

EU Safety Data Sheet

BRAKE FLUID DOT 4 (US Version)



Date of issue / Reference

14.04.2003 os

Replaces version of

07.03.2003 os

Date of printing

24.04.2003 **Sheet No. 1459**

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Company

BUCHER AG LANGENTHAL, MOTOREX-Schmiertechnik, CH-4901 Langenthal

1 Commercial product name and supplier

1.1 Commercial product name / Designation

BRAKE FLUID DOT 4 (US Version)

1.2 Application / Use

Brake fluid

1.3 Producer

BUCHER AG LANGENTHAL, MOTOREX-Schmiertechnik, CH-4901 Langenthal
Telefon +41 (0)62 919 75 75, Fax +41 (0)62 919 75 95

1.4 Supplier

BUCHER AG MOTOREX, Inc., dba: MOTOREX USA, 1932 Eastman Avenue, Suite 107, Ventura, CA 93003-5766
Tel. 805-658-0900 Fax: 805-658-0910

1.5 TOX emergency number

Europe: + 41 (0)1 251 51 51 (Center of Toxicology Information, CH-8028 Zurich)
North America:

1.6 Product No.

2 Composition

2.1 Chemical characterization

Glycol ether
Glycol ether borate
Inhibitors
Polyglycols

2.2 Hazardous components

Components contributing to hazard:

CAS No. 143-22-6

<20 % Triethylene glykol monobutylether
Xi: Irritant. R36: Irritating to eyes.

CAS No. 111-46-6

<15 % Diethylene glycol
Xn: Harmful. R22: Harmful if swallowed.

CAS No. 112-59-4

<15 % Diethylene glykol monoheptylether
Xn: Harmful. R21: Harmful in contact with skin. R36/38: Irritating to eyes and skin.

CAS No. 112-34-5

<5 % Diethylenglykol monobutylether
Xi: Irritant. R36: Irritating to eyes.

CAS No. 111-77-3

<5 % Diethylene glykol monomethylether
Xn: Harmful. R63: Possible risk of harm to the unborn child.
<3 % Aliphatic amine
Xi: Irritant. R36: Irritating to eyes.

2.3 Further information

3 Hazards identification

No known hazard.

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4 First aid measures

- | | | |
|-----|---------------------|--|
| 4.1 | Eye contact | Irrigate immediately with water for at least 5 minutes.
Consult a physician if irritation develops. |
| 4.2 | Skin contact | Immediately wash skin with soap and plenty of water.
Remove contaminated clothing immediately. |
| 4.3 | Ingestion | Rinse mouth and drink large amount of water.
Consult a physician immediately. |
| 4.4 | Inhalation | Remove to fresh air. Consult a physician. |
| 4.5 | Further information | |

5 Fire-fighting measures

- | | | |
|-----|------------------------------|---|
| 5.1 | Suitable extinguishing media | Water fog, carbon dioxide, foam, dry chemicals. |
| 5.2 | Extinguishing media to avoid | No restrictions. |
| 5.3 | Further information | Wear self-contained breathing apparatus. |

6 Accidental release measures

Spills should be contained by, and covered with suitable absorbent material and removed for disposal.
Do not discharge into natural waters.

7 Handling and storage

- | | | |
|-----|--------------------------------|---|
| 7.1 | Handling | Good general ventilation should be sufficient for most conditions. |
| 7.2 | Industrial hygiene | No specific requirements. |
| 7.3 | Storage | Store in cool, dry well ventilated area away from sources of ignition and heat.
Keep container tightly closed; product is hygroscopic. |
| 7.4 | Place of storage | |
| 7.5 | Fire- and explosion-protection | No specific requirements |

8 Exposure controls / Personal protection

- | | | |
|-------|-------------------------------|---|
| 8.1 | Technical measures | Good general ventilation should be sufficient. |
| 8.2 | Control of threshold limits | None established for the mixture. |
| 8.3 | Personal protective equipment | |
| 8.3.1 | Respiratory protection | Good general ventilation should be sufficient for most conditions. |
| 8.3.2 | Hand protection | Use impervious gloves at all times. |
| 8.3.3 | Eye protection | Use safety glasses. Where contact with the liquid is likely, chemical goggles are recommended |

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8.3.4 Other

9 Physical and chemical properties

9.1 Appearance liquid

9.2 Colour yellowish

9.3 Odour characteristic

9.4 Change of physical state Test method:

Boiling point >260 °C (1013 mbar)

Solidification point <-50 °C

9.5 Density

1.02 g/cm³ (20°C)

ISO 3675

9.6 Vapour pressure

<1 mbar (20°C)

9.7 Viscosity

10-14 mPa·s (20°C)

DIN 51 562/1

9.8 Solubility

in water

miscible in all proportions

9.9 pH

7,5 - 8,5

at 100 g/l of water

9.10 Flash point

>100 °C (1013 mbar)

ISO 2592

9.11 Ignition temperature

>200 °C (1013 mbar)

DIN 51794

9.12 Explosion limits

Lower:

Upper:

not explosive

9.13 Further information

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10 Stability and reactivity

- | | | |
|------|----------------------------------|--|
| 10.1 | Thermal decomposition | Non, when used in accordance with regulations. |
| 10.2 | Hazardous decomposition products | Non, when used in accordance with regulations. |
| 10.3 | Hazardous reactions | No hazardous reactions have been observed. |
| 10.4 | Further information | The product is stable but hygroscopic. |

11 Toxicological information

- | | | |
|------|-----------------------------|---|
| 11.1 | Acute toxicity | The oral LD50 for rats is >2000 mg/kg. |
| 11.2 | Subacute / Chronic toxicity | |
| 11.3 | Further information | The sweet taste can seduce children to drink large quantities; hence keep out of reach of children. |

12 Ecological information

Upon correct discharge of low concentrations into adapted biological sewage works, disturbance of the degrading activity of the activate sludge is not to be expected.
German 'Wassergefährdungs Klasse (WGK)': 1

13 Disposal considerations

Dispose of according to local and national regulations.

- | | | |
|------|--------------|-----------------------|
| 13.1 | EU waste key | 16 01 13 Brake fluids |
|------|--------------|-----------------------|

14 Transport information

- | | | | |
|------|-------------------|----------------------|---------------|
| 14.1 | Transport at land | ADR | RID |
| | | UN Number | Kemler Number |
| | | Packing Group | |
| | | Proper shipping name | |
| 14.2 | Transport at sea | ADNR | IMDG |
| | | UN Number | |
| | | EMS | MFAG |
| | | Packing Group | |
| | | Proper shipping name | |

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14.3 Air transport ICAO / IATA-DGR
UN Number
Packing Group
Proper shipping name

Passenger airplane Packing Instructions

Cargo Airplane max.
Packing Instructions

max.

14.4 Further information Product is not classified for any mode of transportation.

15 Regulatory information

This product does not require classification according to the criteria of the Commission of the European Communities (Council Directive 67/548/EEC).

The concentration of hazardous components are below the classification limit.

15.1 UN number

15.2 National regulations

15.3 EU number

15.4 Hazard symbols

15.5 Hazard designation

15.6 Risk phrases

15.7 Safety phrases

15.8 MAK value

15.9 BVD classification (CH) F41 Y3

15.10 VbF (D)

15.11 Further information

16 Other information

No other information.

The above mentioned data correspond to our present state of knowledge and experience. The safety data sheet serves as description of the products in regard to necessary safety measures. The indications do not have the meaning of guarantees on properties.