

MATERIAL SAFETY DATA SHEET

S-OIL MTF FX 75W-85W

Date of the previous version: 2019-12-16

Revision Date: 2024-04-22

Version 3

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name S-OIL MTF FX 75W-85W
Pure substance/mixture Mixture

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

Recommended Use Lubricant

1.3. Details of the supplier of the safety data sheet

Supplier S-OIL CORPORATION
192, Baekbeom-ro, Mapo-gu,
Seoul 04196, Korea

For further information, please contact:

Contact Point HSSEQ
E-mail Address dolyoo@stlc.co.kr

1.4. Emergency telephone number

Korea + 82 2 527-6051

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

GHS Classification

Not Classified

2.2. Label elements

GHS label elements, including precautionary statements

Symbol(s) Not Classified

Signal Words Not Classified

2.3. GHS Harzad Statements

Not Classified

2.4. GHS Precautionary Statements

Prevention Not Classified

Response Not Classified

Storage Not Classified

Disposal Not Classified

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2.5. Other hazards

Physical-Chemical Properties Contaminated surfaces will be extremely slippery.

Environmental properties Should not be released into the environment

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Mixture

Chemical Name	CAS-No	EC-No	Weight %
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	265-157-1	85.0 ~ 94.0
(Z)-octadec-9-enylamine	112-90-3	204-015-5	0.1 ~ 0.25
Mixed performance additive	Mixture	-	1.0 ~ 7.0
Additive 1	Mixture	-	6.0 ~ 11.0
Additive 2	Mixture	-	< 1.0

Additional information Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

4. FIRST AID MEASURES

4.1. Description of first-aid measures

General advice	IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. High pressure jets may cause skin damage. Take victim immediately to hospital.
Inhalation	Move to fresh air.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

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

Eye contact	Not classified.
Skin contact	Not classified. May produce an allergic reaction. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.
Inhalation	Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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Advice on safe handling	When using, do not eat, drink or smoke. For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.
Prevention of fire and explosion	Take precautionary measures against static discharges. Ground/bond containers, tanks and transfer/receiving equipment.
Hygiene measures	Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions	Keep away from food, drink and animal feeding stuffs. Keep in a bunded area. Keep container tightly closed. Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Do not remove the hazard labels of the containers (even if they are empty). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Protect from frost, heat and sunlight. Protect from moisture.
Materials to Avoid	Strong oxidizing agents.

7.3. Specific end uses

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits	Mineral oil mist : USA : OSHA (PEL) TWA 5 mg/m ³ , NIOSH (REL) TWA 5 mg/m ³ , STEL 10 mg/m ³ , ACGIH (TLV) TWA 5 mg/m ³ (highly refined).
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Legend	See section 16.
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8.2. Exposure controls

Occupational Exposure Controls

Engineering Measures	Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.
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Personal Protective Equipment

General Information	If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.
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Respiratory protection	None under normal use conditions. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respirator with combination filter for vapour/particulate (EN14387): Type A/P1. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.
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Eye Protection	If splashes are likely to occur, wear: Safety glasses with side-shields.
Skin and body protection	Wear suitable protective clothing. Protective shoes or boots. Long sleeved clothing.
Hand Protection	Hydrocarbon-proof gloves. Fluorinated rubber. Nitrile rubber. In case of prolonged contact with the product, it is recommended to wear gloves complying with EN 420 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. 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.

Environmental exposure controls

General Information The product should not be allowed to enter drains, water courses or the soil.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Color		Bright and Clear	
Physical State @20°C		Liquid	
Odor		Characteristic	

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH		Not applicable	
Boiling point/boiling range		Not applicable	
Flash point	206 °C		Cleveland Open Cup (COC)
Evaporation rate		No information available	
Flammability Limits in Air		No information available	
Vapor Pressure		No information available	
Vapor density		No information available	
Density	874 kg/m ³	@ 15 °C	
Water solubility	Negligible	Insoluble	
Solubility in other solvents		No information available	
logPow		No information available	
Autoignition temperature		No information available	
Viscosity, kinematic	69.5 mm ² /s 12.4 mm ² /s	@ 40 °C @ 100 °C	
Explosive properties	Not explosive		
Oxidizing Properties	Not applicable		
Possibility of hazardous reactions	Not applicable		

9.2. Other information

10. STABILITY AND REACTIVITY

10.1. Reactivity

General Information No information available.

10.2. Chemical stability

Stability. Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

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Hazardous Reactions None under normal processing.

10.4. Conditions to Avoid

Conditions to Avoid Heat (temperatures above flash point), sparks, ignition points, flames, static electricity.

10.5. Incompatible Materials

Materials to Avoid Strong oxidizing agents.

10.6. Hazardous Decomposition Products

Hazardous Decomposition Product None under normal use.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity Local effects Product Information

Skin contact . Not classified based on available data.

Eye contact . Not classified based on available data.

Inhalation . Not classified based on available data. Vapors inhaled in strong concentration have a narcotic effect on the central nervous system. May cause central nervous system depression with nausea, headache, tiredness, nausea, unconsciousness, cessation of breathing.

