



Brake Fluid Low Viscosity DOT 4+ LV

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Revision date: 8-9-2015 version: 7.0

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

1.1. Product identifier

Product form : Mixture
Product name : Brake Fluid Low Viscosity DOT 4+ LV
Product code : 20000LV
Product group : Trade product

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
Function or use category : Hydraulic fluids and additives

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 - www.mpmoil.nl

1.4. Emergency telephone number

Emergency number : +31 (0)15 2514030 (08.00 - 17.00 GMT+1)

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, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Precautionary statements (CLP) : P102 - Keep out of reach of children.
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.
P301+P310 - IF SWALLOWED: Immediately call a doctor, a POISON CENTER.
EUH-statements : EUH210 - Safety data sheet available on request.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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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	0 - 20	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-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
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

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 (30 =<C < 100) 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. In all cases of doubt, or when symptoms persist, seek medical attention.
After skin contact	: Take off contaminated clothing. Wash with plenty of soap and water. 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	: If the person is fully conscious, make him/her drink plenty of water. Never give an unconscious person anything to drink. Immediately call a POISON CENTER/doctor. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice.

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

No additional information available

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 : water spray, powder, foam and CO₂.

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.

5.3. Advice for firefighters

Protection during firefighting	: In case of fire: Wear self-contained breathing apparatus.
Other information	: Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing.

6.1.2. For emergency responders

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

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6.2. Environmental precautions

Do not flush into surface water or sewer system. Notify authorities if liquid enters sewers or public waters.

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 : Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Clean up with absorbent material (for example sand, sawdust, neutral absorbent granule, silica gel).

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Keep away from Mineral oil, Humid air, water. - No smoking.
Precautions for safe handling : Keep away from sources of ignition - No smoking. Provide adequate ventilation. Take precautionary measures against static discharge. Avoid aerosol formation. Protect from moisture.
Hygiene measures : When using do not eat, drink or smoke. Wash hands before breaks and at the end of work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep only in the original container in a cool, well-ventilated place.
Storage conditions : Store in dry protected location to prevent any moisture contact. Store in a well-ventilated place. Keep container tightly closed.
Incompatible products : Mineral oil.
Incompatible materials : The substance is hygroscopic and absorbs water as it comes into contact with moisture in the air.
Storage area : Ensure adequate ventilation of the storage area.

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 ³)	101 mg/m ³
Germany	TRGS 910 Acceptable concentration notes	
United Kingdom	WEL TWA (mg/m ³)	101 mg/m ³
United Kingdom	WEL TWA (ppm)	23 ppm

2-(2-Methoxyethoxy)ethanol (111-77-3)		
EU	IOELV TWA (mg/m ³)	50,1 mg/m ³
EU	IOELV TWA (ppm)	10 ppm
Germany	TRGS 910 Acceptable concentration notes	
United Kingdom	WEL TWA (mg/m ³)	50,1 mg/m ³
United Kingdom	WEL TWA (ppm)	10 ppm

2-(2-Butoxyethoxy)ethanol (112-34-5)		
EU	IOELV TWA (mg/m ³)	67,5 mg/m ³
EU	IOELV TWA (ppm)	10 ppm
EU	IOELV STEL (mg/m ³)	101,2 mg/m ³
EU	IOELV STEL (ppm)	15 ppm
Germany	TRGS 910 Acceptable concentration notes	
United Kingdom	WEL TWA (mg/m ³)	67,5 mg/m ³
United Kingdom	WEL TWA (ppm)	10 ppm
United Kingdom	WEL STEL (mg/m ³)	101,2 mg/m ³
United Kingdom	WEL STEL (ppm)	15 ppm

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8.2. Exposure controls

Technical measures:

The substance must be handled in accordance with good industrial hygiene and safety procedures.

Personal protective equipment:

Gloves. Safety glasses.

Hand protection:

Wear suitable gloves. DIN EN 374. In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Butyl rubber, Nitrile rubber (NBR), Natural rubber, Polyvinylchloride (PVC)	6 (> 480 minutes)			EN ISO 374

Eye protection:

Tightly sealed safety glasses.

Skin and body protection:

Wear suitable protective clothing, gloves and eye/face protection.

Respiratory protection:

In case of inadequate ventilation wear respiratory protection.

Device	Filter type	Condition	Standard
Gas mask	Type A/P2	In the event of insufficient ventilation:	

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: yellow.
Odour	: characteristic.
Odour threshold	: No data available
pH	: 7 - 11,5 SAE J 1703
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: < -50 °C SAE J 1703
Boiling point	: > 260 °C SAE J 1703
Flash point	: > 120 °C IP 35
Auto-ignition temperature	: > 300 °C ASDTM D 286
Decomposition temperature	: > 300 °C
Flammability (solid, gas)	: No data available
Vapour pressure	: < 2 mbar Reid
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1057 (1030 - 1090) g/l DIN 51757
Solubility	: Water: Soluble Ethanol: Soluble
Log Pow	: < 2
Viscosity, kinematic	: 5 - 10 mm ² /s
Viscosity, dynamic	: No data available

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Explosive properties	: Product is not explosive.
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

None under normal use.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Glycol ethers can react with light metals with the evolution of hydrogen. Glycol Ethers can form peroxides on storage.

10.4. Conditions to avoid

No naked flames, sparks, and do not smoke.

10.5. Incompatible materials

Materials to avoid. Oxidizing substances. moisture.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 3000
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 7 - 11,5 SAE J 1703
Additional information	: Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation	: Not classified pH: 7 - 11,5 SAE J 1703
Additional information	: Slightly irritant to eyes
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified (Inconclusive data. The danger was based on evaluation of data on components of the product.)
Additional information	: May damage the unborn child.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

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Viscosity, kinematic	5 - 10 mm ² /s
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SECTION 12: Ecological information

12.1. Toxicity

General	: No known adverse effects on the functioning of water treatment plants under normal use conditions as recommended.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

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LC50 fish 1	> 100 mg/l 96 h - Oncorhynchus Mykiss
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12.2. Persistence and degradability

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Persistence and degradability	Is well eliminable from water.
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Biodegradation	> 100 % 28 d (OESO 302B)
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12.3. Bioaccumulative potential

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Log Pow	< 2
Bioaccumulative potential	There is no bioaccumulation.

12.4. Mobility in soil

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Soil	Soluble in water and will partition to aqueous phase. Volatilisation from water to air not expected.
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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Additional information : Product may not be released into waters without pre-treatment (biological sewage plant).

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Waste disposal according to official state regulations.
Product/Packaging disposal recommendations : Waste suitable for incineration.
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
14.1. UN number	
Not applicable	Not applicable
14.2. UN proper shipping name	
Not applicable	Not applicable
14.3. Transport hazard class(es)	
Not applicable	Not applicable
14.4. Packing group	
Not applicable	Not applicable
14.5. Environmental hazards	
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

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

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15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

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.
EUH210	Safety data sheet available on request.

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.