



Brembo S.p.A.

Brake Fluid DOT 4

Version 3

Printed on : Apr 12, 2023

## SAFETY DATA SHEET

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

#### 1.1. Product identifier

**Product name** BRAKE FLUID - DOT 4

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** Car maintenance product.

#### 1.3 . Details of the supplier of the safety data sheet

**Name** BREMBO S.P.A.  
**Full address** Via Brembo, 25  
**District and Country** 24035 Curno (IT) , Italy  
TEL: 035 605 1111

#### **Email address of the competent person**

**Responsible for the Safety Data Sheet** SDS@brembo.it

#### 1.4 . Emergency telephone number

For urgent inquiries refer to +39 035 6051111 (8.30 – 17.30 IT, EN)

### SECTION 2: Hazards identification

#### 2. 1. Classification of the substance or mixture

##### **Classification (EC 1272/2008)**

**Physical hazards** Not Classified  
**Health hazards** Acute Tox. 4 - H302 Eye Irrit. 2 - H319 STOT RE 2 - H373  
**Environmental hazards** Not Classified  
**Human health** See Section 11 for additional information on health hazards.

#### 2.2. Label elements



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#### Pictogram



#### Signal word

Warning

#### Hazard statements

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

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

#### Precautionary statements

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

P102 Keep out of reach of children.

P260 Do not breathe vapour/ spray.

P264 Wash contaminated skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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

P301+ P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

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

P314 Get medical advice/ attention if you feel unwell.

P330 Rinse mouth.

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

P501 Dispose of contents/ container in accordance with national regulations.

#### Contains

2 , 2 ' - OXYBISETHANOL

#### 2.3. Other hazards

## SECTION 3 : Composition/ information on ingredients

#### 3.2. Mixtures

<b>2 - [ 2 - ( 2 - methoxyethoxy) ethoxy</b>		<b>40% ~ 50%</b>
CAS number: 30989-05-0	EC number: 250-418-4	
<b>Classification</b>		



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Acute Tox. 4 - H302 STOT RE 2 - H373		
<b>Methoxypolyethylene glycols</b>		<b>20% ~ 25%</b>
CAS number: 9004-74-4	EC number: 215-801-2	
<b>Classification</b>		
Eye Dam. 1 - H318		

<b>Triethylene glycol monomethyl ether</b>		<b>15% ~ 25%</b>
CAS number: 112-35-6	EC number: confidentiality	
<b>Classification</b>		
Repr. 1B - H360FD		
<b>Additives</b>		<b>3% ~5.0%</b>
CAS number: confidentiality	EC number: confidentiality	
<b>Classification</b>		
Eye Irrit. 2 - H319		

The full text for all hazard statements is displayed in Section 16 .

**Composition comments** The data shown are in accordance with the latest EC Directives.

## SECTION 4 : First aid measures

### 4.1. Description of first aid measures

<b>General information</b>	Remove affected person from source of contamination. Get medical attention if any discomfort continues.
<b>Inhalation</b>	Get medical attention if any discomfort continues.
<b>Ingestion</b>	Consult a physician for specific advice.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Do not rub eye.



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#### 4.2. Most important symptoms and effects, both acute and delayed

<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Effects may be delayed. Keep affected person under observation.
<b>Inhalation</b>	Vapours in high concentrations are anaesthetic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Central nervous system depression. Irritation of nose, throat and airway.
<b>Ingestion</b>	May cause discomfort if swallowed. May cause stomach pain or vomiting. Ingestion of large amounts may cause unconsciousness. May cause nausea, headache, dizziness and intoxication. Burning sensation in mouth. May cause unconsciousness, blindness and possibly death.
<b>Skin contact</b>	Prolonged skin contact may cause redness and irritation. Mild dermatitis, allergic skin rash.
<b>Eye contact</b>	Irritation of eyes and mucous membranes. Irritation, burning, lachrymation, blurred vision after liquid splash.

#### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Notes for the doctor</b>	No specific recommendations. If in doubt, get medical attention promptly
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## SECTION 5 : Firefighting measures

#### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Use fire-extinguishing media suitable for the surrounding fire.
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#### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	Not relevant. No unusual fire or explosion hazards noted.
<b>Hazardous combustion products</b>	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

#### 5.3. Advice for firefighters

<b>Protective actions during Firefighting</b>	No specific firefighting precautions known.
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<b>Special protective equipment for firefighters</b>	Leave danger zone immediately.
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## SECTION 6 : Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### Personal precautions

For personal protection, see Section 8. In case of spills, beware of slippery floors and surfaces . Follow precautions for safe handling described in this safety data sheet.

### 6.2. Environmental precautions

#### Environmental precautions

Collect and dispose of spillage as indicated in Section 13 .

### 6.3. Methods and material for containment and cleaning up

#### Methods for cleaning up

For waste disposal, see Section 13 . Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non- combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb spillage with non- combustible, absorbent material. Contact Health and Safety department on 6 6 9 5 for further assistance.

### 6.4. Reference to other sections

#### Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. For waste disposal, see section 13 .

## SECTION 7 : Handling and storage

### 7.1. Precautions for safe handling

#### Usage precautions

Read and follow manufacturer' s recommendations . Avoid spilling.  
Avoid contact with skin and eyes. Remove contamination with soap and water or recognized skin cleansing agent. Do not use organic solvents . Do not eat, drink or smoke when using the product . Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Storage precautions

Keep away from food, drink and animal feeding stuffs. Store in tightly- closed, original container in a dry, cool and well-entilated place .

### 7.3. Specific end use(s)

#### Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

## SECTION 8 : Exposure Controls/ personal protection

8.1. Control parameters Occupational exposure limits

No exposure limits known for ingredient( s ) .

<b>2 - ( 2 - METHOXYETHOXY) ETHANOL</b>
Long-term exposure limit (8-hour TWA): WEL 10 ppm(Sk) 50. 1 mg/m <sup>3</sup> (Sk)
<b>2 - ( 2 - BUTOXYETHOXY) ETHANOL</b>
Long- term exposure limit (8- hour TWA) : WEL 10 ppm 67.5 mg/m <sup>3</sup>
Short-term exposure limit (15-minute) : WEL 15 ppm 101.2 mg/m <sup>3</sup>
WEL = Workplace Exposure Limit

8.2. Exposure controls

<b>Protective equipment</b>	 
<b>Appropriate engineering controls</b>	Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients .
<b>Eye/ face protection</b>	The following protection should be worn: Chemical splash goggles or face shield
<b>Hand protection</b>	Chemical- resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible .
<b>Other skin and body protection</b>	Wear appropriate clothing to prevent reasonably probable skin contact.
<b>Hygiene measures</b>	Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station. Wash contaminated clothing before reuse. Wash at the end of each work shift and before eating, smoking and using the toilet.
<b>Respiratory protection</b>	If ventilation is inadequate, suitable respiratory protection must be worn

**SECTION 9 : Physical and Chemical Properties**

9.1. Information on basic physical and chemical properties



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<b>Appearance</b>	Clear liquid.
<b>Colour</b>	Colourless. to Amber.
<b>Odour</b>	No characteristic odour.
<b>Odour threshold</b>	Not determined.
<b>pH</b>	pH (concentrated solution): 7.0 - 10.5
<b>Melting point</b>	<-50°C
<b>Initial boiling point and range</b>	262°C
<b>Flash point</b>	>90°C CC (Closed cup).
<b>Evaporation rate</b>	negligable
<b>Upper/ lower flammability or explosive limits</b>	Not determined.
<b>Vapour pressure</b>	<2 mbar @ 20°C
<b>Vapour density</b>	Not determined.
<b>Relative density</b>	1.01 - 1.07 @ 20°C
<b>Solubility(ies)</b>	Miscible with water. Miscible with the following materials: Ethanol.
<b>Partition coefficient</b>	<2.0
<b>Auto-ignition temperature</b>	>300°C
<b>Decomposition Temperature</b>	Not determined.

#### 9.2. Other information

**Other information**

None.

## SECTION 10 : Stability and reactivity

#### 10.1. Reactivity

**Reactivity**

There are no known reactivity hazards associated with this product.

#### 10.2. Chemical stability

**Stability**

No particular stability concerns.

