

Safety Data Sheet
according to WHS Regulations

Printing date 04.04.2019

Version number 2.0


Revision: 04.04.2019

1 Identification

- **Product identifier**
- **Trade name: BRAKE FLUID DOT 4**
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture**
Only for proper handling.
Brake fluid
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
BUCHER AG LANGENTHAL
MOTOREX-Schmiertechnik
Bern-Zürich-Strasse 31
CH-4901 Langenthal
Telefon +41 (0)62 919 75 75

A1 Accessory Imports
60-62 Burchill St.
Loganholme
4129 QLD
Australia
Phone : 07 3451 1300
- **Further information obtainable from: msds@motorex.com**
- **Emergency telephone number:**
In case of a medical emergency following exposure to a chemical, call Poisons Information Centre
Australia 13 11 26

2 Hazard(s) Identification

- **Classification of the substance or mixture**
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.
- **Label elements**
- **GHS label elements**
The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**

GHS08
- **Signal word** Warning
- **Hazard-determining components of labelling:**
2,2'-oxybisethanol
- **Hazard statements**
H373 May cause damage to organs through prolonged or repeated exposure.
- **Precautionary statements**
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P314 Get medical advice/attention if you feel unwell.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

(Contd. on page 2)

Safety Data Sheet

according to WHS Regulations

Printing date 04.04.2019

Version number 2.0

Revision: 04.04.2019

Trade name: BRAKE FLUID DOT 4

(Contd. of page 1)

· **vPvB:** Not applicable.

3 Composition and Information on Ingredients

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

- **Dangerous components:**

	Reaction mass of 2-(2-(2-Butoxyethoxy)ethoxy)ethanol and 3,6,9,12-Tetraoxahexadecan-1-ol Eye Dam. 1, H318	1-3%
CAS: 111-46-6 EINECS: 203-872-2 Index number: 603-140-00-6	2,2'-oxybisethanol STOT RE 2, H373	0.25-1%
CAS: 110-97-4 EINECS: 203-820-9 Index number: 603-083-00-7	1,1'-iminodipropan-2-ol Eye Irrit. 2A, H319	0.25-1%

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

4 First Aid Measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Remove residues with soap and water.
Remove contaminated clothing immediately.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
Consult a physician if irritation develops.
- **After swallowing:**
Do not induce vomiting. Do not take in resorption stimulating agents.
Consult a physician who will decide on need and method of emptying the stomach.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.

(Contd. on page 3)

Safety Data Sheet

according to WHS Regulations

Printing date 04.04.2019

Version number 2.0

Revision: 04.04.2019

Trade name: BRAKE FLUID DOT 4

(Contd. of page 2)

- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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.

7 Handling and Storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **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:** None.
- **Storage class:** 10
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

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

Ingredients with limit values that require monitoring at the workplace:

111-46-6 2,2'-oxybisethanol

NES Long-term value: 100 mg/m³, 23 ppmWES Long-term value: 100 mg/m³, 23 ppm

DNELs

111-46-6 2,2'-oxybisethanol

Dermal	DNEL / Workers / Systemic effects / Long-term	43 mg/kg/24h (worker)
	DNEL/general population/Systemic effects/Long-term	21 mg/kg/24h (consumer)
Inhalative	DNEL / Workers / Systemic effects / Long-term	44 mg/m ³ (worker)
	DNEL / Workers / Local Effects / Long-term	60 mg/m ³ (worker)
	DNEL/general population/Systemic effects/Long-term	12 mg/m ³ (consumer)
	DNEL/general population/Local effects/Long-term	12 mg/m ³ (consumer)

PNECs

111-46-6 2,2'-oxybisethanol

PNEC / Aquatic organisms / Freshwater	10 mg/l (aquatic organisms)
PNEC / Aquatic organisms / Marine water	1 mg/l (aquatic organisms)
PNEC/Aquatic org/intermittent releases(freshwater)	10 mg/l (aquatic organisms)
PNEC/Aquatic organisms/Sewage treatment plant/STP	199.5 mg/l (aquatic organisms)
PNEC / Aquatic organisms / Sediment (freshwater)	20.9 mg/kg (aquatic organisms)
PNEC / Aquatic organisms / Sediment (marine water)	2.09 mg/kg (aquatic organisms)

(Contd. on page 4)

Safety Data Sheet

according to WHS Regulations

Printing date 04.04.2019

Version number 2.0

Revision: 04.04.2019

Trade name: BRAKE FLUID DOT 4

(Contd. of page 3)

PNEC / Terrestrial organism / Soil	1.53 mg/kg (terrestrial organisms)
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· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Do not inhale gases / fumes / aerosols.

· **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.

Not necessary if room is well-ventilated.

Respiratory protection if formation of aerosol or mist: use mask with filter type A2, A2/P2 or ABEK.

