To Our Customers:

The attached Safety Data Sheet (SDS) was prepared by the vendor of the product you purchased through one of our divisions. We used the manufacturer's electronic document directly or scanned a paper copy and generated a file for our automated SDS delivery system.

All statements, technical information, and recommendations contained therein are solely that of the manufacturer of the product. We at Zep Inc. did not verify the accuracy and completeness of the statements and do not warrantee or guarantee the information. We provide vendor SDSs to assist our customers in their compliance efforts. The attached document is in compliance with one of the respective country regulatory requirements noted below:

The OSHA Hazard Communication Standard (in the United States)
The Hazardous Products Regulations (in Canada)

We made every effort to deliver all of the information prepared by the manufacturer. We cannot anticipate all conditions under which this information will be used. If you have any questions about the statements on the SDS, please contact the company shown on the document.

Zep Inc. assumes no liability or responsibility for loss or damage resulting from the improper use or handling of this product, from incompatible product combinations, or from the failure to follow instructions, warnings, and advisories in the manufacturer's product label and Safety Data Sheet.

Sincerely,

Product Stewardship Team
Zep Inc.

We create chemistry

Safety Data Sheet
Hydraulan® 406 ESI Daimler US

1. Identification

Product identifier used on the label

Hydraulan® 406 ESI Daimler US

Recommended use of the chemical and restriction on use

Recommended use*: brake fluid
Unsuitable for use: None known

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY

Contact address:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932
USA
Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Chemical family: Blend based on: polyglycol, glycol ether, inhibitors

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Repr.	2 (unborn child)	Reproductive toxicity
Repr.	2 (fertility)	Reproductive toxicity

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

H318	Causes serious eye damage.
H361	Suspected of damaging fertility. Suspected of damaging the unborn child.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or physician.
P308 + P313	IF exposed or concerned: Get medical attention.

Precautionary Statements (Storage):

P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Ethanol, 2-[2-(2-methoxyethoxy)ethoxy]-, triester with boric acid (H3BO3)
CAS Number: 30989-05-0
Content (W/W): >= 50.0 - < 75.0%
Synonym: Ethanol, 2-[2-(2-methoxyethoxy)ethyl]-, triester with boric acid (H3BO3)

2-(2-(2-butoxyethoxy)ethoxy)ethanol
CAS Number: 143-22-6
Content (W/W): >= 5.0 - < 10.0%
Synonym: 2-[2-(2-Butoxyethoxy)ethoxy]ethanol; Triethylene glycol monobutyl

ether

3,6,9,12-Tetraoxahexadecan-1-ol
CAS Number: 1559-34-8
Content (W/W): >= 1.0 - < 5.0%
Synonym: No data available.

diethylene glycol
CAS Number: 111-46-6
Content (W/W): >= 1.0 - < 3.0%
Synonym: 2,2'-Oxybisethanol

1,1'-iminodipropan-2-ol
CAS Number: 110-97-4
Content (W/W): >= 0.3 - < 3.0%
Synonym: 1,1'-Iminobis(2-propanol); Diisopropanolamine

2-(2-methoxyethoxy)ethanol
CAS Number: 111-77-3
Content (W/W): > 0.0 - < 0.3%
Synonym: 2-(2-Methoxyethoxy)ethanol; Methyl carbitol

4. First-Aid Measures

Description of first aid measures

General advice:
Immediately remove contaminated clothing. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). First aid personnel should pay attention to their own safety.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

If on skin:
Remove contaminated clothing. Rinse skin immediately with plenty of water for 15 - 20 minutes. If irritation develops, seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open.

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Seek medical attention.

If swallowed:
Rinse mouth immediately with water. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting due to aspiration hazard. Seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

Information on: Ethanol, 2-[2-(2-methoxyethoxy)ethoxy]-, triester with boric acid (H3BO3)
Symptoms: Overexposure may cause:, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps

Information on: 2-(2-(2-butoxyethoxy)ethoxy)ethanol
Symptoms: Overexposure may cause:, corneal injury, skin corrosion, severe pain, coughing, respiratory disorders, dyspnea, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps

Information on: diethylene glycol
Symptoms: Overexposure may cause:, vomiting, coma, abdominal cramps, lethargy, nausea, diarrhea, headache
---
Hazards: No applicable information available.

Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, dry powder, foam

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
harmful vapours
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Breathing protection required.

Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For small amounts: Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder).
Dispose of absorbed material in accordance with regulations.
For large amounts: Pump off product.
Place absorbed material in the same container as the spilled substance/product for disposal.

7. Handling and Storage

Precautions for safe handling

Local exhaust ventilation.

Protection against fire and explosion:
Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

The product in undamaged packing need not be stored separately.

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

Storage stability:
Storage temperature: 0 - 40 °C

8. Exposure Controls/Personal Protection

No substance specific occupational exposure limits known.

Advice on system design:
No applicable information available.

Personal protective equipment

Respiratory protection:
Wear respiratory protection if ventilation is inadequate. Respiratory protection in case of vapour/aerosol release.

Hand protection:
Chemical resistant protective gloves

Eye protection:
Safety glasses with side-shields.

Body protection:
Body protection must be chosen based on level of activity and exposure., Protective coverall and/or impermeable apron and boots as necessary.

