

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 24.08.2022 Revision date: 29.03.2023 Supersedes: 17.11.2022 version: 1.1

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

### **1.1. Product identifier**

Product form Trade name	: Mixture : MPM Brake Fluid DOT 5.1+ Low Viscosity
UFI	: 715V-41RC-H005-MCNC
Product code	: 21000LV
Type of product	: Brake fluids
Product group	: Mixture

#### **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, Industrial use, Consumer use
Industrial/Professional use spec	: Non-dispersive use
	Used in closed systems
Use of the substance/mixture	: Brake fluids
1.2.2. Uses advised against	

No additional information available.

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

#### Manufacturer

MPM International Oil Company Cyclotronweg 1 2629 HN Delft - Nederland T +31 (0)15 2514030 info@mpmoil.com - www.mpmoil.com

# 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	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+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]

Reproductive toxicity, Category 2

H361d

Full text of H- and EUH-statements: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available.

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## 2.2. Label elements Labelling according to Regulation (EC) No. 1272/2008 [CLP] Hazard pictograms (CLP) GHS08 CLP Signal word : Warning Contains : Methyl Triglycol Borate Hazard statements (CLP) : H361d - Suspected of damaging the unborn child. Precautionary statements (CLP) : P280 - Wear protective gloves. P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 - Dispose of contents/container in accordance with local and national regulations. P102 - Keep out of reach of children.

### 2.3. Other hazards

The product does not meet the PBT and vPvB classification criteria

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## **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]
Methyl Triglycol Borate	CAS-No.: 30989-05-0 EC-No.: 250-418-4 EC Index-No.: 250-418-4 REACH-no: 2119462824-33	≥ 30 – ≤ 90	Repr. 2, H361d
Butyl Triglycol	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0 REACH-no: 01-2119475107- 38	≥ 1 – ≤ 9,9	Eye Dam. 1, H318
Butyl Polyglycol	CAS-No.: 9004-77-7 EC-No.: 500-012-0 EC Index-No.: 500-012-0 REACH-no: 2119475115-41	≥0-≤5	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 – ≤ 2,99	Repr. 2, H361d

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Specific concentration limits			
Name	Product identifier	Specific concentration limits	
Butyl Triglycol	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0 REACH-no: 01-2119475107- 38	(20 ≤ C < 30) Eye Irrit. 2, H319 (30 ≤ C < 100) Eye Dam. 1, H318	
Butyl Polyglycol	CAS-No.: 9004-77-7 EC-No.: 500-012-0 EC Index-No.: 500-012-0 REACH-no: 2119475115-41	(20 ≤ C < 100) Eye Irrit. 2, H319	

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid meas	sures
4.1. Description of first aid m	leasures
General	: Remove to fresh air and keep at rest in a position comfortable for breathing. If medical advice is needed, have product container or label at hand.
After inhalation	: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISO CENTER/doctor if you feel unwell.
After skin contact	: Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.
After eye contact	: If eye irritation persists: Get medical advice/attention. In case of eye contact, immediately rinse with clean water for 10-15 minutes.
After ingestion	: Do NOT induce vomiting. Rinse mouth. Call a physician immediately. If the person is fully conscious, make him/her drink plenty of water. Never give an unconscious person anythin to drink.
4.2. Most important symptom	ns and effects, both acute and delayed
After inhalation After skin contact After eye contact After ingestion	<ul> <li>May cause respiratory irritation.</li> <li>Repeated exposure may cause skin dryness or cracking.</li> <li>May cause severe irritation.</li> <li>Abdominal pain, nausea. Vomiting.</li> </ul>
4.3. Indication of any immedi	ate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures	
5.1. Extinguishing media	
Suitable extinguishing media	: Water spray, powder, foam and CO2.
5.2. Special hazards arising from the subst	tance or mixture
Hazardous decomposition products in case of fire	: Carbon monoxide. Carbon dioxide.
5.3. Advice for firefighters	
Precautionary measures fire Firefighting instructions	<ul> <li>Do not enter fire area without proper protective equipment, including respiratory protection.</li> <li>Use water spray or fog for cooling exposed containers. Prevent fire fighting water from entering the environment.</li> </ul>
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

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SECTION 6: Accidental release measures		
6.1. Personal precautions, protective equipment and emergency procedures		
General measures	: Mark out the contaminated area with signs and prevent access to unauthorized personnel.	
6.1.1. For non-emergency personnel		
Protective equipment	: Wear suitable protective clothing and gloves.	
6.1.2. For emergency responders		
No additional information available.		
6.2. Environmental precautions		
Prevent entry to sewers and public waters.		
6.3. Methods and material for containment and cleaning up		
Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.	
6.4. Reference to other sections		

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and stora	age
7.1. Precautions for safe handling	
Precautions for safe handling	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not get in eyes, on skin, or on clothing. Keep container closed when not in use
Hygiene measures	: Do not eat, drink or smoke when using this product.
7.2. Conditions for safe storage, in	ncluding any incompatibilities
Storage conditions Incompatible products	<ul><li>Store in a well-ventilated place. Keep container tightly closed.</li><li>Oxidizing agent.</li></ul>
7.3. Specific end use(s)	

No additional information available.

