



# Brake Fluid DOT 4

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Revision date: 8-9-2015 version: 6.0

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

#### 1.1. Product identifier

Product name : Brake Fluid DOT 4

Product code : 20000

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

##### 1.2.1. Relevant identified uses

Main use category : Professional use

Use of the substance/mixture : Automotive care products

##### 1.2.2. Uses advised against

No additional information available

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

MPM International Oil Company  
Cyclotronweg 1  
2629 HN Delft - Nederland  
T +31 (0)15 2514030 - F +31 (0)15 2514031  
[info@mpmoil.nl](mailto:info@mpmoil.nl) - [www.mpmoil.nl](http://www.mpmoil.nl)

#### 1.4. Emergency telephone number

Emergency number : +31 (0)15 2514030 (08.00 - 17.00)

Country	Official advisory body	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	: +353 1 8379964	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Centre Hospitalier Universitaire de Constantine	Avonley Road SE14 5ER London	0870 243 2241	

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Serious eye damage/eye irritation, H319

Category 2

Full text of hazard classes and H-statements : see section 16

##### Adverse physicochemical, human health and environmental effects

It is expected that the product is not harmful to the environment.

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

CLP Signal word

: Warning

Hazard statements (CLP)

: H319 - Causes serious eye irritation

Precautionary statements (CLP)

: P102 - Keep out of reach of children  
P301+P310 - IF SWALLOWED: Immediately call a doctor, a POISON CENTER  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P501 - Dispose of contents/container to officially registered waste disposal company

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### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-[2-(2-butoxyethoxy)ethoxy] ethanol	(CAS No) 143-22-6 (EC No) 205-592-6 (EC Index No) 603-183-00-0 (REACH-no) 01-2119531322-53	20 - 45	Eye Dam. 1, H318
Diethylene glycol	(CAS No) 111-46-6 (EC No) 203-872-2 (EC Index No) 603-140-00-6 (REACH-no) 01-2119457857-21	0 - 10	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
2-(2-Butoxyethoxy)ethanol	(CAS No) 112-34-5 (EC No) 203-961-6 (EC Index No) 603-096-00-8 (REACH-no) 01-2119475104-44	0 - 3	Eye Irrit. 2, H319
2-(2-Methoxyethoxy)ethanol	(CAS No) 111-77-3 (EC No) 203-906-6 (EC Index No) 603-107-00-6 (REACH-no) 01-2119475100-52	0 - 3	Repr. 2, H361d

#### Specific concentration limits:

Name	Product identifier	Specific concentration limits
2-[2-(2-butoxyethoxy)ethoxy] ethanol	(CAS No) 143-22-6 (EC No) 205-592-6 (EC Index No) 603-183-00-0 (REACH-no) 01-2119531322-53	( 20 =<C < 30) Eye Irrit. 2, H319 (C >= 30) Eye Dam. 1, H318

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

After inhalation	: Provide fresh air. Seek medical advice.
After skin contact	: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap. If irritation persists, consult a specialist.
After eye contact	: In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. If irritation persists, consult a specialist.
After ingestion	: Get immediate medical advice/attention. Rinse mouth. If the person is fully conscious, make him/her drink plenty of water. Never give an unconscious person anything to drink.

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

After skin contact	: Contact during a long period may cause light irritation.
After eye contact	: May cause severe irritation.

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

First Aid, decontamination, treatment of symptoms.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: powder, alcohol-resistant foam, water spray, carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: On heating/burning: release of (highly) toxic gases/vapours e.g.: carbon monoxide - carbon dioxide.
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### 5.3. Advice for firefighters

Protection during firefighting	: In case of fire: Wear self-contained breathing apparatus.
Other information	: Use water spray/stream to protect personnel and to cool endangered containers.

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### SECTION 6: Accidental release measures

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

General measures : Do not breathe vapour or spray. Avoid contact with skin and eyes.

##### 6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing and eye/face protection.

##### 6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing and eye/face protection.

#### 6.2. Environmental precautions

Do not release in groundwater, surfacewater or sewerage. Do not allow to enter into soil/subsoil.

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

For containment : Prevent spreading over great surfaces (e.g. by damming or installing oil booms).

Methods for cleaning up : Clean up with absorbent material (for example sand, sawdust, neutral absorbent granule, silica gel).

#### 6.4. Reference to other sections

Information on disposal - see Section 13. Information on personal protective equipment - see Chapter 8.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes.

Hygiene measures : Wash hands before breaks and at the end of work. When using do not eat, drink or smoke.

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

Technical measures : Keep only in the original container in a cool, well-ventilated place.

