

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 20.10.2021

Version number 4 (replaces version 3)

Revision: 01.10.2021

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

- **1.1 Product identifier**
- **Trade name:** Bremsflüssigkeit DOT 4
- **Article number:** 30770
- **UFI:** G3C0-F0TE-F00D-55MG
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Brake Fluide
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SWD Lubricants GmbH & Co.KG  
Am Schlütershof 26  
D-47059 Duisburg  
Tel : 0049 (0)203 31919-0  
Fax : 0049 (0)203 31919-99  
E-mail: info@swd-gmbh.de
- **Further information obtainable from:**  
Department product safety  
sdb@swd-gmbh.de
- **1.4 Emergency telephone number:**  
Informationszentrale gegen Vergiftungen Uni - Klinikum Bonn; Notfall - Nr.: +49 228 19 240

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Repr. 2 H361d Suspected of damaging the unborn child.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS08

- **Signal word** Warning
- **Hazard-determining components of labelling:**  
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate
- **Hazard statements**  
H361d Suspected of damaging the unborn child.
- **Precautionary statements**
  - P101 If medical advice is needed, have product container or label at hand.
  - P102 Keep out of reach of children.
  - P103 Read carefully and follow all instructions.
  - P201 Obtain special instructions before use.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
  - P308+P313 IF exposed or concerned: Get medical advice/attention.
  - P405 Store locked up.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Additional information:**  
Contains dihydro-3-(tetrapropenyl)furan-2,5-dione. May produce an allergic reaction.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

#### · **Dangerous components:**

CAS: 30989-05-0 EINECS: 250-418-4	Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate ⚠ Repr. 2, H361d	25-50%
CAS: 111-46-6 EINECS: 203-872-2 Index number: 603-140-00-6 Reg.nr.: 01-2119457857-21	2,2'-oxybisethanol ⚠ STOT RE 2, H373; ⚠ Acute Tox. 4, H302	2.5-10%
CAS: 143-22-6 EINECS: 205-592-6 Index number: 603-183-00-0 Reg.nr.: 01-2119475107-38	2-[2-(2-butoxyethoxy)ethoxy]ethanol ⚠ Eye Dam. 1, H318 Specific concentration limits: Eye Dam. 1; H318: C ≥ 30 % Eye Irrit. 2; H319: 20 % ≤ C < 30 %	2.5-10%
CAS: 111-77-3 EINECS: 203-906-6 Index number: 603-107-00-6	2-(2-methoxyethoxy)ethanol ⚠ Repr. 2, H361d	2.5-10%
CAS: 26544-38-7 EINECS: 247-781-6 Reg.nr.: 01-2119979080-37	dihydro-3-(tetrapropenyl)furan-2,5-dione ⚠ Eye Irrit. 2, H319; Skin Sens. 1A, H317; Aquatic Chronic 4, H413	≤1%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Take affected persons out of danger area and lay down.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
If skin irritation continues, consult a doctor.  
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
A person vomiting while laying on their back should be turned onto their side.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:

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Formation of toxic gases is possible during heating or in case of fire.

Carbon dioxide (CO<sub>2</sub>)

· **5.3 Advice for firefighters**

· **Protective equipment:**

Do not inhale explosion gases or combustion gases.

Wear self-contained respiratory protective device.

· **Additional information**

Cool endangered receptacles with water spray.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

### SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

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

· **6.2 Environmental precautions:**

Keep contaminated washing water and dispose of appropriately.

Prevent from spreading (e.g. by damming-in or oil barriers).

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Remove from the water surface (e.g. skim or suck off).

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** Keep receptacles tightly sealed.

· **Information about fire - and explosion protection:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** No special requirements.

· **Information about storage in one common storage facility:** Store away from oxidising agents.

· **Further information about storage conditions:**

This product is hygroscopic.

Storage in a collecting room is required.

· **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

CAS: 111-77-3 2-(2-methoxyethoxy)ethanol

IOELV Long-term value: 50.1 mg/m<sup>3</sup>, 10 ppm

Skin

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Appropriate engineering controls** No further data; see item 7.

