SAFETY DATA SHEET

MOL-LUB Ltd.

Tr	ade name:	MOL Hvd	ro HLPD 46 detergent hydraulic oil
	rsion: 1	Latest revision	
1.	Identifica	tion of the subs	ance / preparation and of the company
	Product na MOL	me: Hydro HLPD 46	
	Product ty prepar	ed uses: hydraulic oil	
	MOL- H-293	1 Almásfüzitő, I	entification: Production Trade and Service Limited Liability Company 56 u. 21., Hungary 26 330 / +36 34 526 391
	MOL- Custor H-293	ner Service Cen 1 Almásfüzitő, I	Production Trade and Service Limited Liability Company ter 56 u. 21., Hungary 01 296 / +36 34 348 010
	MOL- Phone		Horváth, head of HSE and QOP 3; Mobile: +36 20 474 2644 ol.hu
	MOL- H-111	7 Budapest, Okt	ct Development and Technical Service óber huszonharmadika u. 18., Hungary 1 296 or +36 1 464 0236 / +36 1 464 0304
	Health Tox	· • •	15 ²⁰ h): +36 34 526 210 mation Service (ETTSZ 1096 Budapest, Nagyvárad tér 2.) +36 80 201 199
2.	Hazards i	dentification	
	Human hea No	alth hazards: te:	Danger symbol not required. Prolonged and/or repeated contact may cause irritation and/or skin sensibilization, depending on individual sensitivity (see also Protective equipment).
	Safety haz	ards:	Danger symbol not required.
	Environme No	ental hazards: te:	Danger symbol not required. Spills may form a film on water surfaces causing impaired oxygen transfer.

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3. Composition / information on ingredients

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

Ingredients / Hazardous components:

Name	EINECS number	CAS number	Hazard symbol	Risk phrase	Conc. %(m/m)
Lubricating oils (petroleum), C17-C32*	309-875-6	101316-70-5	-	-	max. 99
Zinc alkyl dithiophosphate	272-028-3	68649-42-3	Xi, N	R 41, R 51/53	max. 0.8
Calcium long chain alkaryl sulphonate	263-093-9	61789-86-4	Xi	R 43, R 53	max. 0.2

*: with exposure limit

The full text of each relevant R phrase see in Section 16.

4. 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. Remove contaminated clothing. 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.

Note to physician:

5. Fire-fighting measures

Fire hazards:

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

Suitable extinguishing media:

Foam, carbon dioxide, dry chemical powder.

Unsuitable extinguishing media:

Water jet.

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	On bur	decomposition products: ming, carbon monoxide, arbons and soot can be fo	carbon dioxide, sulphur oxides, phospho	r oxides, various
	1 1	tective equipment: ling to the existing fire-fi	ighting regulations.	
	Further info	ormation:		
6.	Accidental	release measures		
	Personal pr See Se	ecautions: ction 8.		
	Preven		to natural water, soil and drains by conta uld be remove. Notify relevant authority.	aining the liquid.
	Clean-up p On soi On wa	free liquid by pum ter: Confine the spill	uid with sand, earth or other suitable abs pping. Dispose of according to local regula lage. Remove from surface by skimm local authorities according to regulations	ations. ning or suitable
7.	Handling a	and storage		
	Keep require When	ements.	nd open flame. ed for normal operations with lubrica smoke. Avoid splashing the product.	ants. No special
	Keep a		ce in original, closed containers. pen flame and strong oxidizing agents.	
8.	Exposure	controls / personal prote	ection	
	Engineering Not rec	g control measures:		