Storage area : Keep container tightly closed in a cool, well-ventilated place.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Diethylene glycol (111-46-6)		
EU	IOELV TWA (mg/m <sup>3</sup> )	101 mg/m <sup>3</sup>
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	101 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	23 ppm
2-(2-Butoxyethoxy)ethanol (112-34-5)		
EU	IOELV TWA (mg/m <sup>3</sup> )	67,5 mg/m <sup>3</sup>
EU	IOELV TWA (ppm)	10 ppm
EU	IOELV STEL (mg/m <sup>3</sup> )	101,2 mg/m <sup>3</sup>
EU	IOELV STEL (ppm)	15 ppm
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	67,5 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	10 ppm
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	101,2 mg/m <sup>3</sup>
United Kingdom	WEL STEL (ppm)	15 ppm
2-(2-Methoxyethoxy)ethanol (111-77-3)		
EU	IOELV TWA (mg/m <sup>3</sup> )	50,1 mg/m <sup>3</sup>
EU	IOELV TWA (ppm)	10 ppm
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	50,1 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	10 ppm

#### 8.2. Exposure controls

##### Technical measures:

Provide adequate ventilation.

##### Personal protective equipment:

Gloves. Safety glasses.

##### Hand protection:

Risk of skin contact: Wear suitable gloves

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Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Nitrile rubber (NBR), Butyl rubber, Natural rubber, Polyvinylchloride (PVC)	6 (> 480 minutes)			

### Eye protection:

Safety glasses

Type	Use	Characteristics	Standard
Safety goggles, Safety glasses			EN 166

### Skin and body protection:

Wear suitable protective clothing

### Respiratory protection:

If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn



### Other information:

Wash hands before breaks and at the end of work. When using do not eat, drink or smoke.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: clear.
Colour	: colourless. amber.
Odour	: Low.
Odour threshold	: No data available
pH	: No data available
pH solution	: 7 - 11,5
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: < -50 °C
Freezing point	: No data available
Boiling point	: > 260 °C
Flash point	: > 100 °C CC
Auto-ignition temperature	: > 300 °C
Decomposition temperature	: > 300 °C
Flammability (solid, gas)	: No data available
Vapour pressure	: > 2 mbar 20C
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1046 (1,01 - 1,07) g/l 20C
Solubility	: Miscible with: Water. Alcohol.
Log Pow	: < 2
Viscosity, kinematic	: 5 - 10 cSt
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No data available.

#### 10.2. Chemical stability

The product is stable at normal handling- and storage conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

aerosol or mist generation.

#### 10.5. Incompatible materials

Oxidizing substances.

#### 10.6. Hazardous decomposition products

No additional information available

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
Additional information	: Probably harmless when inhaled because of the low vapor pressure of the substance at ambient temperature May be harmful if swallowed
Skin corrosion/irritation	: Not classified
Additional information	: Repeated exposure may cause skin dryness or cracking
Serious eye damage/irritation	: Causes serious eye irritation.
Additional information	: Slightly irritant to eyes
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

#### Brake Fluid DOT 4

Viscosity, kinematic	5 - 10 mm <sup>2</sup> /s
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### SECTION 12: Ecological information

#### 12.1. Toxicity

General	: It is expected that the product is not harmful to the environment. The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. That does not mean that large or frequent spills can have on the environment.
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LC50 fish 1	> 100 mg/l
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#### 12.2. Persistence and degradability

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Persistence and degradability	Is well eliminable from water.
Biodegradation	100 % @21d (Zahn Wellans/EMPA)

#### 12.3. Bioaccumulative potential

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Log Pow	< 2
Bioaccumulative potential	not bioaccumulable.

#### 12.4. Mobility in soil

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Soil	In water, material soluble.
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### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste) : Waste disposal according to official state regulations.  
 Waste treatment methods : Hand over to officially registered waste disposal company.  
 European List of Waste (LoW) code : 16 01 13\* - brake fluids

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG
<b>14.1. UN number</b>	
Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>	
Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>	
Not applicable	Not applicable
Not applicable	Not applicable
<b>14.4. Packing group</b>	
Not applicable	Not applicable
<b>14.5. Environmental hazards</b>	
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No
No supplementary information available	

### 14.6. Special precautions for user

#### - Overland transport

No data available

#### - Transport by sea

No data available

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

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions  
 Contains no substance on the REACH candidate list  
 Contains no REACH Annex XIV substances

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Indication of changes:

	Supersedes	Removed	
	Revision date	Modified	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.1	Classification according to Directive	Modified	

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	67/548/EEC [DSD] or 1999/45/EC [DPD]		
2.2	Extra phrases	Removed	
2.2	EUH-statements	Removed	
2.2	S-phrases	Modified	
2.2	R-phrases	Modified	
2.2	CLP Signal word	Added	
2.2	Hazard pictograms (CLP)	Modified	
2.2	Precautionary statements (CLP)	Modified	
2.2	Hazard statements (CLP)	Modified	
3	Composition/information on ingredients	Modified	
9.1	pH solution	Added	
9.1	Log Pow	Added	
9.1	Decomposition temperature	Added	
9.1	Flash point	Modified	
9.1	Boiling point	Modified	
12.1	LC50 fish 1	Modified	
12.2	Biodegradation	Added	
12.3	Bioaccumulative potential	Modified	
12.3	Log Pow	Added	

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Repr. 2	Reproductive toxicity, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361d	Suspected of damaging the unborn child
H373	May cause damage to organs through prolonged or repeated exposure.

SDS MPM REACH

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*