

# SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended


## BIZOL Brake Fluid DOT 4

Creation date 17th May 2022  
Revision date Version 1.0

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

- 1.1. Product identifier**  
Substance / mixture BIZOL Brake Fluid DOT 4  
mixture  
UFI ND0P-CTXY-X00R-F87J
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**  
**Mixture's intended use**  
Brake fluid  
**Main intended use**  
PC-TEC-8 Hydraulic fluids, including brake and transmission fluids  
**Mixture uses advised against**  
not available
- 1.3. Details of the supplier of the safety data sheet**  
**Distributor**  
Name or trade name BIZOL Germany GmbH  
Address Martin Buber Str. 12, Berlin, D-14163  
Germany  
VAT Reg No DE311552841  
Phone +49 (0) 30 80 48 69-0  
E-mail info@bizol.de  
**Competent person responsible for the safety data sheet**  
Name BIZOL Germany GmbH  
E-mail info@bizol.de
- 1.4. Emergency telephone number**  
European emergency number: 112

### SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture**  
**Classification of the mixture in accordance with Regulation (EC) No 1272/2008**  
The mixture is classified as dangerous.  
Repr. 2, H361d  
Full text of all classifications and hazard statements is given in the section 16.  
**Most serious adverse physico-chemical effects**  
Unknown.  
**Most serious adverse effects on human health and the environment**  
Harmful if swallowed. Causes serious eye irritation. Suspected of damaging the unborn child.
- 2.2. Label elements**  
**Hazard pictogram**  
  
**Signal word**  
Warning  
**Hazardous substances**  
Tris(2-(2-(2-methoxyethoxy)ethoxy)ethyl)orthoborat  
2-(2-methoxyethoxy)ethanol  
**Hazard statements**  
H361d Suspected of damaging the unborn child.  
**Precautionary statements**  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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- |                |  |
|----------------|--|
| P280           | Wear protective gloves/protective clothing/eye protection/face protection.   |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P501           | Dispose of contents/container to in accordance with local/regional/national/international regulations.                           |

**Requirements for child-resistant fastenings and tactile warning of danger**

Container must carry a tactile warning of danger.

**2.3. Other hazards**

Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

**Chemical characterization**

Mixture of substances and additives specified below.

**Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment**

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
CAS: 30989-05-0 EC: 250-418-4 Registration number: 01-2119462824-33	Tris(2-(2-(2-methoxyethoxy)ethoxy)ethyl) orthoborat	40-50	Repr. 2, H361d	
EC: 907-996-4 Registration number: 01-2119531322-53	Reaction mass of 2-[2-(2-Butoxyethoxy)ethoxy]ethanol and 3,6,9,12-tetraoxahexadecan-1-ol	5-15	Eye Dam. 1, H318 Specific concentration limit: Eye Dam. 1, H318: C > 30 % Eye Irrit. 2, H319: 20 % ≤ C ≤ 30 %	
Index: 603-183-00-0 CAS: 143-22-6 EC: 205-592-6	2-[2-(2-butoxyethoxy)ethoxy]ethanol	1-5	Eye Dam. 1, H318 Specific concentration limit: Eye Dam. 1, H318: C ≥ 30 % Eye Irrit. 2, H319: 20 % ≤ C < 30 %	
Index: 603-140-00-6 CAS: 111-46-6 EC: 203-872-2 Registration number: 01-2119457857-21	2,2'-oxybisethanol	1-3	Acute Tox. 4, H302	
Index: 603-083-00-7 CAS: 110-97-4 EC: 203-820-9 Registration number: 01-2119475444-34	1,1'-iminodipropan-2-ol	1-2,5	Eye Irrit. 2, H319	
Index: 603-107-00-6 CAS: 111-77-3 EC: 203-906-6	2-(2-methoxyethoxy)ethanol	>1	Repr. 2, H361d	1, 2

**Notes**

- 1 Substance with a Union workplace exposure limit.
  - 2 The use of the substance is restricted by Annex XVII of REACH Regulation
- Full text of all classifications and hazard statements is given in the section 16.



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### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

##### If inhaled

Terminate the exposure immediately; move the affected person to fresh air. Protect the person against growing cold. Provide medical treatment if irritation, dyspnoea or other symptoms persist.

##### If on skin

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists. Note: If the product sticks to the skin and cannot be removed using water and cleaning products or edible oil, do not use force and leave for specialized treatment.

##### If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should continue at least for 10 minutes. Provide medical treatment, specialized if possible. Note: If the product sticks to the skin and cannot be removed using water and cleaning products or edible oil, do not use force and leave for specialized treatment.