## SECTION 8: Exposure controls/personal protection

8.1. Control parameters

## 8.1.1. National occupational exposure and biological limit values

2-(2-Methoxyethoxy)ethanol (111-77-3)		
EU - Indicative Occupational Exposure Limit (IOEL)		
Local name	2-(2-Methoxyethoxy)ethanol	
IOELV TWA (mg/m³)	50,1 mg/m³	
Notes	Skin	
Regulatory reference COMMISSION DIRECTIVE 2006/15/EC		
Ireland - Occupational Exposure Limits		
Local name	2-(2-Methoxyethoxy)ethanol	
OEL (8 hours ref) (mg/m <sup>3</sup> ) 50,1 mg/m <sup>3</sup>		
OEL (8 hours ref) (ppm)	10 ppm	

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2-(2-Methoxyethoxy)ethanol (111-77-3)		
Regulatory reference Chemical Agents Code of Practice 2021		
United Kingdom - Occupational Exposure Limits		
Local name	2-(2-Methoxyethoxy) ethanol	
WEL TWA (mg/m³)	50,1 mg/m³	
WEL TWA (ppm)	10 ppm	
Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)	
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE	

#### 8.1.2. Recommended monitoring procedures

No additional information available.

#### 8.1.3. Air contaminants formed

No additional information available.

#### 8.1.4. DNEL and PNEC

No additional information available.

#### 8.1.5. Control banding

No additional information available.

#### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

#### **Technical measures:**

Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

### 8.2.2. Personal protection equipment

## Personal protective equipment:

Safety glasses. Gloves.

Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

#### Eye protection:

Chemical goggles or safety glasses

Eye protection				
Type         Field of application         Characteristics         Standard				
Safety glasses, Face shield		With side shields	EN 166	

## 8.2.2.2. Skin protection

# Skin and body protection:

Wear suitable protective clothing

#### Hand protection:

Wear suitable gloves resistant to chemical penetration

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Hand protection					
Туре	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Butyl rubber, Natural rubber	6 (> 480 minutes)	0.3		EN ISO 374, EN 388

#### 8.2.2.3. Respiratory protection

### **Respiratory protection:**

No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation

Respiratory protection			
Device	Filter type	Condition	Standard
Reusable half mask	Type A - High-boiling (>65 °C) organic compounds	In the event of insufficient ventilation:	

#### 8.2.2.4. Thermal hazards

No additional information available.

#### 8.2.3. Environmental exposure controls

### Environmental exposure controls:

Avoid release to the environment.

#### Other information:

Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

SECTION 9: Physical and chemical properties		
9.1. Information on basic physical and chemical properties		
Physical state	: Liquid	
Colour	: Yellow.	
Appearance	: Clear.	
Odour	: Slight.	
Odour threshold	: Not available	
Melting point	: <-50 °C SAE J 1704	
Freezing point	: Not available	
Boiling point	: > 260 °C SAE J 1704	
Flammability	: >280 °C	
Explosive properties	: Product is not explosive.	
Oxidising properties	: No oxidising properties.	
Explosive limits	: Not available	
Lower explosion limit	: Not available	
Upper explosion limit	: Not available	
Flash point	: > 120 °C IP 35	
Auto-ignition temperature	: Not available	
Decomposition temperature	: > 300 °C	
pH	: 9,55 (7,6 – 11,5) SAE J 1704	
Viscosity, kinematic	: 690 – 750 mm²/s @20C	
Solubility	: In water, material soluble.	
	Water: 100 %	
	Ethanol: 100 %	
Log Kow	: Not available	
Log Pow	: ≤2	
Vapour pressure	: 1 mbar	
Vapour pressure at 50°C	: Not available	
Density	: 1067 (1020 – 1070) kg/m³ DIN 51757	
Relative density	: Not available	
Relative vapour density at 20°C	: Not available	
Particle size	: Not applicable	
Particle size distribution	: Not applicable	

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Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

#### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available.

