

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

Hydrauliköl HLP-D 46

Revision date: 01.07.2024

Page 1 of 12

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Hydrauliköl HLP-D 46

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Hydraulic oil.

Product Categories [PC]: PC 17 Hydraulic fluids.

1.3. Details of the supplier of the safety data sheet

Company name:	HSR GmbH	
Street:	Oderstraße 3	
Place:	D-47506 Neukirchen-Vluyn	
Telephone:	+49 (0) 2845 2950 0	Telefax: +49 (0) 2845 2950 480
E-mail:	info@hsr.de	
Web	www.hsr.de	

1.4. Emergency telephone**number:** Giftinformationszentrum - Nord: +49 (0) 551 19240**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

This mixture is not classified as hazardous in accordance with Regulation (EC) No 1272/2008.

2.2. Label elements**Regulation (EC) No 1272/2008****Special labelling of certain mixtures**

EUH210 Safety data sheet available on request.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Do not handle until all safety precautions have been read and understood.

Discharge into the environment must be avoided.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Chemical characterization**

Contains: Mineral oil, Additive.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hydrauliköl HLP-D 46

Revision date: 01.07.2024

Page 2 of 12

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
64742-56-9	Distillates (petroleum), solvent-dewaxed light paraffinic; Baseoil - unspecified			5,0 - < 7,0 %
	265-159-2	649-469-00-9	01-2119480132-48	
	Asp. Tox. 1; H304			
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)			0,2 - < 0,3 %
	931-384-6		01-2119493620-38	
	Acute Tox. 4, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H302 H319 H317 H411			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
64742-56-9	265-159-2	Distillates (petroleum), solvent-dewaxed light paraffinic; Baseoil - unspecified	5,0 - < 7,0 %
		inhalation: LC50 = > 5,53 mg/l (dusts or mists); dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 5000 mg/kg	
	931-384-6	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)	0,2 - < 0,3 %
		oral: LD50 = 2000 mg/kg Eye Irrit. 2; H319: >= 50 - 100 Skin Sens. 1; H317: >= 9,39 - 100	

Further Information

The mineral oils in the product contain < 3 % DMSO-extract (IP 346).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection!
Move victim out of danger zone.
Remove contaminated, saturated clothing immediately.
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

Avoid oil mist
Move victim to fresh air. Put victim at rest and keep warm.
Get medical advice/attention if you feel unwell.

After contact with skin

After contact with skin, wash immediately with: Water and soap.
Immediately remove any contaminated clothing, shoes or stockings.
In case of skin irritation, seek medical treatment.

After contact with eyes

Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

If swallowed, rinse mouth with water (only if the person is conscious).
Do NOT induce vomiting. Call a physician immediately.
No administration in cases of unconsciousness or cramps.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hydrauliköl HLP-D 46

Revision date: 01.07.2024

Page 3 of 12

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

No further relevant information available.

In all cases of doubt, or when symptoms persist, seek medical advice.

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

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**Foam, Extinguishing powder, Sand, Water mist, Carbon dioxide (CO₂).**Unsuitable extinguishing media**

High power water jet.

5.2. Special hazards arising from the substance or mixtureIn case of fire may be liberated: Carbon dioxide (CO₂), Sulphur dioxide (SO₂), Phosphorus oxides, Carbon monoxide.**5.3. Advice for firefighters**

In case of fire and/or explosion do not breathe fumes.

In case of fire: Wear self-contained breathing apparatus.

Additional information

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.

Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Provide adequate ventilation.

Respiratory protection necessary at: aerosol or mist generation. (See section 8.)

Avoid contact with skin and eyes. Wear personal protection equipment.

In case of leakage, eliminate all ignition sources. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

Do not allow to enter into soil/subsoil.

6.3. Methods and material for containment and cleaning up**Other information**

Prevent spread over a wide area (e.g. by containment or oil barriers).

Take up mechanically, placing in appropriate containers for disposal.

Remove from the water surface (e.g. skimming, sucking).

High slip hazard because of leaking or spilled product.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Personal protection equipment: refer to chapter 8.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hydrauliköl HLP-D 46

Revision date: 01.07.2024

Page 4 of 12

Advice on safe handling

- Do not breathe vapour/aerosol. Provide adequate ventilation.
- Avoid contact with skin and eyes.
- Remove contaminated, saturated clothing immediately.
- For industrial purposes only.

Advice on protection against fire and explosion

- No special fire protection measures are necessary.
- Avoid oil mist
- When hot, product develops flammable vapours.
- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- Fire class B (DIN EN 2).

Advice on general occupational hygiene

- Do not eat, drink, smoke or sneeze at the workplace.
- Avoid contact with skin, eyes and clothes.
- Protect skin by using skin protective cream.
- Take off contaminated clothing and wash it before reuse.
- Wash hands before breaks and after work.
- After cleaning apply high-fat content skin care cream.
- Do not put any product-impregnated cleaning rags into your trouser pockets.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

- Only use containers specifically approved for the substance/product.
- Keep container tightly closed and in a well-ventilated place.
- Always close containers tightly after the removal of product.
- Recommended storage temperature: 5 - 30 °C Do not store at temperatures over: 40 °C

Hints on joint storage

- Do not store together with: Oxidising agent,
- Keep away from food, drink and animal feedingstuffs.

