

SAFETY DATA SHEET**SECTION 1: Identification of the substance/ mixture and of the company /undertaking**

1. 1. Product identifier

Product name BRAKE FLUID - DOT4 LV

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

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

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**

2 - [2 - (2 - methoxyethoxy) ethoxy		55% ~ 60%
CAS number: 30989-05-0	EC number: 250-418-4	
Classification Acute Tox. 4 - H302 STOT RE 2 - H373		
Methoxypolyethylene glycols		10% ~ 15%
CAS number: 9004-74-4	EC number: 215-801-2	
Classification Eye Dam. 1 - H318		

Triethylene glycol monomethyl ether		25% ~ 30%
CAS number: 112-35-6	EC number: confidentiality	
Classification		
Repr. 1B - H360FD		

Additives		3% ~ 5%
CAS number: confidentiality	EC number: confidentiality	
Classification		
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

General information	Remove affected person from source of contamination. Get medical attention if any discomfort continues.
Inhalation	Get medical attention if any discomfort continues.
Ingestion	Consult a physician for specific advice.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues. 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.
Eye contact	

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

General information	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.
Inhalation	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.
Ingestion	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.
Skin contact	Prolonged skin contact may cause redness and irritation. Mild dermatitis, allergic skin rash.
Eye contact	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

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly
-----------------------------	--

SECTION 5 : Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media suitable for the surrounding fire.
-------------------------------------	---

5.2. Special hazards arising from the substance or mixture

Specific hazards	Not relevant. No unusual fire or explosion hazards noted.
-------------------------	---

Hazardous combustion products

Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during Firefighting	No specific firefighting precautions known.
---	---

Special protective equipment for firefighters	Leave danger zone immediately.
--	--------------------------------

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

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 6695 for further assistance.

6.4. Reference to other sections

Reference to other

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-ventilated place.

7.3. Specific end use(s)

Specific end use(s)

Section 1.2.

The identified uses for this product are detailed in

SECTION 8 : Exposure Controls/ personal protection

8. 1. Control parameters Occupational exposure limits

No exposure limits known for ingredient(s).

2 - (2 - METHOXYETHOXY) ETHANOL

Long-term exposure limit (8-hour TWA): WEL 10 ppm(Sk) 50. 1 mg/m³(Sk)


2 - (2 - BUTOXYETHOXY) ETHANOL

Long-term exposure limit (8-hour TWA) : WEL 10 ppm 67.5 mg/m³

Short-term exposure limit (15-minute) : WEL 15 ppm 101.2 mg/m³

WEL = Workplace Exposure Limit

8.2. Exposure controls

Protective equipment	
Appropriate engineering controls	Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients .
Eye/ face protection	The following protection should be worn: Chemical splash goggles or face shield
Hand protection	Chemical- resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible .
Other skin and body protection	Wear appropriate clothing to prevent reasonably probable skin contact.
Hygiene measures	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.
Respiratory protection	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

Appearance	Clear liquid.
Colour	Colourless. to Amber.
Odour	No characteristic odour.
Odour threshold	Not determined.
pH	pH (concentrated solution): 7.0 - 10.5
Melting point	<-50°C
Initial boiling point and range	262°C
Flash point	>90°C CC (Closed cup).
Evaporation rate	negligable
Upper/ lower flammability or explosive limits	Not determined.

Vapour pressure	<2 mbar @ 20°C
Vapour density	Not determined.
Relative density	1.01 - 1.07 @ 20°C
Solubility(ies)	Miscible with water. Miscible with the following materials:
Ethanol.	<2.0
Partition coefficient	
Auto-ignition temperature	>300°C
Decomposition Temperature	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

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)

Ingestion

Inhalation

Skin contact

Eye contact	1,672.24
Acute and chronic health hazards	<p>Unlikely to be hazardous by inhalation because of the low vapour pressure of the product at ambient temperature.</p> <p>Harmful if swallowed.</p> <p>Repeated exposure may cause skin dryness or cracking. Irritation of eyes and mucous membranes.</p> <p>This chemical can be hazardous when inhaled and/or touched.</p>

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 ₅₀ , 96 hours: >2200mg/l mg/l, Algae
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: >500mg/l mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC ₅₀ , 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	
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.

14.6. Special precautions for user

Not applicable.

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

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

General information	Only trained personnel should use this material.
Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	12/01/2017
Revision	10
Supersedes date	21/ 10/2015
SDS status	Approved.
Hazard statements in full	H302 Harmful if swallowed. H318 Causes serious eye damage. H319 Causes serious eye irritation. H360FD May damage fertility. May damage the unborn child. H361d 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 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.