General safety and hygiene measures:
Wearing of closed work clothing is required additionally to the stated personal protection equipment.
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	No data available.	
Odour threshold:	not determined	
Colour:	amber to yellowish	
pH value:	7.7 (50 %(m))	
Melting temperature:	No applicable information available.	
Freezing point:	No applicable information available.	
boiling temperature:	271 °C (1,013 hPa)	(ASTM D1120)
Sublimation temperature:	No applicable information available.	
Flash point:	137.5 °C	(ISO 2719)
Flammability:	hardly combustible	(derived from flash point)
Lower explosion limit:	For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.	(DIN 51649-1)
Upper explosion limit:	For liquids not relevant for classification and labelling.	(DIN 51649-1)
Autoignition:	222 °C 230 °C	(DIN EN ISO/IEC 80079-20-1) (DIN 51794)
Vapour pressure:	1 hPa (50 °C) 1 hPa (20 °C)	
Density:	1.06 g/cm3 (20 °C)	(DIN 51757)
Relative density:	No applicable information available.	
Vapour density:	> 1 (20 °C) Heavier than air.	(estimated)
Partitioning coefficient n-octanol/water (log Pow):	not applicable for mixtures	
Self-ignition temperature:	not self-igniting	
Thermal decomposition:	No decomposition if used as directed.	
Viscosity, dynamic:	7.2 mPa.s (40 °C)	
Viscosity, kinematic:	11.5 mm2/s (23 °C) 6.8 mm2/s (40 °C)	(ASTM D445)
Particle size:	The substance / product is marketed or used in a non solid or granular form.	
Solubility in water:	soluble	
Solubility (quantitative):	No applicable information available.	

Solubility (qualitative):	soluble solvent(s): polar solvents,
Molar mass:	No applicable information available.
Evaporation rate:	not determined

10. Stability and Reactivity

Reactivity
No applicable information available.

Corrosion to metals:
No corrosive effect on metal.

Oxidizing properties:
not fire-propagating

Minimum ignition energy:

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
No hazardous reactions when stored and handled according to instructions.
The product is chemically stable.

Conditions to avoid
Avoid open flames.

Incompatible materials
strong oxidizing agents, atmospheric moisture

Hazardous decomposition products

Decomposition products:
Hazardous decomposition products: No hazardous decomposition products known.

Thermal decomposition:
No decomposition if used as directed.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Virtually nontoxic after a single ingestion.

Oral

Type of value: ATE
Value: > 5,000 mg/kg

Inhalation
No applicable information available.

Dermal
No applicable information available.

Assessment other acute effects
Based on available data, the classification criteria are not met.

Irritation / corrosion
Assessment of irritating effects: May cause severe damage to the eyes. Not irritating to the skin.

Information on: 2-(2-(2-butoxyethoxy)ethoxy)ethanol
Assessment of irritating effects: Not irritating to the skin. Causes serious eye damage.

Sensitization
Assessment of sensitization: Based on the ingredients, there is no suspicion of a skin-sensitizing potential.

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Genetic toxicity
Assessment of mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity
Assessment of carcinogenicity: None of the components in this product at concentrations greater than 0.1% are listed by IARC; NTP, OSHA or ACGIH as a carcinogen.

Reproductive toxicity
Assessment of reproduction toxicity: Based on the ingredients, there is a suspicion of a toxic effect on reproduction.

Information on: Ethanol, 2-[2-(2-methoxyethoxy)ethoxy]-, triester with boric acid (H3BO3)
Assessment of reproduction toxicity: The results of animal studies suggest a fertility impairing effect.

Teratogenicity
Assessment of teratogenicity: Possible risk of harm to the unborn child.

Information on: 2-(2-methoxyethoxy)ethanol
Assessment of teratogenicity: In animal studies the substance caused malformations.

Information on: Ethanol, 2-[2-(2-methoxyethoxy)ethoxy]-, triester with boric acid (H3BO3)

Assessment of teratogenicity: Indications of possible developmental toxicity/teratogenicity were seen in animal studies.

Other Information
The product has not been tested. The statements on toxicology have been derived from products of a similar structure and composition.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

Mobility in soil

Assessment transport between environmental compartments
The substance will not evaporate into the atmosphere from the water surface.

Additional information

Other ecotoxicological advice:
Do not release untreated into natural waters.

The product has not been tested. The statements on ecotoxicology have been derived from products of a similar structure and composition.

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with national, state and local regulations. It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA.

Container disposal:
Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

EPCRA 313:

CAS Number	Chemical name
112-35-6	2-(2-(2-methoxyethoxy)ethoxy)ethanol
143-22-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol

State regulations

State RTK	CAS Number	Chemical name
PA	110-97-4	1,1'-iminodipropan-2-ol
	111-46-6	diethylene glycol
	112-35-6	2-(2-(2-methoxyethoxy)ethoxy)ethanol
	143-22-6	2-(2-(2-butoxyethoxy)ethoxy)ethanol

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including ETHYLENE OXIDE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

NFPA Hazard codes:
Health: 3 Fire: 1 Reactivity: 0 Special:

HMIS III rating
Health: 3¤ Flammability: 1 Physical hazard: 0

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2022/11/30

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in

a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

Hydraulan® 406 ESI Daimler US END OF DATA SHEET