



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

Date of issue:

Revision date: 08/09/2015

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)

Country	Official advisory body	Address	Emergency number
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]

Not classified

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. Substance

Not applicable

3.2. Mixture

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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 (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. 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 or doctor/physician. 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 : hazy water, 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.

6.2. Environmental precautions

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

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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
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
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
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

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 374

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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:	



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
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.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : 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)
Repeated exposure may cause skin dryness or cracking
pH: 7 - 11,5 SAE J 1703

Serious eye damage/irritation : Not classified
Slightly irritant to eyes
pH: 7 - 11,5 SAE J 1703

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)
May damage the unborn child

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

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Viscosity, kinematic	5 - 10 mm ² /s

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.

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LC50 fish 1	> 100 mg/l 96 h - Oncorhynchus Mykiss

12.2. Persistence and degradability

Brake Fluid Low Viscosity DOT 4+ LV	
Persistence and degradability	Is well eliminable from water.
Biodegradation	> 100 % 28 d (OESO 302B)

12.3. Bioaccumulative potential

Brake Fluid Low Viscosity DOT 4+ LV	
Log Pow	< 2
Bioaccumulative potential	There is no bioaccumulation.

12.4. Mobility in soil

Brake Fluid Low Viscosity DOT 4+ LV	
Soil	Soluble in water and will partition to aqueous phase. Volatilisation from water to air not expected.

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.

Waste treatment methods : Waste suitable for incineration.

European List of Waste (LoW) code : 16 01 13* - brake fluids

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SECTION 14: Transport information

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

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable

Proper Shipping Name (IMDG) : Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable

Packing group (IMDG) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : 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 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

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 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.

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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