Date of the previous version: 2016-10-19 Revision Date: 2016-10-19 Version 1

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

1.1. Product identifier

Product name S-OIL MARINE TP 1240

Pure substance/mixture Mixture

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

Recommended Use Marine Oil.

1.3. Details of the supplier of the safety data sheet

Manufacturer S-OIL TOTAL LUBRICANTS CO., LTD

3F Ace Tower, 92 Tongil-ro, Jung-gu

Seoul 100-712 Korea

For further information, please contact:

Contact Point E-mail Address

1.4. Emergency telephone number

Korea +82 2 6320 2000

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification

Not classified.

Symbol(s)

Not classified.

2.2. Label elements

Signal word Not classified.

2.3. hazards Statement

No information available.

2.4. Precautionary Statements

No information available.

2.5. Other hazards

Physical-Chemical Properties Contaminated surfaces will be extremely slippery.

Environmental properties Should not be released into the environment.

Date of the previous version: 2016-10-19 Revision Date: 2016-10-19 Version 1

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Mixture

Chemical Name	CAS-No	EC-No	Weight %
SEVERELY HYDROTREATED HEAVY PARAFFINIC DISTILLATE	64742-54-7	-	70.0 ~ 80.0
RESIDUAL OILS (PETROLEUM), HYDROTREATED	64742-57-0	-	10.0 ~ 20.0
MIXED PERFORMANCE ADDITIVE	Mixture	-	1.0 ~ 10.0
ADDITIVE 1	Mixture	-	< 2.0

Hazardous ingredients Do not contain hazardous substance nor substance with European workplace

exposure limits in concentration above regulatory thresholds

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 Rinse thoroughly with plenty of water, also under the eyelids.

Skin contact Remove contaminated clothing and shoes. Wash skin with soap and water. Wash

contaminated clothing before reuse.

High pressure jets may cause skin damage. In this case, the casualty should be sent

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. 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.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Date of the previous version: 2016-10-19 Revision Date: 2016-10-19 Version 1

5.1. Extinguishing media

Suitable extinguishing media Carbon dioxide (CO 2). ABC powder. Foam. Water spray or fog.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Special Hazard Incomplete combustion and thermolysis may produce gases of varying toxicity such as

carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These maybe highly dangerous if inhaled in confined spaces or at high concentration.

5.3. Advice for fire-fighters

Special protective equipment for

fire-fighters

Wear self-contained breathing apparatus and protective suit.

Other information Cool containers / tanks with water spray. Fire residues and contaminated fire

extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General Information Do not touch or walk through spilled material. Contaminated surfaces will be extremely

slippery. Use personal protective equipment. Ensure adequate ventilation. Remove all

sources of ignition.

6.2. Environmental precautions

General Information Do not allow material to contaminate ground water system. Try to prevent the material from

courses. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Methods for containment Dam up. Contain spillage, and then collect with non-combustible absorbent material, (e.g.

sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed

containers for disposal.

6.4. Reference to other sections

Personal Protective Equipment See Section 8 for more detail.

Waste treatment See section 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

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.

MATERIAL SAFETY DATA SHEET

S-OIL MARINE TP 1240

Date of the previous version: 2016-10-19 Revision Date: 2016-10-19 Version 1

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 feedingstuffs. 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 ACGIH STEL 10mg/m³ (Oil mist)

Legend See section 16.

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.

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.

Respiratory protectionNone 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 (EN 14387). The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their

choices and uses.

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. 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. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the

supplier of the EC approved gloves.

Date of the previous version: 2016-10-19 Revision Date: 2016-10-19 Version 1

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
Physical State @20°C
Odor
Dark brown
liquid
Characteristic

Property
pHValuesRemarks
Not applicableMethod

Boiling point/boiling range Not applicable

Flash point 256 °C Cleveland Open Cup (COC) 493 °F Cleveland Open Cup (COC)

@ 40 °C

Evaporation rateNo information availableFlammability Limits in AirNo information availableVapor PressureNo information available

Vapor PressureNo information availableVapor densityNo information availableDensity885.3 kg/m3© 15 °C

Density885.3 kg/m3@ 15 °CWater solubilitySoluble

Solubility in other solventsNo information availablelogPowNo information availableAutoignition temperatureNo information available

Viscosity, kinematic 128.2 mm²/s

Explosive properties Not explosive

Oxidizing Properties Not applicable

Possibility of hazardous reactions Not applicable

9.2. Other information

Other Information No information available.

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

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.

Date of the previous version: 2016-10-19 Revision Date: 2016-10-19 Version 1

10.6. Hazardous Decomposition Products

Hazardous Decomposition

CO, CO₂, Carbon oxide.

Product

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity Local effects Product Information

Skin contact . Not classified. High pressure injection of the products under the skin may have very

serious consequences even though no symptom or injury may be apparent.

Eye contact . Not classified.

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

Acute toxicity- Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
SEVERELY HYDROTREATED	LD50 > 15000mg/kg	LD50 > 5000mg/kg	
HEAVY PARAFFINIC DISTILLATE	(Rat)	(Rabbit)	-

Sensitization

Chemical Name	Sensitization
MIXED PERFORMANCE ADDITIVE	Eye: Contact with the eyes causes permanent damage, including blindness. Symptoms may include pain, tearing, reddening, swelling and impaired vision. If this material is heated, thermal burns may result from eye contact.
MIXED PERFORMANCE ADDITIVE (EYE)	Skin: Repeated contact with the skin may cause irritation. Symptoms may include pain, itching, discoloration, swelling, and blistering. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin. If this material is heated, thermal burns may result from skin contact.

Specific effects

CarcinogenicityThis product is not classified carcinogenic.MutagenicityThis product is not classified as mutagenic.

Reproductive toxicityThis 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).

Date of the previous version: 2016-10-19 Revision Date: 2016-10-19 Version 1

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Aquatic toxicity - Product Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates.	Toxicity to fish
SEVERELY HYDROTREATED HEAVY PARAFFINIC DISTILLATE	LC50 >1000mg/L 96hr	LC50 >1000mg/L 48hr	LC50 >1000mg/L 96hr

Effects on terrestrial organisms

No information available.

General Information

No information available.

12.2. Persistence and degradability

General Information

Persistence No information available.

degradability No information available.

General Information

No information available.

12.3. Bioaccumulative potential

Product Information

Chemical Name	Biodegradability
SEVERELY HYDROTREATED HEAVY	6% (28days)
PARAFFINIC DISTILLATE	070 (20ddy0)

<u>logPow</u>

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 Soluble.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessmentNo information available.

12.6. Other adverse effects



Date of the previous version: 2016-10-19 Revision Date: 2016-10-19 Version 1

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. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local

regulations.

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

disposal.

EWC Waste Disposal No. The following Waste Codes are only suggestions: 13 01 10. 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.

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

European Union

International Inventories

No information available

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 ***: Trade secret
M: Mutagen C: Carcinogen

Date of the previous version: 2016-10-19 Revision Date: 2016-10-19 Version 1

Revision Date:

2016-10-19

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 theuser 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