



# SAFETY DATA SHEET

according to regulation 1907/2006/EC (REACH) and 1272/2008/EC

**MOL-LUB Ltd.**

Trade name: **MOL Hydro HM 46 AL ashless hydraulic oil**

Version: 6

Latest revision: 26. 06. 2020

Date of issue: 20. 06. 2007

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## SECTION 1 Identification of the mixture/substance and of the company/undertaking

### 1.1 Product identifier:

**MOL Hydro HM 46 AL ashless hydraulic oil**

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

Relevant identified uses: ashless hydraulic oil

Uses advised against: no data

### 1.3 Details of the supplier of the safety data sheet:

MOL-LUB Lubricant Production Distribution and Service Ltd.

H-2931 Almásfüzitő, Fő út 21., Hungary

Phone / Fax: +36 34 526 330 / +36 34 526 391

E-mail: kenoanyag@mol.hu

Request SDS of:

MOL-LUB Lubricant Production Distribution and Service Ltd.

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 SD, HSE & Business Support

Phone: +36 34 526 343; Mobile: +36 20 474 2644

e-mail: csahorvath@mol.hu

### 1.4 Emergency telephone number

Emergency telephone (07-15<sup>20</sup> h): +36 34 526 210 (CET) on workdays

Health Toxicological Information Service (ETTSZ 1096 Budapest, Nagyvárad tér 2.)

Tel.: +36 80 201 199 (0-24 h, free number).

National Health Toxicological Information Service:

## SECTION 2 Hazards identification

### 2.1 Classification of the mixture or substance

Hazard Class and Category:

Not classified.

Hazard statement:

-



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### 2.2 Label elements

Product identification: Trade name: **MOL Hydro HM 46 AL ashless hydraulic oil**

Hazardous component(s): -

GHS Pictogram: Not required.

Signal word: Not required.

Hazard statement:

**Not required.**

Supplemental hazard information:

**EUH210** Safety data sheet available on request.

Precautionary statements – General: -

Precautionary statements – Prevention:

**P273** Avoid release to the environment.

Precautionary statements – Response: -

Precautionary statements – Storage: -

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

The product does not contain any PBT or vPvB substance according to annex XIII of regulation (EC) 1907/2006.



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## SECTION 3    Composition/information on ingredients

### 3.2 Mixtures

Chemical description:    Mixture of refined mineral base oils containing additives.

Component(s) / Hazardous component(s):

Name	EC number	CAS number	Hazard classes and cat.	Hazard statements	Conc. % (m/ m)
Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated* REACH Registr. Nr.: 01-2119489969-06	309-877-7	101316-72-7	- (Note L)	-	max. 99
Lubricating oils (petroleum), C18-40, solvent-dewaxed hydrocracked distillate-based* REACH Registr. Nr.: 01-2119486987-11	305-594-8	94733-15-0	- (Note L)	-	max. 58
Distillates (petroleum), dewaxed light paraffinic, hydrotreated REACH Registr. Nr.: 01-2119488517-24	295-301-9	91995-40-3	Asp. Tox. 1 (Note L)	H304	max. 7.5
Amines, C16-18-(even numbered, saturated and unsaturated) alkyl, O,O-di-Bu phosphorothioates REACH Registr. Nr.: 01-2120759337-45	947-129-7	-	Eye Irrit. 2 Aquatic Acute 1 Aquatic Chronic 2	H319 H400 (M=10) H411	<0.1

\*: with exposure limit

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

## SECTION 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.

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



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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.

Protection of first-aid person: No individual specifications.

#### 4.2 Most important symptoms and effects, both acute and delayed

Prolonged and/or repeated contact may cause irritation on skin or in eyes depending on individual sensitivity.

#### 4.3 Indication of any immediate medical attention and special treatment need

Not required.

### SECTION 5 Fire-fighting measures

Fire hazards:

Combustible.

#### 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 or substance

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. Respiratory protection.

Further information:

Use water jets just to cool down surfaces exposed to fire.



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### SECTION 6 Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: see Section 8.

Danger of slipping on leaked out/spilled product.

#### 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.

### SECTION 7 Handling and storage

#### 7.1 Precautions for safe handling

Keep general measures applied for normal operations with lubricants and flammable liquids.

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 clothing and wash it before reuse.

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

Handling temperature: no data.

#### 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)

Ashless hydraulic oil.



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## SECTION 8 Exposure controls / personal protection

Engineering control measures:

Not required.

