

SAFETY DATA SHEET

MOL-LUB Ltd.

according to regulation (EC) No 1907/2006 (REACH) and 1272/2008/EC

Trade name: **MOL Thermol 46 heat transfer oil**

Version: 3 Latest revision: 10. 09. 2012 Date of issue: 20. 06. 2007 Page: 1/(11)

1. Identification of the mixture and of the company/undertaking

1.1 Product identifier:

MOL Thermol 46 heat transfer oil

1.2 Relevant identified uses of the mixture and uses advised against

Relevant identified uses: heat transfer oil

Uses advised against: no data

1.3 Details of the supplier of the safety data sheet:

MOL-LUB Lubricant Production Trade and Service Limited Liability Company
H-2931 Almásfüzitő, Fő út 21., Hungary
Phone / Fax: +36 34 526 330 / +36 34 526 391

Request SDS of:

MOL-LUB Lubricant Production Trade and Service Limited Liability Company
Customer Service Center
H-2931 Almásfüzitő, Fő út 21., Hungary
Phone / Fax: +36 80 201 296 / +36 34 348 010

Responsible for SDS:

MOL-LUB Ltd. Csaba Horváth, head of HSE, SD and QOP
Phone: +36 34 526 343; Mobile: +36 20 474 2644
e-mail: csahorvath@mol.hu

Technical information:

MOL-LUB Ltd. Product Development and Technical Service
H-1117 Budapest, Október huszonharmadika utca 18., Hungary
Phone/Fax: +36 80 201 296 or +36 1 464 0236 / +36 1 464 0304

1.4 Emergency telephone number

Emergency telephone (07-15²⁰ h): +36 34 526 210 (CET) on workdays
Health Toxicological Information Service (ETTSZ 1096 Budapest, Nagyvárad tér 2.)
Tel.: +36 1 476 6464, or +36 80 201 199
National Health Toxicological Information Service:

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2. Hazards identification

2.1 Classification of the mixture

2.1.1 Classification of the mixture according to regulation 1272/2008/EC

Hazard Class and Category: Hazard statement:
not required -

2.1.2 Classification of the substance according to regulation 1999/45/EC

Human health hazards: Danger symbol not required.
Note: Prolonged and/or repeated contact may cause irritation
on skin or in eyes depending on individual sensitivity
(See also Protective equipment).

Safety hazards: Danger symbol not required.

Environmental hazards: Danger symbol not required.
Note: Spills may form a film on water surfaces causing
impaired oxygen transfer.

2.2 Label elements 1272/2008/EC

Product identification: Trade name: **MOL Thermol 46 heat transfer oil**

GHS Pictogram: -

Signal word: -

Hazard statement:

Not required.

Precautionary statements – Prevention:

P273 Avoid release to the environment.

Precautionary statements – Disposal:

P501 Dispose of contents/container in accordance with national regulation.

Other liabilities for labelling:

Tactile warning of danger: Not required.

Transport classification: see section 14.

2.3 Other hazards

no data available

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3. Composition/information on ingredients

3.1 Mixtures

Chemical description: Mixture of refined mineral base oils.

Ingredients:

Name	EINECS number	CAS number	Hazard symbol / Hazard classes and cat.	Risk phrase / Hazard statements	Conc. %(m/m)
Lubricating oils (petroleum), C18-40* REACH Registr.Nr.: 01-2119486987-11	305-594-8	94733-15-0	67/548/EEC: - (Note L) 1272/2008/EC: Asp.Tox.1 (Note L)	- H304	max. 100
Lubricating oils (petroleum), C24-C50* REACH Registr.Nr.: 01-2119489969-06	309-877-7	101316-72-7	67/548/EEC: - (Note L) 1272/2008/EC: Asp.Tox.1 (Note L)	- H304	
Lubricating oils (petroleum), C>25* REACH Registr.Nr.: 01-2119486948-13	309-874-0	101316-69-2	67/548/EEC: - (Note L) 1272/2008/EC: - (Note L)	- -	

*: with exposure limit

The full text of each relevant R-, H- phrase and Hazard classes and cat. see in Section 16.

4. First aid measures

4.1 Description of first aid measures

General information: Never give anything by mouth to an unconscious person, or never induce vomiting.

Inhalation: Remove the affected person to fresh air. If rapid recovery does not occur, obtain medical attention.

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Skin contact: Wash skin with large amounts of water, use soap. In case of persistent irritation, get medical attention.

