

Safety Data Sheet

acc. to OSHA HCS

Printing date 03/22/2016

Reviewed on 03/22/2016

1 Identification

- **Product identifier**
- **Trade name:** BRAKE FLUID DOT 4
- **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

Lube-Tech
Lubrication Technologies, Inc.
900 Mendelssohn Avenue North
US-55427 Golden Valley, Minnesota
Phone: 001 763 417 1357
- **Information department:** msds@motorex.com
- **Emergency telephone number:**
Toxicological Information Centre
CH-8028 Zurich
info@toxi.ch
T. +41 (0)44 251 51 51
USA + Kanada: 1 800 424 9300 (Chemtrec Chemical Manufacturers Association, Arlington, VA 22209)

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS08

- **Signal word** Warning
- **Hazard-determining components of labeling:**
2,2'-oxybisethanol
- **Hazard statements**
H373 May cause damage to organs through prolonged or repeated exposure.

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- **Precautionary statements**
 P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 P314 Get medical advice/attention if you feel unwell.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
 - **Classification system:**
 - **NFPA ratings (scale 0 - 4)**
- 

Health = 0

Fire = 1

Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**
- | | | |
|------------|---|----------------|
| HEALTH | 0 | Health = 0 |
| FIRE | 1 | Fire = 1 |
| REACTIVITY | 0 | Reactivity = 0 |
- **Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

3 Composition/information on ingredients

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

- **Dangerous components:**

CAS: 143-22-6	2-[2-(2-butoxyethoxy)ethoxy]ethanol	2.5-7.5%
Reg.nr.: 01-2119531322-53	☠ Eye Dam. 1, H318	
CAS: 111-46-6	2,2'-oxybisethanol	1-3%
Reg.nr.: 01-2119457857-21	☠ STOT RE 2, H373; ☠ Acute Tox. 4, H302	

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.

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- **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 fighting measures that suit the environment.
- **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.
- **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 protection against explosions and fires:**
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/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

111-46-6 2,2'-oxybisethanol

WEEL Long-term value: 10 mg/m ³
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- **Additional information:** The lists that were valid during the creation 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.

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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.

- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form: Fluid

Color: Amber colored

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· pH-value at 20 °C (68 °F):	8 (DIN 51369)
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· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	> 265 °C (> 509 °F) (DIN EN ISO 3405)
· Flash point:	> 110 °C (> 230 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	225 °C (437 °F) (DIN 51794) >200 °C (DIN 51794)
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not determined.
· Density at 20 °C (68 °F):	1.066 g/cm ³ (8.896 lbs/gal) (ASTM D 4052)
· Relative density	Not determined.
· Vapor 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)
VOC content:	2.9 %
	30.9 g/l / 0.26 lb/gl
· 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:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.

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- **Sensitization:** No sensitizing effects known.
 - **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
 - **Carcinogenic categories**
- | |
|---|
| · IARC (International Agency for Research on Cancer) |
| None of the ingredients is listed. |
- | |
|--|
| · NTP (National Toxicology Program) |
| None of the ingredients is listed. |
- | |
|--|
| · OSHA-Ca (Occupational Safety & Health Administration) |
| None of the ingredients is listed. |

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-classification according VwVwS, 17.05.1999): 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 of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|------|
| · UN-Number | |
| · DOT, ADR,ADN, ADN, IMDG, IATA | Void |
- | | |
|--|------|
| · UN proper shipping name | |
| · DOT, ADR,ADN, ADN, IMDG, IATA | Void |

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- | | |
|--|-----------------|
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 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
- Sara

· Section 355 (extremely hazardous substances):
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None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):
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143-22-6 2-[2-(2-butoxyethoxy)ethoxy]ethanol
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· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:
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None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:
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None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)
--

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

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

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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.

· **Department issuing SDS:** Abteilung Produktsicherheit

· **Date of preparation / last revision** 03/22/2016 / -

· **Abbreviations and acronyms:**

Acute Tox. 4: Acute toxicity, Hazard Category 4

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

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

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