#### 9.2.2. Other safety characteristics

No additional information available.

SECTION 10: Stability and reactivity	
10.1. Reactivity	

None under normal conditions.

**10.2. Chemical stability** 

The substance is hygroscopic and absorbs water as it comes into contact with moisture in the air.

10.3. Possibility of hazardous reactions

Peroxides may be formed on prolonged contact with air.

10.4. Conditions to avoid

Do not allow contact with water. No flames, no sparks. Eliminate all sources of ignition.

**10.5.** Incompatible materials

Strong oxidizing agent. Strong bases. Strong acids. water.

**10.6. Hazardous decomposition products** 

**SECTION 11: Toxicological information** 

When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, nitrogen oxides (NOx), NH3, sulphur compounds.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008		
Acute toxicity (dermal):Acute toxicity (inhalation):	Not classified (Based on available data, the classification criteria are not met.) Not classified Due to the low vapor pressure, inhalation is unlikely to be a hazard at room temperature. If a significant amount is ingested there is a risk of kidney damage which in extreme cases could lead to kidney failure, coma or dead. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, breathing arrest.	
MPM Brake Fluid DOT 5.1+ Low Viscosity		
LD50 oral rat	5000 mg/kg Limited experience indicates that the fatal dose in humans may be lower.	
LD50 dermal rabbit	3000 mg/kg	
Methyl Triglycol Borate (30989-05-0)		
LD50 oral rat	> 2000 mg/kg bodyweight	
LD50 dermal rat	> 2000 mg/kg bodyweight	

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Butyl Triglycol (143-22-6)		
LD50 oral rat	> 5000 mg/kg bodyweight	
LD50 dermal rabbit	3540 mg/kg bodyweight	
Butyl Polyglycol (9004-77-7)		
LD50 oral rat	> 2000 mg/kg bodyweight	
LD50 dermal rabbit	3540 mg/kg bodyweight	
ATE CLP (dermal)	3540 mg/kg bodyweight	
2-(2-Methoxyethoxy)ethanol (111-77-3)		
LD50 dermal rabbit	9404 mg/kg bodyweight OECD 402	
ATE CLP (dermal)	9404 mg/kg bodyweight	
Additional information : Serious eye damage/irritation :	Not classified (Based on available data, the classification criteria are not met.) pH: 9,55 (7,6 – 11,5) SAE J 1704 However, prolonged or repeated exposure can degrease the skin and lead to dermatitis. Not classified pH: 9,55 (7,6 – 11,5) SAE J 1704 Causes eye irritation	
Respiratory or skin sensitisation:Germ cell mutagenicity:Carcinogenicity:	Not classified (Based on available data, the classification criteria are not met.) Not classified (Based on available data, the classification criteria are not met.) Not classified (Based on available data, the classification criteria are not met.)	
	Suspected of damaging the unborn child. Not classified. (Based on available data, the classification criteria are not met.)	
MPM Brake Fluid DOT 5.1+ Low Viscosity		
NOAEL (oral, rat)	500 mg/kg bodyweight	
STOT-repeated exposure :	Not classified (Based on available data, the classification criteria are not met.)	
Methyl Triglycol Borate (30989-05-0)		
NOAEL (oral, rat, 90 days)	≥ 1000 mg/kg bodyweight	
Butyl Triglycol (143-22-6)		
LOAEL (oral, rat, 90 days)	1200 mg/kg bodyweight OECD 408 (	
NOAEL (oral, rat, 90 days)	400 mg/kg bodyweight OECD 408	
NOAEL (dermal, rat/rabbit, 90 days)	4000 mg/kg bodyweight	
Butyl Polyglycol (9004-77-7)		
LOAEL (oral, rat, 90 days)	1200 mg/kg bodyweight	
NOAEL (oral, rat, 90 days)	400 mg/kg bodyweight	
2-(2-Methoxyethoxy)ethanol (111-77-3)		
NOAEL (oral, rat, 90 days)	900 mg/kg bodyweight OECD 407	
NOAEC (inhalation, rat, vapour, 90 days)	> 1,06 mg/l air OECD 413	
Aspiration hazard : Not classified		
MPM Brake Fluid DOT 5.1+ Low Viscosity		
Viscosity, kinematic	690 – 750 mm²/s @20C	