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Exposure limits:	3 3
Mineral oil mist:	TWA: 5 mg/m³ ; STEL: 10 mg/m ³ , for oil mist, vapour excluded (ACGIH).
Method of testing, recomm	nended: NIOSH 5026
Personal protection:	
Respiratory protection:	Breathing apparatus not required.
Hand protection:	Oil resistant gloves (EN 374, Breakthrough time 480 min; Permeation performance level: 6) (e.g. nitrile rubber – minimal thickness 0.33 mm).
Eye protection:	Protective goggles not required.
Skin protection:	Protective clothing (oil resistant).
Other special:	
Ensure washing facilities a	ad eyes. Avoid prolonged breathing of oil vapours or mists. after working hours and before breaks. Take off contaminated sh with warm water and soap.
Avoid contact with skin an Ensure washing facilities	d eyes. Avoid prolonged breathing of oil vapours or mists. after working hours and before breaks. Take off contaminated sh with warm water and soap.
Avoid contact with skin an Ensure washing facilities a or oil-soaked clothing, was P. Physical and chemical proper Appearance:	d eyes. Avoid prolonged breathing of oil vapours or mists. after working hours and before breaks. Take off contaminated sh with warm water and soap.
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 Avoid contact with skin an Ensure washing facilities a or oil-soaked clothing, was Physical and chemical proper Appearance: Physical state: Colour: Odour: Change in physical state: 	hd eyes. Avoid prolonged breathing of oil vapours or mists. after working hours and before breaks. Take off contaminated sh with warm water and soap. rties liquid yellow, clear characteristic
Avoid contact with skin an Ensure washing facilities a or oil-soaked clothing, was P. Physical and chemical proper Appearance: Physical state: Colour: Odour: Change in physical state: Pour point (ISO 3016):	after working hours and before breaks. Take off contaminated sh with warm water and soap.
 Avoid contact with skin an Ensure washing facilities a or oil-soaked clothing, was Physical and chemical proper Appearance: Physical state: Colour: Odour: Change in physical state: 	hd eyes. Avoid prolonged breathing of oil vapours or mists. after working hours and before breaks. Take off contaminated sh with warm water and soap. rties liquid yellow, clear characteristic
 Avoid contact with skin an Ensure washing facilities a or oil-soaked clothing, was Physical and chemical proper Appearance: Physical state: Colour: Odour: Odour: Change in physical state: Pour point (ISO 3016): Boiling point: 	hd eyes. Avoid prolonged breathing of oil vapours or mists. after working hours and before breaks. Take off contaminated sh with warm water and soap. rties liquid yellow, clear characteristic typ24°C
Avoid contact with skin an Ensure washing facilities a or oil-soaked clothing, was P. Physical and chemical proper Appearance: Physical state: Colour: Odour: Change in physical state: Pour point (ISO 3016): Boiling point: Others:	and eyes. Avoid prolonged breathing of oil vapours or mists. after working hours and before breaks. Take off contaminated sh with warm water and soap. rties liquid yellow, clear characteristic typ24°C SO 2592): typ. 225°C not available
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Avoid contact with skin an Ensure washing facilities a or oil-soaked clothing, was P. Physical and chemical proper Appearance: Physical state: Colour: Odour: Change in physical state: Pour point (ISO 3016): Boiling point: Others: Flash point (COC) (EN IS Ignition point (EN ISO 2: Autoignition temperature Explosive properties: Oxidizing properties: Vapour pressure at 20°C: Density at 15°C (EN ISO	ad eyes. Avoid prolonged breathing of oil vapours or mists. after working hours and before breaks. Take off contaminated sh with warm water and soap. rties liquid yellow, clear characteristic typ24°C SO 2592): typ. 225°C rot available not available not available not explosive negligible typ. 0.873 g/cm ³
Avoid contact with skin an Ensure washing facilities a or oil-soaked clothing, was P. Physical and chemical proper Appearance: Physical state: Colour: Odour: Change in physical state: Pour point (ISO 3016): Boiling point: Others: Flash point (COC) (EN IS Ignition point (EN ISO 2: Autoignition temperature Explosive properties: Oxidizing properties: Vapour pressure at 20°C:	ad eyes. Avoid prolonged breathing of oil vapours or mists. after working hours and before breaks. Take off contaminated sh with warm water and soap. rties liquid yellow, clear characteristic typ24°C SO 2592): typ. 225°C not available not explosive : not available not explosive poilt2185): typ. 0.873 g/cm ³ practically insoluble in water

