

Safety Data Sheet

According to Hazard Communication Standard (29 CFR 1910.1200)

L-HM 100 Anti-wear Hydraulic Oil

Version 1.0

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SDS record number: CSSS-TCO-010-141135

1. Product and Company Identification

Material name	L-HM 100 Anti-wear Hydraulic Oil
CAS #	See section 3
Product code	60205822
Product use	Comprehensively used in lubrication of high pressure hydraulic system in engineering machinery, mining machinery, metallurgical equipment and so on.
Manufacturer/Supplier	
Supplier(Manufacturer):	SINOPEC LUBRICANT CO., LTD.
Address:	No. 6 Anning Zhuang West Road, Haidian District, Beijing, P.R.China
Contact person(E-mail):	csc.lube@sinopec.com
Telephone:	00-86-95388-3
Fax:	86-10-82410856
Emergency telephone Number:	00-86-95388-3

2. Hazards identification

GHS classification

Physical hazards	Not classified
Health hazards	Not classified
Environmental hazards	Not classified

GHS label elements

Hazard Pictograms	No hazard pictogram is used.
Signal word	No signal word is used.
Hazard statement	Not applicable.

Precautionary statement

Prevention	Not applicable.
Response	Not applicable.
Storage	Not applicable.
Disposal	Not applicable.
Other hazards	Not available.

3. Composition / Information on Ingredients

Components	CAS#	Percent
Mineral oil	8042-47-5	97.0 – 99.9%weight
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	0.1 - 3.0%weight

4. First Aid Measures

First aid procedures

Eye contact	No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.
Skin contact	No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Inhalation

No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

Ingestion

No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Notes to physician

Treat symptoms.

5. Fire Fighting Measure**Flammable properties**

Not available.

Extinguishing media**Suitable extinguishing media**

Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Unsuitable extinguishing media

Not available.

Firefighting equipment/instructions

This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Hazardous combustion products

Carbon monoxide, carbon dioxide, and unidentified organic compounds.

6. Accidental Release Measures**Personal precautions**

Eliminate all sources of ignition in vicinity of spilled material.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

7. Handling and Storage**Handling**

Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water. Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'. Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner

or disposed of properly.

Storage

Keep container tightly closed in a dry and well-ventilated place.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Mineral oil (CAS 8042-47-5)	PEL	5 mg/m ³	Mist.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Mineral oil (CAS 8042-47-5)	TWA	5 mg/m ³	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Mineral oil (CAS 8042-47-5)	STEL	10 mg/m ³	Mist.
	TWA	5 mg/m ³	Mist.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Individual protection measures, such as personal protective equipment:

Eye / face protection

No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin protection

No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: Neoprene, Nitrile Rubber.

Respiratory protection

No respiratory protection is normally required. No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

General hygiene considerations

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

9. Physical & Chemical Properties

Appearance

Physical state

Liquid

Form

Liquid

Color

Light to Brown

Odor

Petroleum odor

Odor threshold

Not available

pH

Not available

Vapor pressure

<0.01 mmHg Maximum @ 37.8 °C (100 °F)

Vapor density

>1 Minimum

Boiling point	>280°C (Estimated value)
Melting point/Freezing point	Not available
Solubility (water)	Insoluble in water.
Density	0.84 kg/l - 0.93 kg/l(20 °C) (68° F)
Flash point	(Cleveland Open Cup) 200 °C (392 °F) Minimum
Partition coefficient	Not available
Flammability limits in air, upper, %by volume	Not available
Flammability limits in air, lower, % by volume	Not available
Auto-ignition temperature	Not available
VOC	Not available
Percent volatile	Not available
Molecular Formula	Not available
Molecular Weight	Not available
Other data	
Viscosity	90.0mm ² /s-110.0mm ² /s @40°C (104° F)
Dissociation constant	Not available
Pour Point:	-12 °C (Typical)

10. Chemical Stability & Reactivity Information

Reactivity	The substance is stable under normal storage and handling conditions.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Incompatible materials. Heat. Hot surfaces. Flames.
Incompatible materials	May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous decomposition products	Carbon monoxide, carbon dioxide, and unidentified organic compounds.
Possibility of hazardous reactions	No hazardous reactions known.

11. Toxicological Information

Toxicokinetics, metabolism and distribution:

Non-human toxicological data: Not available

Information on toxicological effects:

Acute toxicity:

Mineral oil (CAS#8042-47-5)

LD50(Oral, Rat):	> 5000 mg/kg bw
LD50(Dermal, Rabbit):	> 2000 mg/kg bw
LC50(Inhalation, Rat):	> 5 mg/L 4 h
Skin corrosion/Irritation:	Not classified
Serious eye damage/irritation:	Not classified
Respiratory or skin sensitization:	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
STOT- single exposure:	Not classified
STOT-repeated exposure:	Not classified
Aspiration hazard:	Not classified

12. Ecological Information

Toxicity:

Mineral oil (CAS#8042-47-5)

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LL50	> 10000 mg/L	96h	Fish	OECD 203	N/A	N/A
LL50	> 100 mg/L	48h	Daphnia	OECD 202	N/A	N/A
EC50	N/A	72h	Algae	OECD 201	N/A	N/A

Persistence and degradability: This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.

Bioaccumulative potential: Not available.

Mobility in soil: Not available.

Results of PBT&vPvB assessment: Not available.

Other adverse effects: Not available.

13. Disposal Considerations

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

DOT

Basic shipping requirements:

UN number Not regulated

Proper shipping name Not regulated

Hazard class Not regulated

Packing group Not regulated

Environmental hazards No

IATA

UN number Not regulated

UN proper shipping name Not regulated

Transport hazard class(es) Not regulated

Packing group Not regulated

Environmental hazards No

IMDG

UN number Not regulated

UN proper shipping name Not regulated

Transport hazard class(es) Not regulated

Packing group Not regulated

Environmental hazards No

15. Regulatory Information

US federal regulations

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS 68649-42-3) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	0.1 - 3.0%weight

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

16. Other Information

HMIS® ratings

Health: 0
Flammability: 1
Physical hazard: 0

NFPA ratings

Health: 0
Flammability: 1
Instability: 0

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available.

Issue date

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