Ingestion . Not classified based on available data. Ingestion constitutes the main danger because of the toxicity of ethylene glycol. Accidental ingestion may be harmful to the central nervous system. Ingestion is followed first by digestive disorders (nausea, vomiting, abdominal pain), then by loss of muscular coordination, convulsions, headaches, and dizzy spells, preceding serious nervous disorders. This develops into a state of torpor and then coma, at times accompanied by convulsions. Intoxication can lead to a coma with metabolic acidosis that may be fatal.

Acute toxicity - Product Information

Oral Not classified based on available data.
0% of the mixture ingredient(s) of unknown acute oral toxicity.

Dermal Not classified based on available data.
0% of the mixture ingredient(s) of unknown acute dermal toxicity.

Inhalation Not classified based on available data.
0% of the mixture ingredient(s) of unknown acute inhalation toxicity.
ATEmix (inhalation-dust/mist) : 8.50 mg/l
ATEmix (inhalation-vapor) : 1488.90 mg/l

Acute toxicity - Component Information

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Distillates (petroleum), hydrotreated heavy paraffinic	LD50 > 5000 mg/kg bw (rat – OECD 420)	LD50 > 5000 mg/kg bw (rabbit – OECD 402)	LC50 > 5 mg/l (4h, aerosol) (rat – OECD 403)

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Mixed performance additive	ATEmix 5000 ~ 10000 mg/lg	-	-
Additive 1	LD50 > 2000 mg/kg (Rat)	LD50 > 2000 mg/kg (Rabbit)	-
Additive 2	LD50 > 2000 mg/kg (Rat)	LD50 > 2000 mg/kg (Rabbit)	-

Skin corrosion/Irritation - Component Information

Chemical name	Skin corrosion/irritation
Mixed performance additive	Classification : Severely irritating to skin. Rabbit. Remarks : Causes skin irritation. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.

Serious eye damage/Eye irritation - Component Information

Chemical name	Skin corrosion/irritation
Mixed performance additive	Classification : Risk of serious damage to eyes. Rabbit. Remarks : Causes serious eye damage.

Sensitization

Sensitization Not classified as a sensitizer.

Specific effects

Carcinogenicity This product is not classified carcinogenic.
Mutagenicity This product is not classified as mutagenic.
Reproductive toxicity This product does not present any known or suspected reproductive hazards.

Repeated Dose Toxicity

Subchronic toxicity No information available.

Target Organ Effects (STOT)

Target Organ Effects (STOT) No information available.

Other information

Other adverse effects Characteristic skin lesions (pimples) may develop following prolonged and repeated exposures (contact with contaminated clothing).

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Acute aquatic toxicity – Component information

Chemical name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish
Distillates (petroleum), hydrotreated heavy paraffinic	EL50 > 100 mg/l (48h, Pseudokirchnerella subcapitata – OECD 201)	EL50 > 10000 mg/l (48h, Daphnia magna – OECD 202)	LL50 > 100 mg/l (96h, Oncorhynchus mykiss – OECD 203)
(Z)-octadec-9-enylamine	ERC50 (72h) 0.46 mg/l (Desmodemus subspicatus – OECD 201) EBC50 (72h) 0.38 mg/l (Desmodemus subspicatus)	EC50 (48h) 0.011 mg/l (Daphnia magna – OECD 202)	LC50 (96h) 0.11 mg/l (Pimephales promelas – OECD 203)

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	– OECD 201)	
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Chronic aquatic toxicity – Component information

Chemical name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish
Distillates (petroleum), hydrotreated heavy paraffinic		NOEL > 10 mg/l (21d, Daphnia magna – QSAR Petrotox)	NOEL > 1000 mg/l (14/28d, Oncorhynchus mykiss – QSAR Petrotox)
(Z)-octadec-9-enylamine	NOEC (72h) 0.15 mg/l (Desmodesmus subspicatus – OECD 201) NOEC (96h) 0.01 mg/l (Selenastrum capricornutum – OECD 201)	NOEC (21d) 0.013 mg/l (Daphnia magna – OECD 211)	

Effects on terrestrial organisms

No information available.

12.2. Persistence and degradability

General Information

No information available.

12.3. Bioaccumulative potential

Product Information No information available.

logPow No information available

Component Information No information available.

12.4. Mobility in soil

Soil Given its physical and chemical characteristics, the product generally shows low soil mobility.

Air Loss by evaporation is limited.

Water Insoluble. The product spreads on the surface of the water.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

12.6. Other adverse effects

General Information No information available

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products Should not be released into the environment. Do not empty into drains. Dispose of in accordance with all applicable national environmental laws and regulations. Where possible recycling is preferred to disposal or incineration.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

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Other information Refer to section 8 for safety and protective measures for disposal personnel.

14. TRANSPORT INFORMATION

ADR/RID Not regulated**IMDG/IMO** Not regulated**ICAO/IATA** Not regulated**ADN** Not regulated

15. REGULATORY INFORMATION

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

International Inventories

TSCA

KECL

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

KECL - Korean Existing and Evaluated Chemical Substances

Further information

15.2. Chemical Safety Assessment

Chemical Safety Assessment No information available

16. OTHER INFORMATION

Abbreviations, acronyms

Legend Section 8

+	Sensitizer	*	Skin designation
**	Hazard Designation	C:	Carcinogen
M:	Mutagen	R:	Toxic to reproduction

Revision Date: 2024-04-22

Revision Note *** Indicates updated section.

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of the safety data sheet