· **Protection of hands:**



Protective gloves

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**

Protective gloves to EN374, resistant to oil in use. Standard EN 374 Level 3 control G1

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.

Fluorocarbon rubber (Viton)

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.4 mm

· **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.

For the mixture of chemicals mentioned below the penetration time has to be at least 60 minutes (Permeation according to EN 374 Part 3: Level 1).

· **Eye protection:**



safety goggles

· **Body protection:** Protective work clothing

9 Physical and Chemical Properties

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

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Amber coloured

· **Odour:** Characteristic

· **Odour threshold:** Not determined.

· **pH-value at 20 °C:** 8 (DIN 51369)

· **Change in condition**

· **Melting point/freezing point:** Undetermined.

(Contd. on page 5)

Safety Data Sheet

according to WHS Regulations

Printing date 04.04.2019

Version number 2.0

Revision: 04.04.2019

Trade name: BRAKE FLUID DOT 4

(Contd. of page 4)

Initial boiling point and boiling range: >265 °C (DIN EN ISO 3405)	
· Flash point:	>110 °C
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	225 °C (DIN 51794) >200 °C (DIN 51794)
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not determined.
· Density at 20 °C:	1.066 g/cm ³ (ASTM D 4052)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	20 mm ² /s @ 40 °C (DIN 51562-1)
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**

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

111-46-6 2,2'-oxybisethanol

Oral	LD50	1,000 mg/kg (rat)
	NOAEL	10,000 mg/kg (rat)
	NOAEL	128-300 mg/kg/24h (rat)
	LOAEL	40,000 mg/kg (rat)
Dermal	LD50	13,300 mg/kg (rabbit)

(Contd. on page 6)

Safety Data Sheet

according to WHS Regulations

Printing date 04.04.2019

Version number 2.0

Revision: 04.04.2019

Trade name: BRAKE FLUID DOT 4

(Contd. of page 5)

Inhalative	NOAEL	2,200-4,400 mg/kg/24h (dog)
	LC50 / 4h	>4.6 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** No irritating effect.
- **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:

12 Ecological Information

- **Toxicity**

- **Aquatic toxicity:**

111-46-6 2,2'-oxybisethanol

LC50	75.2 mg/l/96h (fish)
LC50	1,500 mg/l/28d (fish)
EC50	10,000 mg/l/24h (aquatic invertebrates)
EC50	6,500-13,000 mg/l/96h (algae / cyanobacteria)
EC50	33,911 mg/l/21d (aquatic invertebrates)
NOEC	7,500-15,000 mg/l/21d (aquatic invertebrates)
NOEC	100 mg/l/72h (algae / cyanobacteria)
NOEC	8,590-24,000 mg/l/7d (aquatic invertebrates)
	15,380-32,000 mg/l/7d (fish)

- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**

- **Bioaccumulative potential**

111-46-6 2,2'-oxybisethanol

Partition coefficient	≤ 1.98 [---] (log Kow) (Bioaccumulation)
Biodegradability	90-100 % (28d) (Biodegradability) (OECD 301 A)

- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (according to Appendix 1 AwSV): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

(Contd. on page 7)

Safety Data Sheet

according to WHS Regulations

Printing date 04.04.2019

Version number 2.0

Revision: 04.04.2019

Trade name: BRAKE FLUID DOT 4

(Contd. of page 6)

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

14 Transport information

- | | |
|--|-----------------|
| · UN-Number
· ADG, ADN, IMDG, IATA | Void |
| · UN proper shipping name
· ADG, ADN, IMDG, IATA | Void |
| · Transport hazard class(es)
· ADG, ADN, IMDG, IATA
· Class | Void |
| · Packing group
· ADG, IMDG, IATA | Void |
| · Environmental hazards:
· Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Void |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **Australian Inventory of Chemical Substances**

111-46-6	2,2'-oxybisethanol
110-97-4	1,1'-iminodipropan-2-ol

- **Standard for the Uniform Scheduling of Medicines and Poisons**

111-46-6	2,2'-oxybisethanol	S5, S6, S10
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- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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. The classification of the mixture was carried out by calculation in accordance with the rules laid down in Annex I of Regulation (EC) No 1272/2008. No special training instructions to ensure protection of human health and environment are required.

- **Relevant phrases**

H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

- **Department issuing SDS:** Abteilung Produktsicherheit

- **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

(Contd. on page 8)

Safety Data Sheet

according to WHS Regulations

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Version number 2.0

Revision: 04.04.2019

Trade name: BRAKE FLUID DOT 4

(Contd. of page 7)

*IATA: International Air Transport Association**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)**DNEL: Derived No-Effect Level (REACH)**PNEC: Predicted No-Effect Concentration (REACH)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Eye Dam. 1: Serious eye damage/eye irritation – Category 1**Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2**** Data compared to the previous version altered.**

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