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- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**  
 Avoid close or long term contact with the skin.  
 Clean skin thoroughly immediately after handling the product.  
 Ensure that washing facilities are available at the work place.  
 Use skin protection cream for skin protection.  
 Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
- **Hand protection**  
 Use gloves of stable material (e.g. Nitrile) - if necessary tricoted to improve the wearability.  
 The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
 The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Not suitable are gloves made of the following materials:** Leather gloves
- **Eye/face protection** Goggles recommended during refilling
- **Body protection:** Impervious protective clothing

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Fluid
- **Colour:** Amber coloured
- **Odour:** Pleasant
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** Undetermined.
- **Boiling point or initial boiling point and boiling range** >230 °C (DIN 51751)
- **Flammability** Not applicable.
- **Lower and upper explosion limit**
- **Lower:** 0.7 Vol % (DIN EN 1839)
- **Upper:** 22 Vol % (DIN EN 1839)
- **Flash point:** >100 °C (DIN ISO 2592)
- **Auto-ignition temperature:** Product is not selfigniting.
- **Decomposition temperature:** > 300 °C
- **pH at 20 °C** 7
- **Viscosity:** Not determined.
- **Kinematic viscosity at 20 °C** 5 mm<sup>2</sup>/s
- **Dynamic:** Not determined.
- **Solubility**
- **water:** Fully miscible.
- **Partition coefficient n-octanol/water (log value)** < 2.0 POW
- **Vapour pressure:** Not determined.
- **Density and/or relative density**
- **Density at 20 °C:** 1.07 g/cm<sup>3</sup> (DIN 51757)
- **Relative density** Not determined.

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· <b>Vapour density</b>	Not determined.
· <b>9.2 Other information</b>	
· <b>Appearance:</b>	
· <b>Form:</b>	Fluid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Explosive properties:</b>	Product does not present an explosion hazard. Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <b>Solvent content:</b>	
· <b>Organic solvents:</b>	<13.0 %
· <b>Change in condition</b>	
· <b>Softening point/range</b>	
· <b>Pour point</b>	Not determined
· <b>Evaporation rate</b>	Not determined.
· <b>Information with regard to physical hazard classes</b>	
· <b>Explosives</b>	Void
· <b>Flammable gases</b>	Void
· <b>Aerosols</b>	Void
· <b>Oxidising gases</b>	Void
· <b>Gases under pressure</b>	Void
· <b>Flammable liquids</b>	Void
· <b>Flammable solids</b>	Void
· <b>Self-reactive substances and mixtures</b>	Void
· <b>Pyrophoric liquids</b>	Void
· <b>Pyrophoric solids</b>	Void
· <b>Self-heating substances and mixtures</b>	Void
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
· <b>Oxidising liquids</b>	Void
· <b>Oxidising solids</b>	Void
· <b>Organic peroxides</b>	Void
· <b>Corrosive to metals</b>	Void
· <b>Desensitised explosives</b>	Void

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**  
Possible formation of peroxide.  
Reacts with strong oxidising agents.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### 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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#### · LD/LC50 values relevant for classification:

**CAS: 111-46-6 2,2'-oxybisethanol**

Oral	LD50	12,565 mg/kg (rat)
Dermal	LD50	11,890 mg/kg (rabbit)

**CAS: 111-77-3 2-(2-methoxyethoxy)ethanol**

Oral	LD50	5,500 mg/kg (rat)
Dermal	LD50	6,540 mg/kg (rabbit)

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **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.
- **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** Based on available data, the classification criteria are not met.

#### · 11.2 Information on other hazards

##### · Endocrine disrupting properties

None of the ingredients is listed.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** biodegradable
- **12.3 Bioaccumulative potential** Non significant accumulation in organisms
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**  
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must be specially treated adhering to official regulations.  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
Delivery of waste oil to officially authorised collectors only.

#### · European waste catalogue

16 01 13*	brake fluids
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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

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· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

· <b>14.1 UN number or ID number</b>	
· <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.2 UN proper shipping name</b>	
· <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.3 Transport hazard class(es)</b>	
· <b>ADR, ADN, IMDG, IATA</b>	
· <b>Class</b>	Void
· <b>14.4 Packing group</b>	
· <b>ADR, IMDG, IATA</b>	Void
· <b>14.5 Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b>	Not applicable.
· <b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable.
· <b>UN "Model Regulation":</b>	Void

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS08

- **Signal word** Warning
- **Hazard-determining components of labelling:**  
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate
- **Hazard statements**  
H361d Suspected of damaging the unborn child.
- **Precautionary statements**
  - P101 If medical advice is needed, have product container or label at hand.
  - P102 Keep out of reach of children.
  - P103 Read carefully and follow all instructions.
  - P201 Obtain special instructions before use.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
  - P308+P313 IF exposed or concerned: Get medical advice/attention.
  - P405 Store locked up.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

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· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 54

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H361d Suspected of damaging the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

H413 May cause long lasting harmful effects to aquatic life.

· **Department issuing SDS:** Product safety

· **Version number of previous version:** 3

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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

GHS: Globally Harmonised 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 (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1A: Skin sensitisation – Category 1A

Repr. 2: Reproductive toxicity – Category 2

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

· **Sources** Concawe Product Dossier No.97/108. Concawe Product Dossier Nn. 01/54.

· **\* Data compared to the previous version altered.**