### 8.1 Control parameters:

**Mineral oil mist:** TWA: **5 mg/m<sup>3</sup>**; STEL: 10 mg/m<sup>3</sup>, for oil mist, vapour excluded (ACGIH).

Method of testing, recommended: NIOSH 5026

### 8.2 Exposure controls

Personal protection:

Respiratory protection: Under normal conditions not required. In case of exceeded exposure-limits respiratory protection with particle-filter is recommended.

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, if splashes may occur (EN 166).

Skin protection: Protective clothing (oil resistant).

Other special: No data.

Environmental exposure controls:

Do not discharge into drains/surface waters/groundwater.

## SECTION 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance:

Physical state:

liquid

Colour:

yellow, bright, clear

Odour:

characteristic

Change in physical state:

Pour point (ISO 3016):

typ. -30°C

Boiling point (DIN 51356):

not available



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## Others:

Flash point (COC) (EN ISO 2592):	typ. 225°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
Density at 15°C (EN ISO 12185):	0.868- 0.888 g/cm <sup>3</sup>
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. 47 mm <sup>2</sup> /s
Kinematic viscosity at 100°C (EN ISO 3104):	typ. 6.8 mm <sup>2</sup> /s
pH:	not applicable

## 9.2 Other information

no data available

## SECTION 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.

## SECTION 11 Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity:

Oral:	LD <sub>50</sub> (rat)	> 5000 mg/kg	(based on components)
Dermal:	LD <sub>50</sub> (rabbit)	> 2000 mg/kg	(based on components)



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## Components:

Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated

Oral:	LD <sub>50</sub> (rat)	> 5000 mg/kg
Dermal:	LD <sub>50</sub> (rabbit)	> 2000 mg/kg
Inhalation:	LC <sub>50</sub> (rat)	> 5.53 mg/L

Lubricating oils (petroleum), C18-40, solvent-dewaxed hydrocracked distillate-based

Oral:	LD <sub>50</sub> (rat)	> 5000 mg/kg
Dermal:	LD <sub>50</sub> (rabbit)	> 2000 mg/kg
Inhalation:	LC <sub>50</sub> (rat)	> 5.53 mg/L

Distillates (petroleum), dewaxed light paraffinic, hydrotreated

Oral:	LD <sub>50</sub> (rat)	> 5000 mg/kg
Dermal:	LD <sub>50</sub> (rabbit)	> 2000 mg/kg
Inhalation:	LC <sub>50</sub> (rat)	> 5.53 mg/L

Amines, C16-18-(even numbered, saturated and unsaturated) alkyl, O,O-di-Bu phosphorothioates

Oral:	LD <sub>50</sub> (rat)	> 2000 mg/kg	(test: 420)
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## Acute toxicity: irritation

Skin:	not irritant (based on components)
Eye:	not irritant (based on components)

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

## Other information, specific effects:

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.

Germ cell mutagenicity:	not known, resp. not mutagen (based on components)
Carcinogenicity:	not known, resp. not carcinogen (based on components)
Reproductive toxicity:	not known, resp. no reproduction-damaging effect (based on components)
STOT-single exposure:	not classified
STOT-repeated exposure:	not classified
Aspiration hazard:	not classified





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## SECTION 12 Ecological information

### 12.1 Toxicity

No data for the product.

#### Components:

Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated

Fish: LC<sub>50</sub> > 100 mg/L

Daphnia: EC<sub>50</sub> > 100 mg/L

Other aquatic organisms: EC<sub>50</sub> > 100 mg/L

Other living beings: TLM >1 mg/L

Lubricating oils (petroleum), C18-40, solvent-dewaxed hydrocracked distillate-based

Fish: LC<sub>50</sub> > 100 mg/L

Daphnia: EC<sub>50</sub> > 100 mg/L

Other aquatic organisms: EC<sub>50</sub> > 100 mg/L

Other living beings: TLM >1 mg/L

Distillates (petroleum), dewaxed light paraffinic, hydrotreated

Fish: LC<sub>50</sub> > 100 mg/L

Daphnia: EC<sub>50</sub> > 100 mg/L

Other aquatic organisms: EC<sub>50</sub> > 100 mg/L

Other living beings: TLM >1 mg/L

Amines, C16-18-(even numbered, saturated and unsaturated) alkyl, O,O-di-Bu phosphorothioates

Fish (*Oncorhynchus mykiss*): LL<sub>50</sub> >0.028 mg/L 96 h

Daphnia (*Daphnia magna*): EL<sub>50</sub> 0.071 mg/L 48 h

Algae (*Pseudokirchneriella subcapitata*): EL<sub>50</sub> 0.028 mg/L 72 h

Algae (*Pseudokirchneriella subcapitata*): EL<sub>10</sub> 0.025 mg/L 72 h

Microorganisms: EC<sub>50</sub> >100 mg/L 3 h

### 12.2 Persistence and degradability

#### Biodegradability:

Hydrocarbons are inherently degradable.

