



MPM Brake Fluid Low Viscosity DOT 4+ LV

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 8-9-2015 Revision date: 18-1-2023 Supersedes: 12-4-2022 version: 7.6

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

1.1. Product identifier

Product form : Mixture
Trade name : MPM Brake Fluid Low Viscosity DOT 4+ LV
UFI : UDYR-MMYX-VU1H-C4H5
Product code : 20000LV
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
pvhoorn@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.

MPM Brake Fluid Low Viscosity DOT 4+ LV

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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) : P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves, eye protection, face shield.
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/vPvB substances $\geq 0.1\%$ 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	$\geq 30 - \leq 90$	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	$\geq 1 - \leq 9,9$	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	$\geq 0 - \leq 5$	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	$\geq 0 - \leq 2,99$	Repr. 2, H361d

MPM Brake Fluid Low Viscosity DOT 4+ LV

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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 measures

4.1. Description of first aid measures

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 POISON 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 anything to drink.

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

After inhalation	: May cause respiratory irritation.
After skin contact	: Repeated exposure may cause skin dryness or cracking.
After eye contact	: May cause severe irritation.
After ingestion	: Abdominal pain, nausea. Vomiting.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray, powder, foam and CO ₂ .
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5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Carbon monoxide. Carbon dioxide.
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5.3. Advice for firefighters

Precautionary measures fire	: Do not enter fire area without proper protective equipment, including respiratory protection.
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

MPM Brake Fluid Low Viscosity DOT 4+ LV

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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 storage

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, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep container tightly closed.
Incompatible products : Oxidizing agent.

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/m ³)	50,1 mg/m ³
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 ³)	50,1 mg/m ³
OEL (8 hours ref) (ppm)	10 ppm

MPM Brake Fluid Low Viscosity DOT 4+ LV

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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/m ³)	50,1 mg/m ³
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

MPM Brake Fluid Low Viscosity DOT 4+ LV

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Hand protection					
Type	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	: Amber.
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	: Not available
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	: 7 – 10,5 SAE J 1704
Viscosity, kinematic	: 5 – 10 mm ² /s @20C
Solubility	: Water: 100 % Ethanol: 100 %
Log Kow	: Not available
Log Pow	: ≤ 2
Vapour pressure	: 1 mbar
Vapour pressure at 50°C	: Not available
Density	: 1057 (1020 – 1070) kg/m ³ DIN 51757
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable

MPM Brake Fluid Low Viscosity DOT 4+ LV

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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

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

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met.)
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Due to the low vapor pressure, inhalation is unlikely to be a hazard at room temperature.
Additional information	: If a significant amount is ingested there is a risk of kidney damage which in extreme cases could lead to kidney failure, coma or death. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, breathing arrest.

MPM Brake Fluid Low Viscosity DOT 4+ LV	
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
Butyl Triglycol (143-22-6)	
LD50 oral rat	> 5000 mg/kg bodyweight
LD50 dermal rabbit	3540 mg/kg bodyweight

MPM Brake Fluid Low Viscosity DOT 4+ LV

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met.) pH: 7 – 10,5 SAE J 1704
Additional information	: However, prolonged or repeated exposure can degrease the skin and lead to dermatitis.
Serious eye damage/irritation	: Not classified pH: 7 – 10,5 SAE J 1704
Additional information	: Causes eye irritation
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met.)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met.)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met.)
Reproductive toxicity	: Suspected of damaging the unborn child.
STOT-single exposure	: Not classified. (Based on available data, the classification criteria are not met.)

MPM Brake Fluid Low Viscosity DOT 4+ LV	
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 Low Viscosity DOT 4+ LV	
Viscosity, kinematic	5 – 10 mm ² /s @20C

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
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MPM Brake Fluid Low Viscosity DOT 4+ LV

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

11.2.2. Other information

Other information : 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.

SECTION 12: Ecological information

12.1. Toxicity

General : The product is not expected to be harmful to the environment.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

MPM Brake Fluid Low Viscosity DOT 4+ LV	
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

12.2. Persistence and degradability

MPM Brake Fluid Low Viscosity DOT 4+ LV	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

MPM Brake Fluid Low Viscosity DOT 4+ LV	
Log Pow	≤ 2

MPM Brake Fluid Low Viscosity DOT 4+ LV

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

MPM Brake Fluid Low Viscosity DOT 4+ LV

Bioaccumulative potential	No bioaccumulation expected.
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12.4. Mobility in soil

MPM Brake Fluid Low Viscosity DOT 4+ LV

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

MPM Brake Fluid Low Viscosity DOT 4+ LV

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

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Waste suitable for incineration.
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Remove to an authorized waste treatment plant.
European List of Waste (LoW) code : 16 01 13* - brake fluids

SECTION 14: Transport information

In accordance with ADR / IMDG

14.1. UN number or ID number

UN-No. : Not regulated
UN-No. (IMDG) : Not regulated

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not regulated
Proper Shipping Name (IMDG) : Not regulated

14.3. Transport hazard class(es)

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

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

14.4. Packing group

Packing group (ADR) : Not regulated
Packing group (IMDG) : Not regulated

MPM Brake Fluid Low Viscosity DOT 4+ LV

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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

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

Indication of changes

Section	Changed item	Change	Comments
	Supersedes	Modified	
	Revision date	Modified	
	Adverse effects on the environment caused by endocrine disrupting properties	Added	
2.2	Precautionary statements (CLP)	Modified	

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

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MPM Brake Fluid Low Viscosity DOT 4+ LV

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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.