Eye contact: Flush eyes with plenty of water for 10-15 minutes. In case of persistent irritation, get medical attention.

Ingestion: If swallowed, give water. **Do not** induce vomiting. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed
No data available.

4.3 Indication of any immediate medical attention and special treatment need
Not required.

5. Fire-fighting measures

Fire hazards:
Moderately hazardous (see also Section 9 - flash point).

5.1 Extinguishing media
Suitable extinguishing media:
Foam, carbon dioxide, dry chemical powder.

Unsuitable extinguishing media:
Water jet.

5.2 Special hazards arising from the mixture
Hazardous combustion products:
On burning, carbon dioxide, carbon monoxide, various hydrocarbons and soot can be formed.

5.3 Advice for fire-fighters
Special protective equipment:
According to the existing fire-fighting regulations.

Further information:
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Contaminated extinguishing water must be disposed of in accordance with official regulations.

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6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: see Section 8.

6.2 Environmental precautions:

Confine spills to prevent material from entering sewers, watercourses, drains and into soil Notify relevant authority.

6.3 Methods and material for containment and cleaning up

On soil: All kind of ignition sources should be remove. Recover free liquid by pumping. Contain the rest or small quantities with sand, earth or other suitable absorbents. Dispose of according to local regulations.

On water: Confine the spillage. Remove from surface by skimming or suitable absorbents. Notify local authorities according to regulations.

6.4 Reference to other sections

Personal precautions: see section 8.

Waste treatment methods: see section 13.

7. Handling and storage

7.1 Precautions for safe handling

Keep general measures applied for normal operations with lubricants.

Keep away from radiant heat and open flame.

Avoid contact with skin and eyes. Avoid prolonged breathing of oil vapours or mists.

Ensure washing facilities after working hours and before breaks. Take off contaminated or oil-soaked clothing, wash with warm water and soap.

When using do not eat, drink or smoke. Avoid splashing the product.

Handling temperature:

7.2 Conditions for safe storage, including any incompatibilities

Storage facilities must comply with regulations for storing of flammable liquids.

Store in dry, well ventilated place in original, closed containers.

Keep away from radiant heat, open flame and strong oxidizing agents.

Storage temperature: max. 40°C

7.3 Specific end use(s)

Heat transfer oil.

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8. Exposure controls / personal protection

Engineering control measures:

Not required.

8.1 Control parameters:

Mineral oil mist: TWA: **5 mg/m³**; STEL: 10 mg/m³, for oil mist, vapour excluded (ACGIH).

Method of testing, recommended: NIOSH 5026

8.2 Exposure controls

Personal protection:

Respiratory protection: Breathing apparatus not required.

Hand protection: Oil resistant gloves (EN 374, Breakthrough time 480 min) (e.g. nitrile rubber – minimal thickness 0.33 mm).

Note: Manufacturer's directions for use and the conditions of application should be observed.

Eye protection: Protective goggles not required.

Skin protection: Protective clothing (oil resistant).

Other special: no data

Environmental exposure controls:

Do not discharge into drains/surface waters/groundwater.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:

Physical state:	liquid
Colour:	yellow, clear
Odour:	characteristic

Change in physical state:

Pour point (ISO 3016):	typ. -15°C
Boiling point:	not available

Others:

Flash point (COC) (EN ISO 2592):	typ. 232°C
Ignition point (EN ISO 2592):	not available
Autoignition temperature:	not available
Explosive properties:	not explosive
Oxidizing properties:	not oxidize
Vapour pressure at 20°C:	negligible

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Density at 15°C (EN ISO 12185):	0.869-0.883 g/cm ³
Solubility in water:	practically insoluble in water
Solubility in other solvents:	gasoline, kerosene, toluene, etc.
n-Octanol/water partition coefficient:	not available
Vapour density:	not available
Heating value:	inf. 38 000 kJ/kg
Kinematic viscosity at 40°C (EN ISO 3104):	typ. 43.6 mm ² /s
Kinematic viscosity at 100°C (EN ISO 3104):	typ. 6.5 mm ² /s
pH:	not applicable

9.2 Other information
no data available

10. Stability and reactivity

- 10.1 Reactivity: Dangerous reactivity not known.
10.2 Chemical stability: No decomposition if stored and handled properly.
10.3 Possibility of hazardous reactions: Not known.
10.4 Conditions to avoid: Direct heat or ignition sources.
10.5 Incompatible materials: Strong oxidizing agents.
10.6 Hazardous decomposition products: No dangerous decomposition products are formed under normal conditions. Hazardous combustion products: See Section 5.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

Oral:	LD ₅₀ (rat)	> 2000	mg/kg	(based on components)
Dermal:	LD ₅₀ (rabbit)	> 2000	mg/kg	(based on components)

Acute toxicity: irritation

- Skin: not irritant (based on components)
Eye: not irritant (based on components)
Note: Prolonged and/or repeated contact may cause irritation on skin or in eyes depending on individual sensitivity.