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11.2. Information on other hazards	
11.2.1. Endocrine disrupting properties	
Adverse health effects caused by endocrine disrupting properties	: Shows an adverse effect in an intact organism or its progeny, which is a change in the morphology, physiology, growth, development, reproduction or life span of an organism, system or (sub)population that results in an impairment of functional capacity, an impairment of the capacity to compensate for additional stress or an increase in susceptibility to other influences
11.2.2. Other information	
Other information	<ul> <li>Irritant side effects: The product contains substances that can irritate locally through skin/eye contact or when inhaled. Contact with local irritants may result in the contact area more easily absorbing harmful substances, such as allergens.</li> </ul>

# **SECTION 12: Ecological information**

12.1. Toxicity		
Hazardous to the aquatic environment, short-term : (acute)	The product is not expected to be harmful to the environment. Not classified Not classified	
MPM Brake Fluid DOT 5.1+ Low Viscosity		
LC50 fish 1	> 100 mg/l @96h (Oncorhynchus Mykiss)	
Methyl Triglycol Borate (30989-05-0)		
LC50 fish 1	> 222,2 mg/l	
LC50 fish 2	> 1010 mg/l	
EC50 Daphnia 1	> 211,2 mg/l	
EC50 Daphnia 2	> 960 mg/l	
EC50 72h - Algae [1]	> 224,4 mg/l	
EC50 72h - Algae [2]	> 1020 mg/l	
Butyl Triglycol (143-22-6)		
LC50 fish 1	2400 mg/l Pimephales promelas	
LC50 fish 2	2200 – 4600 mg/l Leuciscus idus	
EC50 72h - Algae [1]	1589 mg/l Pseudokirchneriella subcapitata	
EC50 72h - Algae [2]	3211 mg/l Pseudokirchneriella subcapitata	
Butyl Polyglycol (9004-77-7)		
LC50 fish 1	> 1800 mg/l	
EC50 Daphnia 1	> 3200 mg/l	
EC50 72h - Algae [1]	391 mg/l	
2-(2-Methoxyethoxy)ethanol (111-77-3)		
LC50 fish 1	5741 mg/l Pimephales promelas	
EC50 Daphnia 1	1192 mg/l Daphnia magna	
EC50 96h - Algae [1]	> 1000 mg/l Pseudokirchneriella subcapitata	

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12.2. Persistence and degradability		
MPM Brake Fluid DOT 5.1+ Low Viscosity		
Persistence and degradability	Readily biodegradable.	
12.3. Bioaccumulative potential		
MPM Brake Fluid DOT 5.1+ Low Viscosity		
Log Pow	≤2	
Bioaccumulative potential	No bioaccumulation expected.	
12.4. Mobility in soil		
MPM Brake Fluid DOT 5.1+ Low Viscosity		
Soil	Soluble in water and will partition to aqueos phase. Volatilisation from water to air not expected.	
12.5. Results of PBT and vPvB assessment		
MPM Brake Fluid DOT 5.1+ Low Viscosity		
The product does not meet the PBT and vPvB classification criteria		
12.6. Endocrine disrupting properties		
Adverse effects on the environment caused by : endocrine disrupting properties	The product does not contain any substances with endocrine disrupting properties.	
12.7. Other adverse effects		

No additional information available.

SECTION 13: Disposal considerations	5
13.1. Waste treatment methods	
Regional waste regulation Product/Packaging disposal recommendations	<ul> <li>Disposal must be done according to official regulations.</li> <li>Waste suitable for incineration.</li> </ul>
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Remove to an
European List of Waste (LoW, EC 2150/2002)	authorized waste treatment plant. : 16 01 13* - brake fluids

SECTION 14: Transport information	
In accordance with ADR / IMDG	
14.1. UN number or ID number	
UN-No. UN-No. (IMDG)	: Not regulated : Not regulated
14.2. UN proper shipping name	
Proper Shipping Name (ADR) Proper Shipping Name (IMDG)	: Not regulated : Not regulated
14.3. Transport hazard class(es)	
ADR Transport hazard class(es) (ADR)	: Not regulated

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IMDG Transport hazard class(es) (IMDG)	: Not regulated
14.4. Packing group	
Packing group (ADR) Packing group (IMDG)	: Not regulated : Not regulated
14.5. Environmental hazards	
Dangerous for the environment Marine pollutant Other information	: No : No : No supplementary information available
14.6. Special precautions for user	

#### **Overland transport**

Not regulated

#### Transport by sea

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

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 substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

### 15.1.2. National regulations

No additional information available.

#### 15.2. Chemical safety assessment

No additional information available.

### **SECTION 16: Other information**

Full text of H- and EUH-statements	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361d	Suspected of damaging the unborn child
Repr. 2	Reproductive toxicity, Category 2

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.