#### 10.3 . Possibility of hazardous reactions

**Possibility of hazardous reactions**

Will not polymerise.

#### 10.4. Conditions to avoid

**Conditions to avoid**

Avoid contact with strong oxidising agents.  
Avoid heat, flames and other sources of ignition.  
Avoid contact with acids and alkalis.

#### 10.5. Incompatible materials

**Materials to avoid**

Strong oxidising agents.

#### 10.6. Hazardous decomposition products



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**Hazardous decomposition products**

Does not decompose when used and stored as recommended.

## SECTION 11 : Toxicological information

### 11.1. Information on toxicological effects Acute toxicity – oral

**ATE oral ( mg/ kg)  
Inhalation**

1,672.24

Unlikely to be hazardous by inhalation because of the low vapour pressure of the product at ambient temperature.

**Ingestion  
Skin contact**

Harmful if swallowed.

Repeated exposure may cause skin dryness or cracking.

**Eye contact**

Irritation of eyes and mucous membranes.

**Acute and chronic health**

This chemical can be hazardous when inhaled and/ or touched.

## SECTION 12 : Ecological Information

**Ecotoxicity**

The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

### 12.1. Toxicity

**Acute toxicity - fish**

LC<sub>50</sub>, 96 hours: >2200mg/l mg/l, Algae

**Acute toxicity - aquatic invertebrates**

EC<sub>50</sub>, 48 hours: >500mg/l mg/l, Daphnia magna

**Acute toxicity - aquatic plants**

IC<sub>50</sub>, 72 hours: 2490mg/l mg/l, Fish

### 12.2. Persistence and degradability

**Persistence and degradability**

The product is biodegradable.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential**

The product contains potentially bioaccumulating substances.

**Partition coefficient**

<2.0

### 12.4. Mobility in soil

**Mobility**

The product is soluble in water.

**Adsorption/ desorption coefficient**

Not available.

### 12.5. Results of PBT and vPvB assessment



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**Results of PBT and vPvB assessment**

This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

**Other adverse effects**

Not available.

**SECTION 13 : Disposal considerations**

13.1 . Waste treatment methods

**General information**

When handling waste, the safety precautions applying to handling of the product should be considered.

**Disposal methods**

Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Absorb in vermiculite, dry sand or earth and place into containers. Dispose of waste via a licensed waste disposal contractor.

**SECTION 14 : Transport information**

**General**

The product is not covered by international regulations on the transport of dangerous goods ( IMDG, IATA, ADR/ RID) .

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

**Environmentally hazardous substance/ marine pollutant**

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code



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Transport in bulk according to  
Annex II of MARPOL 73/78 and the IBC  
Code

Not applicable

## SECTION 15 : Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

### National regulations

The Control of Substances Hazardous to Health  
Regulations 2002

(SI 2002 No. 2677) (as amended).

### EU legislation

Regulation (EC) No 1907/2006 of the  
European Parliament and of  
the Council of 18 December 2006 concerning  
the Registration,  
Evaluation, Authorisation and Restriction of  
Chemicals (REACH) (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16 : Other information

<b>General information</b>	Only trained personnel should use this material.
<b>Revision comments</b>	Only trained personnel should use this material.
<b>Revision date</b>	12/01/2017
<b>Revision</b>	10
<b>Supersedes date</b>	21/ 10/2015
<b>SDS status</b>	Approved.
<b>Hazard statements in full</b>	H302 Harmful if swallowed. H318 Causes serious eye damage. H319 Causes serious eye irritation. H360 FD May damage fertility. May damage the unborn child. H361 d Suspected of damaging the unborn child. H373 May cause damage to organs through prolonged or repeated exposure.

The information provided in this document has been compiled on the basis of our current knowledge and is believed to be in accordance with the requirements of the Dangerous

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Substances Directive, Dangerous Preparations Directive and Safety Data Sheets Directive.

The information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any particular conditions or process.

The conditions and extent of storage and use of material are outside of our control and within the control of the possessor or user. Consequently it is the responsibility of the possessor or user to satisfy themselves as to the completeness of such information and the suitability of the material for their own particular circumstances, conditions or use.