

Material Safety Data Sheet (MSDS)

1. Chemical Product & Company Identification

A. Product Name : S-OIL 7 POWER STEERING FLUID

B. Intended Use

:Hydraulic Oil

C. Manufacturer & Supplier information

- Manufacturer : BLC Co., Ltd (☎ +82-52-263-1333 Fax. +82-52-263-1332)
- Address : #339 Bong Hwa-ro Sangbook-Myun Ulju-goon Ulsan-si Korea Rep.
- Supplier : BLC Co., Ltd (☎ +82-52-263-1333 Fax. +82-52-263-1332)
- Address : #339 Bong Hwa-ro Sangbook-Myun Ulju-goon Ulsan-si Korea Rep.

2. Hazard Identification

A. Hazard Identification

1) **Physicochemical** : Not Classified

2) **Health hazards** :

Specific target organ toxicity following repeat exposure : Category 2

3) **Environmental hazards** : Not Classified

B. Precautionary Statement(s) & Warning Label

1) Symbols



2) Signal Word : Warning

3) Hazard Statement(s)

H315 - Causes skin irritation

4) Precautionary Statement(s)

■ Precautionary

P264 Wash hands thoroughly after handling

P280 Wear protective gloves/protective clothing/eye protection/face protection.

■ Response

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P321 Specific treatment

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

■ Storage : Not Classified

■ Disposal

Not Classified

C. Other hazards.

NFPA grade (0 ~ 4 level)

Health : 2, Flammability : 1, Reactivity : 0

3. Composition / Information on ingredients

Chemical Name	Other name	CAS No.	%
Distillates (petroleum), hydrotreated heavy paraffinic	Hydrotreated (mild) heavy paraffinic distillate	64742-54-7	90 ~ 99 %
2-6 DI-3-Butyl-p-cresol	BUTYLATED HYDROXYTOLUENE	128-37-0	0.1 ~ 1 %
TRADE SECRET	-	-	0.1 ~ 1%

4. First aid Measures

A. Eye Contact :

Do not rub your eyes

Immediately flush eyes with plenty of water for at least 15minutes and call a doctor/physician.

B. Skin contact :

Flush skin with plenty of wter for at least 15 minutes while removing contaminated clothing and shoes.

Laundering enough contaminated clothing before reuse

Go to the hospital immediately if symptoms(flare, irritate) occur

Wash thoroughly after handling.

C. Inhalation :

When exposed to large amounts of steam and mist, move to fresh air.

Take specific treatment if needed.

D. Ingestion :

About whether I should induce vomiting Take the advice of a doctor.

Rinse your mouth with water immediately.

E. Likely Acute or Delayed symptoms/Effects :

Not available

F. Emergency measure / notes to physician

Notify medical personnel of contaminated situations and have them take appropriate protective measures.

5. Fire Fighting Measures

A. Extinguishing media :

1) Suitable extinguishing media

: Dry chemical, carbon dioxide, regular foam extinguishing agent, spray

2) Unsuitable extinguishing media

: Avoid use of water jet for extinguishing

3) Unusual fire (Big fire)

: Call 911

B. Unusual fire & Explosion hazard :

1) Hazardous combustion product : CO (carbon monoxide), CO₂ (carbon dioxide)

2) Fire & Explosion hazard : Slightly flammable to flammable in presence of open flames and sparks, of heat.

Non-flammable in presence of shocks.

C. Special fire fighting procedure / protection of firefighters :

- Move containers from fire area, if you can do without the risk
- Cool containers with water until well after fire is out.
- Keep unauthorized personnel out.
- Use appropriate extinguishing measure suitable for surrounding fire.
- Keep containers cool with water spray.
- Vapor or gas is burned at distant ignition sources can be spread quickly

6. Accidental Release Measure

A. Personal precautions :

- Ventilate closed spaces before entering.
- Must work against the wind, let the upwind people to evacuate.
- Handling the damaged containers or spilled material after wearing protective equipment.
- Do not direct water at spill or source of leak.
- Avoid skin contact and inhalation.

B. Environmental precautions :

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

C. Spill cleanup methods

- 1) Small liquid spill : sand or other non-combustible material, please let use absorption.
- 2) Large spillages : Stay upwind and keep out of low areas. Dike for later disposal.
- 3) Notification to central government, local government. When emissions at least of the standard amount
- 4) Dispose of waste in accordance with local regulation.
- 5) Appropriate container for disposal of spilled material collected.
- 6) Wipe off the solvent.

7. Handling and Storage

A. Handling

- Comply with all applicable laws and regulations for handling
- Dealing only with a well-ventilated place.
- Operators should wear antistatic footwear and clothing.
- Do not inhale the steam prolonged or repeated.

B. Storage

- Do not use damaged containers.
- Do not apply any physical shock to container.
- Keep in the original container
- Please pay attention to incompatibilities materials and conditions to avoid.
- Prevent static electricity and keep away from combustible materials or heat sources.

8. Exposure Controls / Personal Protection

A. Exposure limit value :

ACGIH TLV

[Distillates (petroleum), hydrotreated heavy paraffinic] : TWA 5 mg/m³, Inhalable particulate matter
(Mineral oil, Pure, highly and severely refined)

OSHA : No data available

B. Engineering Control :

A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area

The use of local exhaust ventilation is recommended to control emissions near the source.

C. Personal protective equipment

1) Respiratory protection

Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum.

Consider warning properties before use.

Any chemical cartridge respirator with organic vapor cartridge(s).

Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).