Further information on storage conditions

- Protect against: Heat, Light, moisture. Protect from direct sunlight.

7.3. Specific end use(s)

- Hydraulic oil.
- Observe technical data sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hydrauliköl HLP-D 46

Revision date: 01.07.2024

Page 5 of 12

DNEL/DMEL values

CAS No	Name of agent			
DNEL type		Exposure route	Effect	Value
64742-56-9	Distillates (petroleum), solvent-dewaxed light paraffinic; Baseoil - unspecified			
Worker DNEL, long-term		inhalation	systemic	2,73 mg/m³
Worker DMEL, long-term		inhalation	local	5,58 mg/m³
Worker DNEL, long-term		dermal	systemic	0,97 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	1,19 mg/m³
Consumer DNEL, long-term		oral	systemic	0,74 mg/kg bw/day
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)			
Worker DNEL, long-term		dermal	systemic	12,5 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	8,56 mg/m³
Consumer DNEL, long-term		dermal	systemic	6,25 mg/kg bw/day
Consumer DNEL, acute		dermal	local	0,024 mg/cm²
Consumer DNEL, long-term		inhalation	systemic	2,2 mg/m³
Consumer DNEL, long-term		oral	systemic	0,25 mg/kg bw/day

PNEC values

CAS No	Name of agent	
Environmental compartment	Value	
64742-56-9	Distillates (petroleum), solvent-dewaxed light paraffinic; Baseoil - unspecified	
Secondary poisoning	9,33 mg/kg	
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)	
Freshwater	0,001 mg/l	
Freshwater (intermittent releases)	0,085 mg/l	
Marine water	0,0001 mg/l	
Freshwater sediment	14,4 mg/kg	
Marine sediment	1,44 mg/kg	
Micro-organisms in sewage treatment plants (STP)	24,33 mg/l	
Soil	10 mg/kg	

Additional advice on limit values

Air limit values: Mineral oil mist

Limit value type (country of origin): US-OSHA PEL-Value: 5 mg/m³

Limit value type (country of origin): ACGIH STEL-Value: 10 mg/m³

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation.

Individual protection measures, such as personal protective equipment

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hydrauliköl HLP-D 46

Revision date: 01.07.2024

Page 6 of 12

Eye/face protection

Suitable eye protection: Tightly sealed safety glasses. (EN 166)

In case of increasing hazard add: Eye-shade.

Hand protection

Tested protective gloves are to be worn: German Industry Norms (DIN) / European Norms (EN): EN 420, EN ISO 374.

Suitable material: NBR (Nitrile rubber), PVC (polyvinyl chloride), FKM (fluororubber).

Required properties: liquid-tight.

penetration time (maximum wearing period): > 240 min.

Thickness of glove material: 0,4 mm

Before using check leak tightness / impermeability.

Skin protection

Handling larger quantities: Wear suitable protective clothing.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at: exceeding exposure limit values, insufficient ventilation, aerosol or mist generation.

Suitable respiratory protective equipment: A2/P2 Combination filter device (DIN EN 141)..

Environmental exposure controls

Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	light yellow
Odour:	like: mineral oil.
Odour threshold:	No data available.

Test method

Changes in the physical state

Melting point/freezing point: No data available.

Boiling point or initial boiling point and

boiling range:

Pour point: < -22 °C DIN ISO 3016

Flash point: > 230 °C DIN ISO 2592

Flammability

Solid/liquid: Based on available data, the classification criteria are not met.

Explosive properties

Based on available data, the classification criteria are not met.

Lower explosion limits: No data available.

Upper explosion limits: No data available.

Auto-ignition temperature: > 210 °C

Decomposition temperature: No data available.

Oxidizing properties

Based on available data, the classification criteria are not met.

pH-Value: not applicable

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hydrauliköl HLP-D 46

Revision date: 01.07.2024

Page 7 of 12

Viscosity / kinematic: (at 40 °C)	approx. 46 mm ² /s DIN 51562
Water solubility:	practically insoluble
Vapour pressure: (at 20 °C)	< 0,1 hPa
Density (at 15 °C):	approx. 0,87 - 0,89 g/cm ³ DIN 51757

9.2. Other information**Information with regard to physical hazard classes**

Sustaining combustion: No data available

Other safety characteristics

Solvent content: 0%

Further Information

none

SECTION 10: Stability and reactivity**10.1. Reactivity**

No risks worthy of mention.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

Decomposition takes place from temperatures above: 120 °C

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

Do not mix with: Oxidizing agents, strong.

10.4. Conditions to avoid

storage stability: Do not store at temperatures over: 40 °C

This material is combustible, but will not ignite readily.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

10.5. Incompatible materials

Oxidizing agents, strong.

