

MATERIAL SAFETY DATA SHEET

S-OIL SEVEN RED #5 SL 20W-50

Date of the previous version: 2019-11-04

Revision Date: 2025-08-08

Version 5

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

1.1. Product identifier

Product name S-OIL SEVEN RED #5 SL 20W-50
Pure substance/mixture Mixture

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

Recommended Use Gasoline Engine Oil

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 HSEQ
E-mail Address

1.4. Emergency telephone number

Korea + 82 2 3772-5655

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 Hazard Statements

Not classified

2.4. GHS Precautionary Statements

Prevention Not Classified

Response Not Classified

Storage Not Classified

Disposal Not Classified

MATERIAL SAFETY DATA SHEET**S-OIL SEVEN RED #5 SL 20W-50**

Date of the previous version: 2019-11-04

Revision Date: 2025-08-08

Version 5

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	79.0 ~ 87.0
bis(nonylphenyl)amine	36878-20-3	-	0.5 ~ 1.5
zinc O,O',O',O'-tetrakis (1,3-dimethylbutyl) bis (phosphorodithioate)	2215-35-2	-	< 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	Remove casualty to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration.
Ingestion	Clean mouth with water. 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.

MATERIAL SAFETY DATA SHEET

S-OIL SEVEN RED #5 SL 20W-50

Date of the previous version: 2019-11-04

Revision Date: 2025-08-08

Version 5

Waste treatment See section 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling	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.
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).
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	Protective engineering solutions should be implemented and in use before personal protective equipment is considered. The personal protective equipment (PPE) recommendations apply to the product ITSELF. In case of mixtures or formulations, it is suggested that you contact the relevant PPE suppliers.
----------------------------	--

MATERIAL SAFETY DATA SHEET

S-OIL SEVEN RED #5 SL 20W-50

Date of the previous version: 2019-11-04

Revision Date: 2025-08-08

Version 5

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 (EN 14387) : Type A/P1. Warning ! filters have a limited use duration. 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. EN 166
Skin and body protection	Wear suitable protective clothing. Protective shoes or boots. Long sleeved clothing. Type 4/6
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		Amber	
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	240 °C 464 °F		Cleveland Open Cup (COC) 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	875 kg/m ³	@ 15 °C	
Water solubility	Negligible	Insoluble	
Solubility in other solvents		No information available	
logPow		No information available	
Autoignition temperature	Not applicable		
Viscosity, kinematic	157.2 mm ² /s	@ 40 °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 None under normal processing.

MATERIAL SAFETY DATA SHEET

S-OIL SEVEN RED #5 SL 20W-50

Date of the previous version: 2019-11-04

Revision Date: 2025-08-08

Version 5

10.2. Chemical stability

Stability. Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous Reactions No dangerous reaction known under conditions of normal use.

10.4. Conditions to Avoid

Conditions to Avoid Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat and sparks.

10.5. Incompatible Materials

Materials to Avoid Strong oxidizing agents.

10.6. Hazardous Decomposition Products

Hazardous Decomposition Product Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. Combustion products include sulphur oxides (SO₂ and SO₃) and Hydrogen sulphide H₂S, Mercaptans, Nitrogen oxides (NO_x), Phosphorous oxides.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Information on likely routes of exposure

Skin contact . Not classified based on available information.

Eye contact . Not classified based on available information.

Inhalation . Not classified based on available information. Inhalation of vapors in high concentration may cause irritation of respiratory system.

Ingestion . Not classified based on available information. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Distillates (petroleum), hydrotreated heavy paraffinic	LD50 > 5000mg/kg bw (Rat - OECD 401)	LD50 > 5000 mg/kg bw (Rabbit - OECD 402)	LC50 > 5 mg/l (aerosol) (4h, rat – OECD 403)
bis(nonylphenyl)amine	LD50 > 5000mg/kg (rat – OECD 401)	LD50 > 2000 mg/kg (rabbit – OECD 402)	-
zinc O,O',O',O'-tetrakis (1,3-dimethylbutyl) bis (phosphorodithioate)	LD50 2230mg/kg (rat – OECD 401)	LD50 > 25000 mg/kg (rabbit – OECD 402)	LC50 > 2 mg/L (1h, rat – OECD 403)

Skin corrosion/Irritations

Not classified based on available data

Serious eye damage/eye irritation

MATERIAL SAFETY DATA SHEET

S-OIL SEVEN RED #5 SL 20W-50

Date of the previous version: 2019-11-04

Revision Date: 2025-08-08

Version 5

Not classified based on available data

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

1) Acute toxicity – Component information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates.	Toxicity to fish
Distillates (petroleum), hydrotreated heavy paraffinic	EL50 > 100mg/L (48hr, Pseudokirchnerella subcapitata - OECD 201)	EL50 > 10000mg/L (48hr, Daphnia magna - OECD 202)	LL50 > 100mg/L (96hr, Oncorhynchus mykiss - OECD 203)
bis(nonylphenyl)amine	EL50 (72h) > 100mg/l (Pseudokirchnerella subcapitata)	EL50 (48h) > 100mg/l (Daphnia magna)	LL50 (96h) > 100mg/l (Danio rerio)
zinc O,O,O',O'-tetrakis (1,3-dimethylbutyl) bis (phosphorodithioate)	EL50 (72h) 24mg/l (Desmodesmus subspicatus)	EL50 (48h) 23mg/l (Daphnia magna)	LL50 (96h) 4.5mg/l (Oncorhynchus mykiss)

2) Chronic 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)
bis(nonylphenyl)amine	EL10 (72h) > 100mg/l (Pseudokirchnerella subcapitata)	EL10 (21d) 4.12mg/l (Daphnia magna)	NOEL10 (34d) 10mg/l (Danio rerio)
zinc O,O,O',O'-tetrakis (1,3-dimethylbutyl) bis (phosphorodithioate)	NOEL (72h) 10mg/l (Desmodesmus subspicatus)	NOEL (21d) 0.4mg/l (Daphnia magna)	-

Effects on terrestrial organisms No information available.

12.2. Persistence and degradability

General Information No information available.

MATERIAL SAFETY DATA SHEET

S-OIL SEVEN RED #5 SL 20W-50

Date of the previous version: 2019-11-04

Revision Date: 2025-08-08

Version 5

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 referred to disposal or incineration.

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

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

MATERIAL SAFETY DATA SHEET**S-OIL SEVEN RED #5 SL 20W-50**

Date of the previous version: 2019-11-04

Revision Date: 2025-08-08

Version 5

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: 2025-08-08**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