

Safety Data Sheet

according to Regulation (EC) No 1907/2006

HYDRAULIC OIL ZHF

Revision date: 29.04.2023

Product code: 001-10-23195 (1L), 001-10-24390 (20L)

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

1.1. Product identifier

HYDRAULIC OIL ZHF

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

Use of the substance/mixture

hydraulic oil

Uses advised against

No information available.

1.3. Details of the supplier of the safety data sheet

Company name:	BBR Automotive GmbH	
Street:	Mercatorstraße 95	
Place:	D-21502 Geesthacht	
Telephone:	+49 (0)40 600806-0	Telefax: +49 (0)40 600806-10
e-mail:	info@bbr-automotive.de	
Internet:	www.bbr-automotive.de	
Responsible Department:	msds@bbr-automotive.de	

1.4. Emergency telephone number:

Giftnotruf (München)
+49 (0)89 19240 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:

Aspiration hazard: Asp. Tox. 1

Serious eye damage/eye irritation: Eye Irrit. 2

Hazard Statements:

May be fatal if swallowed and enters airways.

Causes serious eye irritation.

2.2. Label elements

Regulation (EC) No. 1272/2008

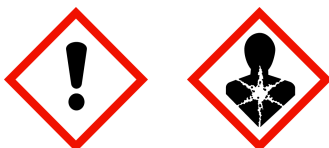
Hazard components for labelling

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil - unspecified

Dec-1-ene, Dimers, hydrogenated

Signal word: Danger

Pictograms:



Hazard statements

H332	Harmful if inhaled.
H319	Causes serious eye irritation.
H304	May be fatal if swallowed and enters airways.

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Precautionary statements

P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call Poison center / doctor if you feel unwell.
P331	Do NOT induce vomiting.
P405	Store locked up.
P501	Dispose of contents / container in accordance with official regulations.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mineral oil, Additive

Hazardous components

CAS No	Chemical name	Quantity
	EC No Index No REACH No	
	GHS Classification	
72623-86-0	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil - unspecified	39 - < 65,18 %
	276-737-9 649-482-00-X 01-2119474878-16	
	Asp. Tox. 1; H304	
68649-11-6	Dec-1-ene, Dimers, hydrogenated	16 - < 28,33 %
	500-228-5 01-2119493069-28	
	Acute Tox. 4, Asp. Tox. 1; H332 H304	
63150-03-8	Methacrylic Copolymer	6 - < 11,47 %
	613-160-7	
	Eye Irrit. 2; H319	

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	
72623-86-0	276-737-9	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil - unspecified	39 - < 65,18 %
		dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 5000 mg/kg	
68649-11-6	500-228-5	Dec-1-ene, Dimers, hydrogenated	16 - < 28,33 %
		inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg	

Further Information

This mixture contains no substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH.

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove affected person from the danger area and lay down.
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

Provide fresh air. Call a doctor if you feel unwell.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.
Take off contaminated clothing and wash it before reuse.
In case of skin irritation, consult a physician.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

Rinse mouth thoroughly with water.
Let water be drunk in little sips (dilution effect).
Do NOT induce vomiting.
In all cases of doubt, or when symptoms persist, seek medical advice.

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

No information available.

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

Use water spray jet to protect personnel and to cool endangered containers.
Co-ordinate fire-fighting measures to the fire surroundings.

- Water spray jet
- Foam
- Carbon dioxide (CO₂).
- Extinguishing powder

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.
In case of fire may be liberated:

- Nitrogen oxides (NO_x)
- Carbon monoxide (CO)
- Carbon dioxide (CO₂).
- Pyrolysis products, toxic

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Use of protective clothing
In case of fire and/or explosion do not breathe fumes.

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Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures

Keep people at a distance and stay on the windward side.

Special danger of slipping by leaking/spilling product.

For non-emergency personnel

Wear protective gloves/protective clothing and eye/face protection.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

Do not allow to enter into soil/subsoil.

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

6.3. Methods and material for containment and cleaning up

For containment

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.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

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

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid formation of oil dust.

Use personal protection equipment.

Do not put any product-impregnated cleaning rags into your trouser pockets.

Clear spills immediately.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Take precautionary measures against static discharges.

Keep away from sources of ignition - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep only in the original container in a cool, well-ventilated place.

Keep container tightly closed.

Floors should be impervious, resistant to liquids and easy to clean.

Hints on joint storage

Do not store together with:

- Materials capable of ignition under almost all normal temperature conditions
- Explosives

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- Radioactive substances
- Infectious substances

Further information on storage conditions

Note Regulation on facilities for the storage, filling and handling water-polluting substances. ...