Amines, C16-18-(even numbered, saturated and unsaturated) alkyl, O,O-di-Bu phosphorothioates

75% (28 days, OECD 301B), easily degradable.

### 12.3 Bioaccumulative potential

No data available.

### 12.4 Mobility

Mobility in soil

Absorbs in soil.

Mobility in water:

Floats on water.



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12.5	Results of PBT and vPvB assessment	Does not contain PBT and vPvB substances.
12.6	Other adverse effects	
	Heavy metal content:	None.
	PCT, PCB and other chlorinated hydrocarbons:	None.
	Environmental effects:	Large spills may be hazardous to the environment. Spills may form a film on water surfaces causing impaired oxygen transfer.
	Water hazard class (German):	WGK 2 (Classification by AwSV)

### SECTION 13 Disposal considerations

#### 13.1 Waste treatment methods

##### Product disposal:

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

Waste Identification Code: 13 01 10\*

Mineral based non-chlorinated hydraulic oils.

Waste Identification Code: 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.

Waste Identification Code: 15 01 10\*

Packaging containing residues of or contaminated by dangerous substances.

##### 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.



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### SECTION 14 Transport information

Land transport:

Road/ Railway

ADR/RID:

Not classified.

14.1. UN number:

Not classified.

14.2. UN proper shipping name:

Not classified.

14.3. Transport hazard class(es):

Not classified.

14.4. Packing group:

Not classified.

14.5. Environmental hazards:

Not classified.

14.6. Special precautions for user:

Not classified.

Waterways:

Inland waterways/ Sea transport

ADN/IMDG:

Not apply to the product.

Air transport: ICAO / IATA:

Not apply to the product.

### SECTION 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 (EC) No 1907/2006 (mod.: 2015/830/EU) and to Regulation (EC) 1272/2008.

Seveso category: not classified.

15.2 Chemical safety assessment.

not available

### SECTION 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.



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Source of data presented in this material safety data sheet:

- Test results of this product
- Material safety data sheets of product's components
- 1272/2008/EC regulation, Annex XVII. of REACH
- Relevant Hungarian and EU regulations

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

Not classified.      -

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

H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
Asp. Tox. 1	Aspiration hazard Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Aquatic Acute 1	Hazardous to the aquatic environment, Acute Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, Chronic Category 2

Legend:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration Factor
BOD	Biological Oxygen Demand
Bw	Body Weight
C&L	Classification and Labelling
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging (1272/2008/EC)
CMR	Carcinogenic, Mutagenic or toxic to Reproduction
COD	Chemical Oxygen Demand
CSA	Chemical Safety Assessment
CSR	Chemical Safety Report
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
ECHA	European Chemicals Agency
Ecx	Effective Concentration x%



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Edx	Effective Dose x%
ELINCS	European List of Notified Chemical Substances
ErC50	EC50 in terms of reduction of growth rate;
ES	Exposure Scenario
ESIS	European Chemical Substances Information System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LCx	Lethal Concentration x%
LDx	Lethal Dose x%
LOAEC	Lowest Observed Adverse Effect Concentration
LOAEL	Lowest Observed Adverse Effect Level
LOEC	Lowest Observed Effect Concentration
LOEL	Lowest Observed Effect Level
NOEC	No observed effect concentration
NOEL	No observed effect level
NLP	No-Longer Polymer
NOAEL	No Observed Adverse Effect Level
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SVHC	Substance of Very High Concern
UVCB	substance of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bio-accumulative

## Revision Indicators:

Section	Subject of change	Date	Version
1-16	Revision modification according to REACH (1907/2006/EC), other correction	29.01.2010	2
3 9 1-16	Composition/information on ingredients Physical and chemical properties Revision modification according to 1272/2008/EC and 453/2010/EC	11.04.2012	3
1 3 9 1-16	Details of the supplier of the safety data sheet, Responsible for SDS Composition/information on ingredients Physical and chemical properties Other corrections, revision modification according to 2015/830 /EU	21.10.2015	4



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Section	Subject of change	Date	Version
3	Composition/information on ingredients	15.01.2018	5
9	Physical and chemical properties		
1-16	Other corrections		
2.2	Label elements	26.06.2020	6
3	Composition/information on ingredients		
11	Toxicological information		
12	Ecological information		
15	Regulatory information		