organization of occupational medicine: not applicable

Other regulations : Art R4412-1 to R4412-57 of the Labor Code relating to the provisions applicable to dangerous chemical agents.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

LU - Luxembourg prohibited chemicals in the workplace

Not listed.

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II,
as amended by Commission Regulation (EU) 2020/878



ZF ECOFLUID E

Inventory list

Australia inventory (AIIIC)	: All components are listed or exempted.
Canada inventory (DSL/NDSL)	: At least one component is not listed in DSL but all such components are listed in NDSL.
China inventory (IECSC)	: All components are listed, exempted, or notified.
Europe inventory (EC)	: All components are listed or exempted.
Japan inventory	: Japan inventory (CSCL) : Not determined. Japan inventory (ISHL) : Not determined.
New Zealand Inventory of Chemicals (NZIoC)	: Not determined.
Philippines inventory (PICCS)	: At least one component is not listed.
Korea inventory (KECI)	: Not determined.
Taiwan Chemical Substances Inventory (TCSI)	: All components are listed, exempted, or notified.
Thailand inventory	: Not determined.
Turkey inventory	: Not determined.
United States inventory (TSCA 8b)	: All components are listed or exempted.
Vietnam inventory	: Not determined.

The information stated in this section relates solely to the conformity of the chemical product with the countries Inventories. The information used to confirm the inventory status of this product may be based on additional data to the chemical composition shown in Section 3. Other regulations may apply for importation or marketing authorizations.

15.2 Chemical Safety Assessment : Risk management measures and safety conditions of use are included in the relevant sections of the SDS

SECTION 16: Other information

* Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
DMEL = Derived Minimal Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
vPvB = Very Persistent and Very Bioaccumulative
PNEC = Predicted No Effect Concentration
LC50 = Median lethal concentration
LD50 = Median lethal dose
OEL = Occupational Exposure Limit
VOC = Volatile Organic Compound
UVCB Substance of unknown or Variable composition, Complex reaction products or Biological material
NOEC No Observed Effect Concentration
QSAR = Quantitative Structure–Activity Relationship
Unique Formula Identifier (UFI)

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Not classified.	

Full text of abbreviated H statements

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II,
as amended by Commission Regulation (EU) 2020/878



ZF ECOFLUID E

H304 H314 H317 H318 H400 H410 H411	May be fatal if swallowed and enters airways. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Toxic to aquatic life with long lasting effects.
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Full text of classifications [CLP/GHS]

Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 2 Asp. Tox. 1 Eye Dam. 1 Skin Corr. 1B Skin Sens. 1A Skin Sens. 1B	AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 2 ASPIRATION HAZARD - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN CORROSION/IRRITATION - Category 1 SKIN SENSITIZATION - Category 1A SKIN SENSITIZATION - Category 1B
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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named 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.