7.3. Specific end use(s)

hydraulic oil

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
72623-86-0	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil - unspecified			
Worker DNEL, long-term		inhalation	systemic	2,73 mg/m ³
Worker DNEL, long-term		inhalation	local	5,58 mg/m ³
Worker DNEL, long-term		dermal	systemic	0,97 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	1,19 mg/m ³
Consumer DNEL, long-term		oral	systemic	0,74 mg/kg bw/day
68649-11-6	Dec-1-ene, Dimers, hydrogenated			
Worker DNEL, acute		inhalation	systemic	60 mg/m ³
Consumer DNEL, acute		inhalation	systemic	50 mg/m ³

PNEC values

CAS No	Substance	Environmental compartment	Value
72623-86-0	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil - unspecified		
		Secondary poisoning	9,33 mg/kg

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations.

Protective and hygiene measures

Take off contaminated clothing and wash it before reuse.

Wash hands before breaks and after work.

When using do not eat, drink, smoke, sniff.

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Eye/face protection

During filling, metering, mixing and sampling must be used:
Wear eye/face protection. DIN EN 166

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Recommended glove articles: EN ISO 374

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0,4 mm

Breakthrough times and swelling properties of the material must be taken into consideration. Breakthrough time: > 8h

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing. DIN EN 14605

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	green
Odour:	characteristic
Odour threshold:	not determined

pH-Value: not determined

Changes in the physical state

Melting point: not determined

Boiling point or initial boiling point and boiling range: not determined

Pour point: not determined

Flash point: 166 °C

Flash point: 166 °C

Flammability

Solid/liquid: not applicable

Gas: not applicable

Explosive properties

Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

Lower explosion limits: not determined

Upper explosion limits: not determined

Self-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

The product is not: oxidising.

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Vapour pressure:	not determined
Density (at 15 °C):	0,833 g/cm ³
Water solubility:	not determined
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not determined
Viscosity / kinematic: (at 40 °C)	20 mm ² /s
Relative vapour density:	not determined
Evaporation rate:	not determined
9.2. Other information	
Solid content:	not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

The formation of combustible vapours is possible at temperatures above: Flash point

Reaction with: Oxidizing agent

10.4. Conditions to avoid

Avoid: Thermal decomposition

10.5. Incompatible materials

Materials to avoid:

- Acids
- Reducing agent
- Oxidising agent

10.6. Hazardous decomposition products

Hazardous combustion products:

- Carbon monoxide (CO)
- Carbon dioxide (CO₂)
- Nitrogen oxides (NO_x)

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

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

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
72623-86-0	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil - unspecified				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1982)	OECD Guideline 401
	dermal	LD50 > 5000 mg/kg	Rabbit	Study report (1982)	OECD Guideline 402
68649-11-6	Dec-1-ene, Dimers, hydrogenated				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1988)	OECD Guideline 423
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1989)	OECD Guideline 402
	inhalation vapour	ATE 11 mg/l			
	inhalation aerosol	ATE 1,5 mg/l			

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

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 product contains less than 3% DMSO extract (method IP346). A classification as a carcinogen with R45 is deleted. (Note L)

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

May be fatal if swallowed and enters airways.

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP]. Special hazards arising from the substance or mixture!

11.2. Information on other hazards

Endocrine disrupting properties

No information available.

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
72623-86-0	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil - unspecified					
	Acute fish toxicity	LL50 mg/l	> 100	96 h	Pimephales promelas	Study report (1995) OECD Guideline 203
	Fish toxicity	NOEC mg/l	>= 1000	14 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010) The aquatic toxicity was estimated by a

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
68649-11-6	Dec-1-ene, Dimers, hydrogenated	> 6,5

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Endocrine disrupting properties

No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN 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:

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.

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

Marine transport (IMDG)

14.1. UN 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.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN 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

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

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 3, Entry 28

2004/42/EC (VOC): 28,33 % (235,989 g/l)

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

Additional information

To follow: 850/2004/EC, 1107/2009/EC, 649/2012/EC

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 2 - obviously hazardous to water

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): 1,2,3,4,5,6,7,8,9,10,11,12,13,15,16.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service
 LC50: Lethal concentration, 50%
 LD50: Lethal dose, 50%
 CLP: Classification, labelling and Packaging
 REACH: Registration, Evaluation and Authorization of Chemicals
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 VOC: Volatile Organic Compounds
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Asp. Tox. 1; H304	Calculation method
Eye Irrit. 2; H319	Calculation method

Relevant H and EUH statements (number and full text)

H304 May be fatal if swallowed and enters airways.
 H319 Causes serious eye irritation.
 H332 Harmful if inhaled.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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