10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours.

In case of fire may be liberated: Carbon dioxide (CO₂), Sulphur dioxide (SO₂), Phosphorus oxides, Carbon monoxide.**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hydrauliköl HLP-D 46

Revision date: 01.07.2024

Page 8 of 12

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64742-56-9	Distillates (petroleum), solvent-dewaxed light paraffinic; Baseoil - unspecified				
	oral	LD50 > 5000 mg/kg	Rat	ECHA Dossier	
	dermal	LD50 > 5000 mg/kg	Rabbit	ECHA Dossier	
	inhalation (4 h) dust/mist	LC50 > 5,53 mg/l	Rat	ECHA Dossier	
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)				
	oral	LD50 2000 mg/kg	Rat		OECD 401

Irritation and corrosivity

Irritant effect on the skin: On short hand contact: non-irritant.

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).

Irritant effect on the eye: slightly irritant but not relevant for classification.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

The mineral oils in the product contain < 3 % DMSO-extract (IP 346).

STOT-repeated exposure

Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

Endocrine disrupting properties

Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hydrauliköl HLP-D 46

Revision date: 01.07.2024

Page 9 of 12

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
64742-56-9	Distillates (petroleum), solvent-dewaxed light paraffinic; Baseoil - unspecified					
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Pimephales promelas (fathead minnow)	ECHA Dossier	
	Acute algae toxicity	ErC50 > 100 mg/l	72 h	Pseudokirchneriella subcapitata	ECHA Dossier	
	Acute crustacea toxicity	EC50 > 10000 mg/l	48 h	Daphnia magna (Big water flea)	ECHA Dossier	
	Crustacea toxicity	NOEC 10 mg/l	21 d	Daphnia magna (Big water flea)	ECHA Dossier	
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)					
	Acute fish toxicity	LL50 24 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)		OECD 203
	Acute algae toxicity	ErC50 15 mg/l	96 h	Pseudokirchneriella subcapitata		OECD 201
	Acute crustacea toxicity	EL50 10,5 mg/l	48 h	Daphnia magna		OECD 202
	Algae toxicity	NOEC 1,7 mg/l	4 d	Pseudokirchneriella subcapitata		OECD 201
	Crustacea toxicity	NOEC 0,12 mg/l	21 d	Daphnia magna		OECD 211
	Acute bacteria toxicity	EC50 2433 mg/l ()	3 h	Activated sludge		OECD 209

12.2. Persistence and degradability

Not easily bio-degradable (according to OECD-criteria).

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
64742-56-9	Distillates (petroleum), solvent-dewaxed light paraffinic; Baseoil - unspecified			
	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	2 - 4 %	28	ECHA Dossier
	Not easily bio-degradable (according to OECD-criteria).			
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)			
	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	3,6	28	
	Not readily biodegradable (according to OECD criteria)			

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

State of matter: liquid at room temperature.

If product enters soil, it will be mobile and may contaminate groundwater

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hydrauliköl HLP-D 46

Revision date: 01.07.2024

Page 10 of 12

12.7. Other adverse effects

No information available.

Further information

Discharge into the environment must be avoided.
Do not allow to enter into surface water or drains.
Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to "Kreislaufwirtschafts- und Abfallgesetz (KrW-/AbfG)". Dispose of waste according to applicable legislation.
The waste key according to the European Waste Catalogue (EWC number) refers to the real wastes origin and therefore is not product- but use-oriented.
Consult the local waste disposal expert about waste disposal.
Observe mixture permissions according to "Altölverordnung (Waste oil directive)".

List of Wastes Code - residues/unused products

130110 OIL WASTES AND WASTES OF LIQUID FUELS (EXCEPT EDIBLE OILS, AND THOSE IN CHAPTERS 05, 12 AND 19); waste hydraulic oils; mineral based non-chlorinated hydraulic oils; hazardous waste

List of Wastes Code - used product

130110 OIL WASTES AND WASTES OF LIQUID FUELS (EXCEPT EDIBLE OILS, AND THOSE IN CHAPTERS 05, 12 AND 19); waste hydraulic oils; mineral based non-chlorinated hydraulic oils; hazardous waste

List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Contaminated packages must be completely emptied and can be re-used following proper cleaning. Packing which cannot be properly cleaned must be disposed of.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hydrauliköl HLP-D 46

Revision date: 01.07.2024

Page 11 of 12

14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.

14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.

14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Handling (Transport information): No special precautionary measures are necessary. See protective measures under point 7 and 8.

14.7. Maritime transport in bulk according to IMO instruments

No information available.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 75

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH).

National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

Additional information

Restricted to professional users.

The receiver of our product is singularly responsible for adhering to existing laws and regulations. Observe in addition any national regulations!

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 8,9,13,14,15,16.

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.
EUH210	Safety data sheet available on request.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hydrauliköl HLP-D 46

Revision date: 01.07.2024

Page 12 of 12

properties and establishes no contract legal rights.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)