Any air-purifying respirator with a full facepiece and an organic vapor canister

2) Eye protection

Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield

Provide an emergency eye wash station and quick drench shower in the immediate work area.

3) Hand protection

Wear appropriate glove

Butyl rubber gloves are recommended.

4) Skin / Body protection

Wear protective cloths.

9. Physical and Chemical properties

A. Appearance : Physical state - liquid, Color - Clear RED

B. Odor : Mild

C. Odor Threshold : No data available

D. pH : Not available

E. Melting Point / Freezing Point : No data available

F. Boiling Point / range : Not available

G. Flash Point : More than 200 °C

H. Evaporation rate : No data available

I. Flammability Limit (Lower/Upper) : No data available

J. Vapor pressure : No data available

K. Solubility in water : No data available

L. Vapor density (Air=1) : No data available

M. Specific Gravity : 0.864

N. Partition Coefficient (n-Octanol/Water) : No data available

O. Auto-ignition temperature : No data available

P. Thermal decomposition : No data available

Q. Viscosity : 32.0 cSt at 40 °C, 5.315 cSt at 100 °C

R. Molecular weight : Not Applicable / Mixture

10. Stability and Reactivity

A. Stability : This material is stable under recommended storage and handling conditions

B. Possibility of hazardous reaction : Hazardous Polymerization will not occur

C. Condition to avoid : Avoid contact with incompatible materials and condition.

Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

D. Incompatible material : Not available

E. Hazardous decomposition products : May emit flammable vapour if involved in fire.

11. Toxicological Information

A. Route of exposure

- 1) Inhalation : No data available
- 2) Ingestion : No data available
- 3) Skin contact : No data available
- 4) Eye contact : No data available

B. Delayed, Immediate, and Chronic effects of Short-and Long-term Exposure

Acute toxicity

*Oral - ATE MIX : >5000mg/kg

- [Distillates (petroleum), hydrotreated heavy paraffinic] : LD50 > 15000 mg/kg Rat

*Dermal - ATE MIX : >5000mg/kg

- [Distillates (petroleum), hydrotreated heavy paraffinic] : LD50 > 5000 mg/kg Rat

*Inhalation - ATE MIX : 2.0mg/L~10.0mg/L

- [Distillates (petroleum), hydrotreated heavy paraffinic] : Mist LC50 = 2.18 mg/l 4 hr Rat

Skin corrosion/irritation

-Causes skin irritation

Serious eye damage/irritation

-Not available

Respiratory sensitization

-Not available

Skin sensitization

-Not available

Carcinogenicity

* IARC

-Not available

* OSHA

-Not available

* ACGIH

- [Distillates (petroleum), hydrotreated heavy paraffinic] : A4

* NTP

-Not available

* EU CLP

- [Distillates (petroleum), hydrotreated heavy paraffinic] : Carc.1B

Germ cell mutagenicity

-Not available

Reproductive toxicity

- Not available
- STOT–single exposure
 - Not available
- STOT–repeated exposure
 - Not available
- Aspiration hazard
 - Not available

12. Ecological Information

A. Ecotoxicity

- Fishes : LC50 > 5000 mg/l 96 hr *Oncorhynchus mykiss*
- Crustacea : EC50 > 1000 mg/l 48 hr *Daphnia magna*
- Algae : EC50 > 1000 mg/l 96 hr *Scenedesmus subspicatus*

B. Persistence and Degradability

- Persistence : log Kow = 3.9 ~ 6 (Estimates)
- Degradability : Not available

C. Bio accumulation

- Accumulation : Not available

D. Ozone layer hazard : Not applicable

E. Mobility in Soil : No data available

F. Other Information : No data available

13. Disposal Consideration

A. Disposal method : Since more than two kinds of designaed waste is mixed, it is difficult to treat seperatly then can be reduction or stabilization by incineration or similar process.

If water separation is possible, pre-process with Water separation process. Dispose by incineration

B. Disposal instruction : The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.

14. Transportation Information

14.1 UN number

-Not available

14.2 UN proper shipping name

-Not available

14.3. Transport hazard class(es)

-Not available

14.4. Packing group

-Not available

14.5. Environmental hazards

-Not available

14.6. Special precautions for user

-Not available

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

-Not available

15. Regulatory Information

A. Regulation

POPs Management Law

- Not applicable

Information of EU Classification

* Classification

- [Distillates (petroleum), hydrotreated heavy paraffinic] : Carc. Cat. 2; R45

* Risk Phrases

- [Distillates (petroleum), hydrotreated heavy paraffinic] : R 45

*Safety Phrase

- [Distillates (petroleum), hydrotreated heavy paraffinic] : S53, S45

US

OSHA regulation (29 CFR1910.119) : No

CERCLA 103 regulation(40 CFR 302.4) : No

EPCRA 302 regulation(40 CFR355.30) : No

EPCRA 304 regulation(40 CFR355.40) : No

EPCRA 313 regulation(40 CFR372.65) : No

Rotterdam Convention listed ingredients

- Not applicable

Stockholm Convention listed ingredients

- Not applicable

Montreal Protocol listed ingredients

- Not applicable

16. Other Information

The information presented herein is believed to be factual as it has been derived from the works from the works and opinions of persons believed to be qualified experts; however, nothing contained in this information is to be taken as a warrant or representation for which **BLC Co., LTD.**

Bears legal responsibility. The user should review any recommendation in the specific context of the intended use to determine whether they are appropriate.

A. Issue date :

2018. 04. 01

B. Last revision :

2024. 03. 01 (Rev. 2) - Accordance with GHS regulation