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	Vapour densit	V:		not available			
	Evaporation ra	•		not available			
	Heating value			inf. 38 000 kJ/kg			
	Kinematic vis	cosity at 4	40°C (EN ISO 3104):	typ. 47.0 mm^2/s^2			
	Kinematic vis	cosity at	100°C (EN ISO 3104):	typ. 6.85 mm ² /s			
	pH:			not applicable			
10.	Stability and reac	tivity					
	Stability:		No decomposition if s	tored and handled prop	erly.		
	Conditions to avoid:		Direct heat or ignition	sources.			
	Materials to avoid:		Strong oxidizing agen	ts.			
	Hazardous decomposition products:		On burning, carbon monoxide, carbon dioxide, sulphur oxides, phosphor oxides, various hydrocarbons and soot can be formed. Under normal conditions no dangerous decomposition products are formed.				
	Notes:						
11.	Toxicological information						
	Acute toxicity:						
	Oral:		LD_{50} (rat) > 2	000 mg/kg (based	d on components)		
	Dermal:				d on components)		
	Acute toxicity: irritation						
	Skin:		ant (based on compone	nts)			
			tant (based on components)				
	Note:		ed and/or repeated contraction, depending on in	ontact may cause irritandividual sensitivity.	ation and/or skin		
	Sensitization: not sensitization		nsitising (based on components), but may produce an allergic n				
	Chronic toxicity:	not kno	own				
	Other information, The product of	-		nd other chlorine com	oounds, and heavy		

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	The base oil(s) contain(s) less as carcinogenic material accord	than 3% DMSO extract (IP 346), therefore not classified ling to 67/548/EEC NOTE L.					
Carcinogen effect: not known, resp. not carcinogen components)							
	Mutagen effect: Reproduction-damaging effect:	not known, resp. not mutagen (based on components) not known, resp. no reproduction-damaging effect (based on components)					
12.	Ecological information						
	Mobility: Degradability / persistence: Biodegradability:	Floats on water. Absorbs on soil.					
	Bioaccumulative potential: Ecotoxicity: Aquatic organisms: Soil organisms:	Not available.					
	Plants: Biological oxygen demand: Chemical oxygen demand:						
	Heavy metal content: PCT, PCB and other chlorinated hydrocarbons:	None. None.					
	Environmental effects:	Spills may form a film on water surfaces causing impaired oxygen transfer.					
	Water hazard class (German):						
13.	Disposal considerations						
	EWC cod: 13 01 10* or 13 0 Mineral based non-chlorinated Mineral-based non-chlorinated						
	national and local disposal regu EWC cod: 15 01 10* Packaging containing residues	of or contaminated by dangerous substances.					
	Disposal must be in compliance	e with national and local regulations.					

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	tewater: Quality regulatio		ater emitted to n	atural water mu	st comply with n	ational and local
regu				1	nce with EC, na w all relevant na	
14. Trar	nsport in	formation				
	l transpor Road/ Ra		ADR	/RID:	Not classified.	
	erways: land wat	erways/ Se	a transport ADN	/IMDG:	Not classified.	
Air t	ransport:	ICAO / I	ATA:		Not classified.	
15. Reg	ulatory i	nformatio	n			
1999	9/45/EC	(existing v	versions)] and to	o Hungarian reg	-	and 88/379/EEC . (XII. 27.) EüM ions:
Dan	Danger symbol(s) and indication(s): Not required.					
Haza	Hazardous substance(s): -					
The					ium long chain al an allergic reaction	• •
R-pł	rases:	Not requi	red.			
S-ph	rases:	S 24 S 60	Avoid contact w This material as waste		must be disposed	of as hazardous
		S 61	Avoid release	to the er	vironment. Ref	er to special

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16. Other information

Recommended application / restrictions: See product sheets.

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.

This safety data sheet has been prepared according to Regulation (EC) No 1907/2006, Directives 88/379/EEC and 1999/45/EC.

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 CONCAWE database

The full text of each relevant R phrase in Section 3.:

- R 41 Risk of serious damage to eyes
- R 43 May cause sensitisation by skin contact
- R 53 May cause long-term adverse effects in the aquatic environment
- R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Revision Indicators:

Section	Subject of change	Date	Version