Respiratory or skin sensitisation: not sensitising (based on components)

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Chronic toxicity: not known

Repeated dose toxicity: not known

Other information, specific effects:

The product does not contain PCBs, PCTs, and other chlorine compounds, and heavy metals, barium compounds.

Note L: The classification as a carcinogen need not apply according to 1272/2008/EC, because it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346.

Carcinogen effect: not known, resp. not carcinogen (based on components)

Mutagen effect: not known, resp. not mutagen (based on components)

Reproduction-damaging effect: not known, resp. no reproduction-damaging effect (based on components)

12. Ecological information

12.1 Toxicity Not available.

Aquatic organisms:

Soil organisms:

Plants:

12.2 Persistence and degradability No data available.

Biodegradability: No data available.

12.3 Bioaccumulative potential No data available.

12.4 Mobility

Mobility in soil Absorbs in soil.

Mobility in water: Floats on water.

12.5 Results of PBT and vPvB assessment Not required.

12.6 Other adverse effects

Heavy metal content: None.

PCT, PCB and other chlorinated hydrocarbons: None.

Environmental effects: Spills may form a film on water surfaces causing impaired oxygen transfer.

Water hazard class (German): -

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13. Disposal considerations

13.1 Waste treatment methods

Product disposal:

Wastes of the product or used oil should be treated as hazardous waste.

EWC cod: 13 02 05*

Mineral-based non-chlorinated engine, gear and lubricating oils.

Disposal must be in compliance with national and local regulations.

Recommended waste treatment method: incineration

Packaging disposal:

Containers with product residue should also be treated as hazardous waste according to national and local disposal regulations.

EWC cod: 15 01 10*

Packaging containing residues of or contaminated by dangerous substances.

Disposal must be in compliance with national and local regulations.

Recommended waste treatment method: incineration

Wastewater:

Quality of wastewater emitted to natural water must comply with national and local regulations.

Care should be taken in any case to ensure compliance with EC, national and local regulations. It is the responsibility of the user to know all relevant national and local regulations.

14. Transport information

Land transport:

Road/ Railway

ADR/RID:

Not classified.

Waterways:

Inland waterways/ Sea transport ADN/IMDG:

Not classified.

Air transport:

ICAO / IATA:

Not classified.

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15. Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the mixture.
This safety data sheet has been prepared according to Regulation 1907/2006/EC and 1272/2008/EC.
- 15.2 Chemical safety assessment.
not available

16. Other information

The information given in this data sheet is based on our best knowledge at the time of publication. The information is related only to this product and is intended to assist its safe transport, handling and use. The given physical and chemical parameters describe the product only for the purpose of safety requirements and therefore should not be construed as guaranteeing any specific property of the product or as being part of a product specification or any contract.

The manufacturer or supplier shall not take responsibility for any damages from the use other than recommended or other misuse of the product. It is the responsibility of the user to keep regulatory precautions and observe recommendations for safe use of the product.

Source of data presented in this material safety data sheet:

- Test results of this product
- Material safety data sheets of product's components
- Hungarian and EU lists of dangerous substances
- Relevant Hungarian regulation and EU directives

Classification for mixtures and used evaluation method according to regulation 1272/2008/EC (CLP)

- -

The full text of each relevant R-, H- phrase and Hazard classes and cat. in Section 3.:

- | | |
|-----------|---|
| H304 | May be fatal if swallowed and enters airways. |
| Asp.Tox.1 | Aspiration hazard Category 1 |

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Revision Indicators:

Section	Subject of change	Date	Version
3. 1-16	Composition / information on ingredients Regulatory information, other corrections	13.10.2010	2
3 9 1-16	Composition/information on ingredients Physical and chemical properties Revision modification according to 1272/2008/EC and 453/2010/EC	10.09.2012	3