##### If swallowed

DO NOT INDUCE VOMITING - even the inducing of vomiting by itself may cause complications (i.e. inhalation of the substance in airways and lungs, for example, in case of detergents and other substances that produce foam or mechanical damage to the mucous membrane of the pharynx may be caused). If possible, provide a small amount of activated carbon (1-2 crushed tablets). For persons with no symptoms, call the Toxicological Information Centre to decide about the need of medical treatment; provide information about the substances or composition of the product from the original packaging or the Safety Data Sheet of the product. Provide medical treatment if the person has any health problems.

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

##### If inhaled

Possible irritation of airways, cough, headache.

##### If on skin

Not expected.

##### If in eyes

Not expected.

##### If swallowed

Irritation, nausea.

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

Symptomatic treatment.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

##### Unsuitable extinguishing media

Water - full jet.

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

Fire produces heavy, black smoke, with potential development of carbon monoxide and dioxide and other toxic gases. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

#### 5.3. Advice for firefighters

Use a self-contained breathing apparatus and full-body protective clothing. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.



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### SECTION 6: Accidental release measures

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

Provide sufficient ventilation. Use gloves in case of prolonged contact. Follow the instructions in the Sections 7 and 8.

#### 6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

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

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. Dispose of the collected material according to the instructions in the section 13. Upon an escape of large quantities of the product, inform the Fire Department and the Environmental Department of the Municipal Authority with the extended scope of competencies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

#### 6.4. Reference to other sections

See the Section 7, 8 and 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Prevent formation of gases and vapours in flammable or explosive concentrations and concentrations exceeding the occupational exposure limits. The product should be used only in the areas where it is not in contact with open fire and other ignition sources. No smoking. Protect against direct sunlight. Electrostatic charge may be formed during use; use only earthed piping (tubing) when repumping. Use of antistatic clothes and footwear is recommended. Use non-sparking tools. Do not inhale gases and vapours. Prevent contact with skin and eyes. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.

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

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Do not expose to sunlight.

Content	Packaging type	Material of package
500 ml	bottle	
1 l	bottle	
5 l	jerry can	
60 l	barrel / drum	
200 l	barrel / drum	
1000 l	IBC (intermediate bulk container)	

#### The specific requirements or rules relating to the substance/mixture

Solvent vapours are heavier than air and accumulate especially near the floor where they may form an explosive mixture with the air.

#### 7.3. Specific end use(s)

not available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

#### European Union

#### Commission Directive 2006/15/EC

Substance name (component)	Type	Value	Note
2-(2-methoxyethoxy)ethanol (CAS: 111-77-3)	OEL 8 hours	50,1 mg/m <sup>3</sup>	Skin
	OEL 8 hours	10 ppm	

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### 8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. If exposure limits cannot be observed in this mode, suitable protection of airways must be used. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

#### Eye/face protection

Protective goggles or face shield (based on the nature of the work performed).

#### Skin protection

Hand protection: Protective gloves resistant to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Use barrier creams for skin protection, they should, however, not be applied once exposure has occurred. Observe other recommendations of the manufacturer. Other protection: Protective antistatic clothing made of natural fibres (cotton) or synthetic fibres resistant to elevated temperatures. Contaminated skin should be washed thoroughly.

#### Respiratory protection

Halfmask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of substances are exceeded or in a poorly ventilated environment.

#### Thermal hazard

not available

#### Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

## SECTION 9: Physical and chemical properties

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

Physical state	liquid
Colour	yellow
Odour	characteristic
Melting point/freezing point	data not available
Boiling point or initial boiling point and boiling range	>250 °C
Flammability	data not available
Lower and upper explosion limit	data not available
Flash point	>100 °C
Auto-ignition temperature	data not available
Decomposition temperature	data not available
pH	7-10,5 (10% solution at 20 °C)
Kinematic viscosity	5-10 mm <sup>2</sup> /s at 40 °C
Solubility in water	data not available
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	data not available
Density and/or relative density	
Density	1,01-1,07 g/cm <sup>3</sup>
Form	liquid

### 9.2. Other information

Ignition temperature	>300 °C
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

If storage conditions are maintained, the mixture is non-flammable.

### 10.2. Chemical stability

The product is stable under normal conditions.

### 10.3. Possibility of hazardous reactions

The product is stable under normal conditions.

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### 10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

### 10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents. Thereby a dangerous exothermic reaction will be prevented.

### 10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide, heavy smoke and nitrogen oxides are formed at high temperature and in fire.

## SECTION 11: Toxicological information

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

No toxicological data is available for the mixture.

#### Acute toxicity

Harmful if swallowed.

