

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

Printing date 22.05.2015

Version number 1

Revision: 22.05.2015

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

- **1.1 Product identifier**
- **Trade name:** Rheinol Bremsflüssigkeit DOT 4
- **Article number:** 30770
- **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

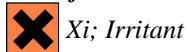
SECTION 2: Hazards identification

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



Eye Irrit. 2 H319 Causes serious eye irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



R41: Risk of serious damage to eyes.

- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
When appropriately and responsibly handled, the product should not be dangerous for the environment.
In case of spillage or inappropriate use, it may however impair water and soil properties.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **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**



- **Signal word** Warning
- **Hazard-determining components of labelling:**
2-[2-(2-butoxyethoxy)ethoxy]ethanol

(Contd. on page 2)

GB

Safety data sheet
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Trade name: Rheinol Bremsflüssigkeit DOT 4

(Contd. of page 1)

· **Hazard statements**

H319 Causes serious eye irritation.

· **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P264 Wash thoroughly after handling.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 143-22-6 EINECS: 205-592-6	2-[2-(2-butoxyethoxy)ethoxy]ethanol Xi R41 Eye Dam. 1, H318	25-50%
CAS: 111-46-6 EINECS: 203-872-2	2,2'-oxybisethanol Xn R22 STOT RE 2, H373; Acute Tox. 4, H302	2.5-10%
CAS: 107-21-1 EINECS: 203-473-3	ethanediol Xn R22 Acute Tox. 4, H302	2.5-10%
CAS: 112-34-5 EINECS: 203-961-6	2-(2-butoxyethoxy)ethanol Xi R36 Eye Irrit. 2, H319	2.5-10%
CAS: 111-77-3 EINECS: 203-906-6	2-(2-methoxyethoxy)ethanol Xn R63 Repr. Cat. 3 Repr. 2, H361d	2.5-10%

· **SVHC** None

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** If symptoms persist consult doctor.

· **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.

GB

(Contd. on page 3)

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

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Version number 1

Revision: 22.05.2015

Trade name: Rheinol Bremsflüssigkeit DOT 4

(Contd. of page 2)

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:
Carbonmonoxide and Carbondioxide
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
- 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:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Ensure adequate ventilation.
- **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.
- Ensure good ventilation/exhaustion at the workplace.
- Prevent formation of aerosols.
- **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:** Not required.
- **Further information about storage conditions:** Storage in a collecting room is required.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

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

111-46-6 2,2'-oxybisethanol

WEL Long-term value: 101 mg/m³, 23 ppm

107-21-1 ethanediol

WEL Short-term value: 104** mg/m³, 40** ppm
Long-term value: 10* 52** mg/m³, 20** ppm
Sk *particulate **vapour

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.05.2015

Version number 1

Revision: 22.05.2015

Trade name: Rheinol Bremsflüssigkeit DOT 4

(Contd. of page 3)

112-34-5 2-(2-butoxyethoxy)ethanol

 WEL Short-term value: 101.2 mg/m³, 15 ppm
 Long-term value: 67.5 mg/m³, 10 ppm

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

 WEL Long-term value: 50.1 mg/m³, 10 ppm
 Sk

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

 · **8.2 Exposure controls**

 · **Personal protective equipment:**

 · **General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

 · **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

 · **Protection of hands:**

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 protection:**


Tightly sealed goggles

SECTION 9: Physical and chemical properties

 · **9.1 Information on basic physical and chemical properties**

 · **General Information**

Appearance: clear

 · **Form:** Fluid

 · **Colour:** Amber coloured

 · **Odour:** Pleasant

 · **Odour threshold:** Not determined.

 · **pH-value:** 7 - 11.5

 · **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: > 230 °C (DIN 51751)

 · **Pour point** Not determined

 · **Flash point:** > 100 °C (DIN ISO 2592)

 · **Flammability (solid, gaseous):** Not applicable.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.05.2015

Version number 1

Revision: 22.05.2015

Trade name: Rheinol Bremsflüssigkeit DOT 4

(Contd. of page 4)

· Ignition temperature:	> 300 °C (DIN 14522)
· Decomposition temperature:	Not determined.
· Self-igniting:	Not determined.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	0.7 Vol % (DIN EN 1839)
Upper:	53.0 Vol % (DIN EN 1839)
· Vapour pressure at 20 °C:	< 2 hPa
· Density at 20 °C:	1.045 g/cm ³ (DIN 51757)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	16.0 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity
- 10.2 Chemical stability
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions 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: Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity

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

111-46-6 2,2'-oxybisethanol

Oral	LD50	12565 mg/kg (rat)
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Dermal	LD50	11890 mg/kg (rabbit)
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107-21-1 ethanediol

Oral	LD50	5840 mg/kg (rat)
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Dermal	LD50	9530 mg/kg (rabbit)
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112-34-5 2-(2-butoxyethoxy)ethanol

Oral	LD50	5660 mg/kg (rat)
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(Contd. on page 6)

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

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Version number 1

Revision: 22.05.2015

Trade name: **Rheinol Bremsflüssigkeit DOT 4**

(Contd. of page 5)

Dermal	LD50	4000 mg/kg (rabbit)
111-77-3 2-(2-methoxyethoxy)ethanol		
Oral	LD50	5500 mg/kg (rat)
Dermal	LD50	6540 mg/kg (rabbit)

- **Primary irritant effect:**

- **Skin corrosion/irritation** No irritant effect.

- **Serious eye damage/irritation** Strong irritant with the danger of severe eye injury.

- **Respiratory or skin sensitisation** No sensitising effects known.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

Irritant

- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**

CMR effects (carcenogenic, mutagenic and toxicity for reproduction) are not known for these products.

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

107-21-1 ethanediol

EC50	6500 mg/kg (Alg)
	13000 mg/kg (SwF)
	9300 mg/kg (daphnia)

- **12.2 Persistence and degradability** Easily biodegradable

- **12.3 Bioaccumulative potential**

Due to its physical and chemical characteristic there is generally little mobility in the soil.

- **12.4 Mobility in soil** No further relevant information available.

- **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.

- **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Delivery of waste oil to offically authorised collectors only.

- **European waste catalogue**

16 01 13*	brake fluids
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(Contd. on page 7)

Safety data sheet
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Revision: 22.05.2015

Trade name: Rheinol Bremsflüssigkeit DOT 4

(Contd. of page 7)

· **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.

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.

R22 Harmful if swallowed.

R36 Irritating to eyes.

R41 Risk of serious damage to eyes.

R63 Possible risk of harm to the unborn child.

· Department issuing MSDS: Product safety**· 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

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

Acute Tox. 4: Acute toxicity, Hazard Category 4

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Repr. 2: Reproductive toxicity, Hazard Category 2

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

· Sources Concawe Product Dossier No.97/108. Concawe Product Dossier Nn. 01/54.**· * Data compared to the previous version altered.**