

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 05/23/2024

Version number 1.0

Reviewed on 05/23/2024

### 1 Identification

- **Product identifier**
- **Trade name:** ZF Ecofluid M
- **Article number:** 0671.090.384, 0671.090.385, 0671.090.386
- **Application of the substance / the mixture** Transmission oil.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
ZF Services, LLC  
777 Hickory Hill Drive  
Vernon Hills, Illinois 60061  
USA  
Telefon: +1 847 478 6868  
Fax: +1 847 478 6843
- **Information department:**  
Information available by telephone number for respective country given above.
- **Emergency telephone number:**  
1-866-928-0789 (For Emergencies, call CARECHEM 24/7 Domestic)  
1-215-207-0061 (For Emergencies, call CARECHEM 24/7 International)

### 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product is not classified, according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 1  
Fire = 1  
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



HEALTH 0 Health = 0  
FIRE 1 Fire = 1  
REACTIVITY 0 Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

64742-54-7	Distillates (petroleum), hydrotreated heavy paraffinic	>10-≤25%
	mineral oil	≤10%

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- **Additional information:**

The exact percentage of the composition has been withheld due to trade secret.

Highly refined mineral oil (IP 346 DMSO < 3%)

For the wording of the listed hazard phrases refer to section 16.

### 4 First-aid measures

- **Description of first aid measures**

- **General information:** No special measures required.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:**

Generally the product does not irritate the skin.

Wash with soap and water.

- **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:**

If symptoms persist consult doctor.

Rinse out mouth thoroughly with water.

Do not induce vomiting without medical advice.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fire with alcohol resistant foam.

- **For safety reasons unsuitable extinguishing agents:** Water with full jet

- **Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Carbon monoxide (CO)

carbon dioxide (CO<sub>2</sub>)

Sulfur oxide

Nitrogen oxides (NO<sub>x</sub>)

- **Advice for firefighters**

- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.

- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

- **Protective Action Criteria for Chemicals**

- **PAC-1:**

None of the ingredients is listed.

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**· PAC-2:**

*None of the ingredients is listed.*

**· PAC-3:**

*None of the ingredients is listed.*

### 7 Handling and storage

**· Handling:**

**· Precautions for safe handling** *No special measures required.*

**· Conditions for safe storage, including any incompatibilities**

**· Storage:**

**· Requirements to be met by storerooms and receptacles:** *No special requirements.*

**· Information about storage in one common storage facility:** *Store away from foodstuffs.*

**· Further information about storage conditions:**

*Store in cool, dry conditions in well sealed receptacles.*

**· Storage class:** *10*

**· Specific end use(s)** *No further relevant information available.*

### 8 Exposure controls/personal protection

**· Additional information about design of technical systems:** *No further data; see section 7.*

**· Control parameters**

**· Components with limit values that require monitoring at the workplace:**

*The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.*

**· Exposure controls**

**· Personal protective equipment:**

**· General protective and hygienic measures:**

*Do not eat, drink, smoke or sniff while working.*

*Take off contaminated clothing and wash it before reuse.*

*Wash hands before breaks and at the end of work.*

**· Breathing equipment:** *Not required.*

**· Protection of hands:**

*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.*

*Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

**· Penetration time of glove material**

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

**· Eye protection:** *Goggles recommended during refilling.*

**· Body protection:** *Protective work clothing*

### 9 Physical and chemical properties

**· Information on basic physical and chemical properties**

**· General Information**

**· Appearance:**

**Form:**

*Fluid*

**Color:**

*Yellow*

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· <b>Odor:</b>	Characteristic
· <b>Odor threshold:</b>	Not determined.
· <b>pH-value:</b>	Not applicable. Mixture is non-soluble (in water).
· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	>316 °C (>600.8 °F)
· <b>Flash point:</b>	>200 °C (>392 °F)
· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Ignition temperature:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	0.9 Vol %
<b>Upper:</b>	7 Vol %
· <b>Vapor pressure at 20 °C (68 °F):</b>	<0.1 hPa
· <b>Density at 20 °C (68 °F):</b>	0.856 g/cm <sup>3</sup> (7.14332 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Insoluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic at 40 °C (104 °F):</b>	50-55 mm <sup>2</sup> /s
· <b>Solvent separation test</b>	
<b>VOC content:</b>	0.00 %
<b>Solids content:</b>	0.0 %
· <b>Other information</b>	No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

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### 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

**64742-54-7 Distillates (petroleum), hydrotreated heavy paraffinic**

Oral	LD50	>5,000 mg/kg (Rat) (OECD TG 401)
Dermal	LD50	>5,000 mg/kg (rabbit) (OECD TG 402)
Inhalative	LC50/4 h	>5 mg/l (Rat) (OECD TG 403)

- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** No irritating effect.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

### 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

**64742-54-7 Distillates (petroleum), hydrotreated heavy paraffinic**

EC50 (72 h)	>100 mg/l (algae) (OECD TG 201)
EC50 (48 h)	>10,000 mg/l (Daphnia magna) (OECD TG 202)
NOEC (72 h)	>100 mg/l (algae) (OECD TG 201)
NOEC (21 d)	>1,000 mg/l (Daphnia magna)

- **Persistence and degradability**

**64742-54-7 Distillates (petroleum), hydrotreated heavy paraffinic**

Biological degradability 31 % /- 28 d

- **Behavior in environmental systems:**

- **Bioaccumulative potential**

**64742-54-7 Distillates (petroleum), hydrotreated heavy paraffinic**

Log Kow >4

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

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· **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- |  |                 |
|--|-----------------|
| · <b>UN-Number</b>   | Void            |
| · <b>DOT, ADR/RID/ADN, IMDG, IATA</b>  | Void            |
| · <b>UN proper shipping name</b>   | Void            |
| · <b>DOT, ADR/RID/ADN, IMDG, IATA</b>  | Void            |
| · <b>Transport hazard class(es)</b>  | Void            |
| · <b>DOT, ADR/RID/ADN, ADN, IMDG, IATA</b>                                       | Void            |
| · <b>Class</b>   | Void            |
| · <b>Packing group</b>   | Void            |
| · <b>DOT, ADR/RID/ADN, IMDG, IATA</b>  | Void            |
| · <b>Environmental hazards:</b>  | Not applicable. |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | Void            |

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.

- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

64742-54-7 Distillates (petroleum), hydrotreated heavy paraffinic

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- **Hazardous Air Pollutants**

None of the ingredients is listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

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**· Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**· Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**· Cancerogenity categories**
**· EPA (Environmental Protection Agency)**

None of the ingredients is listed.

**· TLV (Threshold Limit Value)**

None of the ingredients is listed.

**· AGW (German Maximum Workplace Concentration)**

None of the ingredients is listed.

**· NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

**· GHS label elements** Void

**· Hazard pictograms** Void

**· Signal word** Void

**· Hazard statements** Void

**· Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

**· Department issuing SDS:**

The safety data sheets were drawn up in cooperation with the Umweltkanzlei Beratungs- und Prüfgesellschaft mbH, Phone: +49(0)511-228514-0.

**· Contact:**
**· Date of preparation / last revision** 05/23/2024 / -

**· Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit