



# Hydraulic Oil HVI 46

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878  
Issue date: 16-12-2019 Revision date: 23-12-2021 Supersedes: 26-10-2020 version: 5.0

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : Hydraulic Oil HVI 46  
Product code : 30000  
Type of product : Hydraulic Fluids  
Product group : Blend

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

##### 1.2.1. Relevant identified uses

Main use category : Professional use, Consumer use, Industrial use  
Industrial/Professional use spec : Used in closed systems  
Function or use category : Hydraulic fluids and additives

##### 1.2.2. Uses advised against

No additional information available

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

MPM International Oil Company  
Cyclotronweg 1  
2629 HN Delft Delft - Nederland  
T +31 (0)15 2514030  
[support@mpmoil.nl](mailto:support@mpmoil.nl) - [www.mpmoil.com](http://www.mpmoil.com)

#### 1.4. Emergency telephone number

Emergency number : +31 (0)15 2514030 (08.00 - 17.00 GMT+1)

Country	Official advisory body	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements : EUH210 - Safety data sheet available on request.

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Comments : Highly refined mineral oil, contains <3% (w/w) DMSO extract, according to IP346

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	(CAS-No.) 4259-15-8 (EC-No.) 224-235-5 (REACH-no) 01-2119493635-27	≥ 0,1 – ≤ 0,49	Eye Dam. 1, H318 Aquatic Chronic 2, H411 (M=0)
Alkylphenol (2,6-di-tert-butylphenol)	(CAS-No.) 128-39-2 (EC-No.) 204-884-0 (REACH-no) 01-2119490822-33	≥ 0,1 – ≤ 0,24	Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

### Specific concentration limits:

Name	Product identifier	Specific concentration limits
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	(CAS-No.) 4259-15-8 (EC-No.) 224-235-5 (REACH-no) 01-2119493635-27	( 50 <C ≤ 100) Eye Dam. 1, H318

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

After inhalation	: Not required.
After skin contact	: Wash skin with mild soap and water.
After eye contact	: In case of eye contact, immediately rinse with clean water for 10-15 minutes.
After ingestion	: Do NOT induce vomiting. Rinse mouth out with water. Get immediate medical advice/attention.

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

After inhalation	: Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
After skin contact	: Not expected to present a significant skin hazard under anticipated conditions of normal use.
After eye contact	: Not expected to present a significant eye contact hazard under anticipated conditions of normal use.
After ingestion	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Water spray, powder, foam and CO <sub>2</sub> .
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

Precautionary measures fire	: Exercise caution when fighting any chemical fire.
Firefighting instructions	: Use water spray or fog for cooling exposed containers.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Protective equipment	: Wear suitable protective clothing and gloves.
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#### 6.1.2. For emergency responders

Protective equipment	: Wear suitable protective clothing and gloves.
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### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

For containment	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up	: Detergent. Clean up any spills as soon as possible, using an absorbent material to collect it.

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Other information : Spill area may be slippery. Use suitable disposal containers.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Avoid all unnecessary exposure. Both local exhaust and general room ventilation are usually required.

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Handling temperature : < 40 °C

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Store in a closed container.

Storage temperature : ≤ 40 °C

Storage area : Store in dry, well-ventilated area.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Additional information : Based on ACGIH TLV, a concentration of 5 mg/m<sup>3</sup> oilspray (TWA, 8 hour workday) is recommended.

### 8.2. Exposure controls

#### Personal protective equipment:

Gloves. Safety glasses.

#### Hand protection:

Protective gloves

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Gloves	Nitrile rubber (NBR), Chloroprene rubber (CR)	6 (> 480 minutes)	> 0,4		EN ISO 374

#### Eye protection:

Safety goggles

#### Skin and body protection:

No special clothing/skin protection equipment is recommended under normal conditions of use

#### Respiratory protection:

No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation

#### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Oily liquid.

Colour : Amber.

Odour : Characteristic.

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butylacetate=1) : No data available

Melting point : No data available

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Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 200 °C @ ASTM D92
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 875 kg/m <sup>3</sup> @ 15°C
Solubility	: Slightly soluble, the product remains on the water surface.
Log Pow	: No data available
Viscosity, kinematic	: 46 mm <sup>2</sup> /s @ 40°C
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

None under normal conditions.

### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

No naked flames, sparks, and do not smoke.

### 10.5. Incompatible materials

Strong oxidizing agent. Acids and bases.

### 10.6. Hazardous decomposition products

None under normal conditions.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

### Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)

LD50 oral rat	3100 mg/kg
LD50 dermal rabbit	> 5000 mg/kg

### Alkylphenol (2,6-di-tert-butylphenol) (128-39-2)

LD50 oral rat	> 5000 mg/kg bodyweight
LD50 dermal rabbit	> 2000 mg/kg
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

### Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)

NOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
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### Alkylphenol (2,6-di-tert-butylphenol) (128-39-2)

NOAEL (oral, rat, 90 days)	100 mg/kg bodyweight
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Aspiration hazard : Not classified

### Hydraulic Oil HVI 46

Viscosity, kinematic	46 mm <sup>2</sup> /s @ 40°C
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## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

### Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)

LC50 fish 1	4,4 mg/l Oncorhynchus mykiss OECD 203
LC50 fish 2	≥ 0 mg/l
EC50 Daphnia 1	75 mg/l Daphnia Magna OECD 201
EC50 96h - Algae [1]	240 mg/l Scenedesmus Subspicatus OECD 201 @21d
NOEC (chronic)	0,4 mg/l Daphna Magna OECD 211 @21 D- results analog product
NOEC (acute)	NOEC Acute 220 mg/l Scededesmus Subspicatus OECD 201-biomass

### Alkylphenol (2,6-di-tert-butylphenol) (128-39-2)

LC50 fish 1	1,4 mg/l Pimephales promelas
EC50 72h - Algae [1]	3,6 mg/l Pseudokirchneriella subcapitata
EC50 72h - Algae [2]	1,4 mg/l Pseudokirchneriella subcapitata
EC50 96h - Algae [1]	3,9 mg/l Pseudokirchneriella subcapitata
EC50 96h - Algae [2]	1,2 mg/l Pseudokirchneriella subcapitata
LOEC (chronic)	0,086 mg/l Daphnia magna @21d
NOEC (chronic)	0,035 mg/l Daphnia magna @21d

### 12.2. Persistence and degradability

#### Hydraulic Oil HVI 46

Persistence and degradability	Not soluble in water, so only minimally biodegradable.
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### 12.3. Bioaccumulative potential

#### Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)

Log Kow	3,59
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### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Additional information : This material and its container must be disposed of in a safe way, and as per local legislation.

## SECTION 14: Transport information

In accordance with ADR / IMDG

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ADR	IMDG
<b>14.1. UN number</b>	
Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>	
Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>	
Not applicable	Not applicable
<b>14.4. Packing group</b>	
Not applicable	Not applicable
<b>14.5. Environmental hazards</b>	
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No
No supplementary information available	
<b>14.6. Special precautions for user</b>	
<b>Overland transport</b> No data available	
<b>Transport by sea</b> No data available	
<b>14.7. Transport in bulk according to Annex II of Marpol and the IBC Code</b> Not applicable	

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Indication of changes:			
Section	Changed item	Change	Comments
	Supersedes	Modified	
	Revision date	Modified	
	Adverse effects on the environment caused by endocrine disrupting properties	Added	
	Type of product	Added	
1.2	Main use category	Modified	
1.2	Function or use category	Modified	
1.2	Industrial/Professional use spec	Modified	
3	Composition/information on ingredients	Modified	

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4.1	After skin contact	Modified	
4.1	After ingestion	Modified	
4.1	After eye contact	Modified	
4.2	After skin contact	Added	
4.2	After inhalation	Added	
4.2	After ingestion	Added	
4.2	After eye contact	Added	
5.1	Unsuitable extinguishing media	Modified	
5.1	Suitable extinguishing media	Modified	
5.3	Protection during firefighting	Added	
5.3	Firefighting instructions	Added	
5.3	Precautionary measures fire	Modified	
6.1	Protective equipment	Modified	
6.1	Protective equipment	Modified	
6.2	Environmental precautions	Modified	
6.3	For containment	Added	
6.3	Methods for cleaning up	Modified	
6.3	Other information	Modified	
7.1	Handling temperature	Added	
7.1	Additional hazards when processed	Added	
7.1	Precautions for safe handling	Modified	
7.1	Hygiene measures	Modified	
7.2	Technical measures	Modified	
7.2	Storage temperature	Modified	
7.2	Storage area	Modified	
8.2	Personal protective equipment	Modified	
8.2	Respiratory protection	Modified	
8.2	Hand protection	Modified	
9.1	Viscosity, kinematic	Modified	
9.1	Flash point	Modified	
9.1	Density	Modified	
9.1	Colour	Modified	
10.1	Reactivity	Modified	
10.2	Chemical stability	Modified	
10.3	Possibility of hazardous reactions	Added	
10.4	Conditions to avoid	Modified	
10.5	Incompatible materials	Modified	
10.6	Hazardous decomposition products	Modified	
13.1	Additional information	Added	

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### Abbreviations and acronyms:

ACGIH: American Conference of Governmental Industrial Hygienists. TWA: Time Weighted Average. TLV: Threshold Limit Value. ASTM: American Society for Testing and Materials . ADR: Accord Européen Relatif au Transport International des Marchandises Dangereuses par Route . RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail . ADNR: Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin. IMDG: International Maritime Dangerous Goods. ICAO: International Civil Aviation Organization . IATA: International Air Transport Association. STEL: Short Term Exposure Limit. LD50: median Lethal Dose for 50% of subjects. ATE: acute toxicity estimate. LC50: median Lethal Concentration for 50% of subjects. EC50: concentration producing 50% effect.

### Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH210	Safety data sheet available on request.

### SDS MPM REACH

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*