

US Safety Data Sheet

Brake Fluid DOT 4



Date of issue / Reference

06/10/2005 os

Replaces version of

02/12/2004 os

Date of printing

02/12/2007 **Sheet No. 56**

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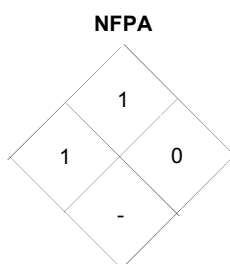
Company

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

1 Commercial product name and supplier

1.1 Commercial product name / Designation

Brake Fluid DOT 4



HMIS	
H	1
F	1
R	0
C	B

1.2 Application / Use

Brake fluid

1.3 Producer

BUCHER AG LANGENTHAL, MOTOREX-Schmiertechnik, CH-4901 Langenthal, Schweiz, T. +41 (0)62 919 7575

1.4 Supplier

MOTOREX USA, 900 Mendelssohn Ave. N, Golden Valley, MN 55427, USA, +1 763-417-1377

1.5 TOX emergency number

USA + Canada: 1 800 424 9300 (Chemtrec Chemical Manufacturers Association, Arlington, VA 22209)

1.6 Product No.

2 Composition

2.1 Chemical characterization

Glycol ether
Glycol ether borate
Inhibitors
Polyglycols

2.2 Hazardous components

Dangerous substances according to the criteria of the EC (Council Directive 88/379/EEC):

CAS No. 143-22-6

<20 % Triethylene glykol monobutylether
Xi: Irritant. R41: Risk of serious damage to eyes.

CAS No. 111-46-6

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

CAS No. 112-59-4

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

CAS No. 112-34-5

<5 % Diethylenglycol monobutyl ether
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.

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<3 % Aliphatic amine
Xi: Irritant. R36: Irritating to eyes.

2.3 Further information

3 Hazards identification No known hazard.

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 Consult a physician who will decide on need and method of emptying the stomach. Do not induce vomiting. Do not take in resorption stimulating agents.
 - 4.4 Inhalation If respiratory irritation is experienced, call a physician. Take into fresh air.
 - 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 Flash point Test method:
DIN EN ISO 2592
 - 5.4 Ignition temperature DIN 51794
 - 5.5 Explosion limits Lower:
Upper:
not explosive
 - 5.6 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.

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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
- 8.3.4 Other

9 Physical and chemical properties

- 9.1 Appearance liquid
- 9.2 Colour light yellow to amber
- 9.3 Odour characteristic
- 9.4 Change of physical state Test method:
Boiling point
Solidification point
- 9.5 Density 1.02 g/cm³ (20°C) ASTM D 4052
- 9.6 Vapour pressure <1 mbar (20°C)
- 9.7 Viscosity 10-14 mPa·s (20°C) DIN EN ISO 3104

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9.8 Solubility
in water

miscible in all proportions

9.9 pH

7.5 - 8.5

at 100 g/l of water

9.10 Further information

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.
Water Hazard Class (Germany): Class 1 (self assessment): slightly hazardous for water.

13 Disposal considerations

- 13.1 EU/CH waste key 16 01 13 Brake fluids
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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	
14.3	Air transport	ICAO / IATA-DGR	
		UN Number	
		Packing Group	
		Proper shipping name	
	Passenger airplane	Packing Instructions	
		max.	
	Cargo Airplane	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 National regulations
15.2 NFPA Storage
15.3 Further information

Class IIIB

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.