1,1'-iminodipropan-2-ol

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD <sub>50</sub>	6720 mg/kg		Rat (Rattus norvegicus)	
Dermal	LD <sub>50</sub>	8000 mg/kg		Rabbit	

2,2'-oxybisethanol

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD <sub>50</sub>	12565 mg/kg		Rat	
Dermal	LD <sub>50</sub>	11890 mg/kg		Rat	

Reaction mass of 2-[2-(2-Butoxyethoxy)ethoxy]ethanol and 3,6,9,12-tetraoxahexadecan-1-ol

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD <sub>50</sub>	>5000 mg/kg		Rat (Rattus norvegicus)	
Dermal	LD <sub>50</sub>	3540 mg/kg		Rabbit	

#### Skin corrosion/irritation

Based on available data the classification criteria are not met.

#### Serious eye damage/irritation

Causes serious eye irritation.

#### Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

#### Germ cell mutagenicity

Based on available data the classification criteria are not met.

#### Carcinogenicity

Based on available data the classification criteria are not met.

#### Reproductive toxicity

Suspected of damaging the unborn child.

#### Toxicity for specific target organ - single exposure

Based on available data the classification criteria are not met.

#### Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

#### Aspiration hazard

Based on available data the classification criteria are not met.

### 11.2. Information on other hazards

not available

## SECTION 12: Ecological information

### 12.1. Toxicity



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### Acute toxicity

1,1'-iminodipropyl-2-ol

Parameter	Value	Time of exposure	Species	Environment
EC <sub>50</sub>	277.7 mg/l	48 hour	Daphnia (Daphnia magna)	
LC <sub>50</sub>	1466 mg/l	96 hour	Fishes (Oncorhynchus mykiss)	

Reaction mass of 2-[2-(2-Butoxyethoxy)ethoxy]ethanol and 3,6,9,12-tetraoxahexadecan-1-ol

Parameter	Value	Time of exposure	Species	Environment
EC <sub>50</sub>	2210 mg/l	48 hour	Daphnia (Daphnia magna)	
EC 10	612.6 mg/l	72 hour	Algae (Selenastrum capricornutum)	
LC <sub>50</sub>	2400 mg/l	96 hour	Fishes (Oncorhynchus mykiss)	

### More information

The product is readily degradable. 90 % within 15 days.

#### 12.2. Persistence and degradability

Data not available.

#### 12.3. Bioaccumulative potential

Not available.

#### 12.4. Mobility in soil

Not available.

#### 12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

#### 12.6. Endocrine disrupting properties

not available

#### 12.7. Other adverse effects

Not available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

#### Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

## SECTION 14: Transport information

### 14.1. UN number or ID number

not subject to transport regulations

### 14.2. UN proper shipping name

not relevant

### 14.3. Transport hazard class(es)

not relevant

### 14.4. Packing group

not relevant





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### 14.5. Environmental hazards

not relevant

### 14.6. Special precautions for user

Reference in the Sections 4 to 8.

### 14.7. Maritime transport in bulk according to IMO instruments

not relevant

## SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended.

#### Restrictions pursuant to Annex XVII of Regulation (EC) No. 1907/2006 (REACH), as amended

2-(2-methoxyethoxy)ethanol

Restriction	Conditions of restriction
54	Shall not be placed on the market after 27 June 2010, for supply to the general public, as a constituent of paints, paint strippers, cleaning agents, self-shining emulsions or floor sealants in concentrations equal to or greater than 0,1 % by weight.

### 15.2. Chemical safety assessment

not available

## SECTION 16: Other information

### A list of standard risk phrases used in the safety data sheet

H302 Harmful if swallowed.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H361d Suspected of damaging the unborn child.

### Guidelines for safe handling used in the safety data sheet

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P501 Dispose of contents/container to in accordance with local/regional/national/international regulations.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

### Key to abbreviations and acronyms used in the safety data sheet

ADR European agreement concerning the international carriage of dangerous goods by road  
BCF Bioconcentration Factor  
CAS Chemical Abstracts Service  
CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures  
EC<sub>50</sub> Concentration of a substance when it is affected 50% of the population  
EINECS European Inventory of Existing Commercial Chemical Substances  
EmS Emergency plan  
ES Identification code for each substance listed in EINECS  
EU European Union  
EuPCS European Product Categorisation System



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IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC <sub>50</sub>	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD <sub>50</sub>	Lethal dose of a substance in which it can be expected death of 50% of the population
log K <sub>ow</sub>	Octanol-water partition coefficient
MARPOL	International Convention for the Prevention of Pollution from Ships
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative

Acute Tox.	Acute toxicity
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
Repr.	Reproductive toxicity

### Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

### Recommended restrictions of use

not available

### Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended.  
REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

### Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.