



MPM BorgWarner Fluid Gen II-V

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 11-12-2015 Revision date: 21-11-2023 Supersedes: 7-2-2023 version: 3.0

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

1.1. Product identifier

Product form : Mixture
Trade name : MPM BorgWarner Fluid Gen II-V
UFI : EARN-EEJA-S106-GJJK
Product code : 50000BWHS
Type of product : Other engine, gear and lubricating oils.
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, Consumer use, Industrial use
Industrial/Professional use spec : Non-dispersive use
Used in closed systems
Function or use category : Lubricants and additives

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 BV
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	Organisation/Company	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]

Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412

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

Adverse physicochemical, human health and environmental effects

No additional information available

MPM BorgWarner Fluid Gen II-V

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]

CLP Signal word	: -
Hazard statements (CLP)	: H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P273 - Avoid release to the environment. P501 - Dispose of contents/container in accordance with local and national regulations. P102 - Keep out of reach of children.
EUH-statements	: EUH208 - Contains: Olefin derivative, Triphenyl phosphite. May produce an allergic reaction.

2.3. Other hazards

The product does not meet the PBT and vPvB classification criteria

Contains PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)	This substance meets the PBT criteria of REACH regulation, annex XIII This substance meets the vPvB criteria of REACH regulation, 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 substance(s) are 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

Comments : Highly refined mineral oil, contains <3% (w/w) DMSO extract, according to IP346

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	CAS-No.: 72623-87-1 EC-No.: 276-738-4 EC Index-No.: 649-483-00-5 REACH-no: 01-2119474889-13	$\geq 20 - \leq 50$	Asp. Tox. 1, H304
Distillates(petroleum), hydrotreated heavy paraffinic	CAS-No.: 64742-54-7 EC-No.: 265-157-1 EC Index-No.: 649-467-00-8 REACH-no: 01-2119484627-25	$\geq 20 - \leq 50$	Asp. Tox. 1, H304
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	CAS-No.: 4259-15-8 EC-No.: 224-235-5 REACH-no: 01-2119493635-27	$\geq 1 - \leq 2,5$	Eye Dam. 1, H318 Aquatic Chronic 2, H411
Olefin derivative	EC-No.: 701-392-2 REACH-no: 01-2119976364-28	$\geq 0,1 - \leq 1$	Skin Sens. 1B, H317

MPM BorgWarner Fluid Gen II-V

Safety Data Sheet

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

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Triphenyl phosphite	CAS-No.: 101-02-0 EC-No.: 202-908-4 EC Index-No.: 015-105-00-7 REACH-no: 01-2119511213-58	≥ 0,1 – ≤ 0,25	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	CAS-No.: 68411-46-1 EC-No.: 270-128-1 REACH-no: 01-2119491299-23	≥ 0,1 – ≤ 0,1	Repr. 2, H361f Aquatic Chronic 3, H412

Specific concentration limits		
Name	Product identifier	Specific concentration limits
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	CAS-No.: 4259-15-8 EC-No.: 224-235-5 REACH-no: 01-2119493635-27	(50 ≤ C < 100) Eye Dam. 1, H318 (50 ≤ C < 100) Eye Irrit. 2, H319
Triphenyl phosphite	CAS-No.: 101-02-0 EC-No.: 202-908-4 EC Index-No.: 015-105-00-7 REACH-no: 01-2119511213-58	(5 ≤ C < 100) Eye Irrit. 2, H319 (5 ≤ C < 100) Skin Irrit. 2, H315

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

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation	: Not required.
After skin contact	: Wash skin with mild soap and water.
After eye contact	: In case of eye contact, immediately rinse with clean water for 10-15 minutes.
After ingestion	: Do NOT induce vomiting. Rinse mouth out with water. Get immediate medical advice/attention.

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

After inhalation	: Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
After skin contact	: Not expected to present a significant skin hazard under anticipated conditions of normal use.
After eye contact	: Not expected to present a significant eye contact hazard under anticipated conditions of normal use.
After ingestion	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray, powder, foam and CO ₂ .
Unsuitable extinguishing media	: Do not use a heavy water stream.

MPM BorgWarner Fluid Gen II-V

Safety Data Sheet

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

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

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|--------------------------------|---|
| Precautionary measures fire | : Exercise caution when fighting any chemical fire. |
| Firefighting instructions | : Use water spray or fog for cooling exposed containers. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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| General measures | : If spilled, may cause the floor to be slippery. |
|------------------|---|

6.1.1. For non-emergency personnel

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|----------------------|---------------------------|
| Protective equipment | : Gloves. Safety glasses. |
| Emergency procedures | : Do not breathe vapours. |

6.1.2. For emergency responders

- | | |
|----------------------|---|
| Protective equipment | : Wear suitable protective clothing and gloves. Safety glasses. |
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6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

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|-------------------------|--|
| For containment | : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. |
| Methods for cleaning up | : Detergent. Clean up any spills as soon as possible, using an absorbent material to collect it. |
| Other information | : Spill area may be slippery. Use suitable disposal containers. |

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 | : Avoid all unnecessary exposure. Both local exhaust and general room ventilation are usually required. |
| Precautions for safe handling | : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| Handling temperature | : < 40 °C |
| Hygiene measures | : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. |

7.2. Conditions for safe storage, including any incompatibilities

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|---------------------|--|
| Technical measures | : Store in a closed container. |
| Storage conditions | : Keep container closed when not in use. |
| Storage temperature | : ≤ 40 °C |
| Storage area | : Store in dry, well-ventilated area. |

7.3. Specific end use(s)

No additional information available

MPM BorgWarner Fluid Gen II-V

Safety Data Sheet

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

No additional information available

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

Additional information : Based on ACGIH TLV, a concentration of 5 mg/m³ oilspray (TWA, 8 hour workday) is recommended.

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Technical measures:

No additional information available.

8.2.2. Personal protection equipment

Personal protective equipment:

Gloves. Safety glasses.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety goggles

8.2.2.2. Skin protection

Skin and body protection:

No special clothing/skin protection equipment is recommended under normal conditions of use

Hand protection:

Protective gloves

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	> 0,4		EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:

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

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

MPM BorgWarner Fluid Gen II-V

Safety Data Sheet

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid.
Colour	: Brown.
Odour	: Characteristic.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 150 °C (DIN EN ISO 2592)
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: 29 mm ² /s @ 40°C (DIN EN ISO 3104)
Solubility	: Slightly soluble, the product remains on the water surface.
Log Kow	: Not available
Log Pow	: > 3
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 880 kg/m ³ @ 15°C (DIN EN ISO 12185)
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
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

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

No naked flames, sparks, and do not smoke.

MPM BorgWarner Fluid Gen II-V

Safety Data Sheet

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

10.5. Incompatible materials

Strong oxidizing agent.

10.6. Hazardous decomposition products

Carbon dioxide. Protection against nuisance dust particles must be used when the concentration in the air is higher than 10 mg/m³.

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.) (Based on available data, the classification criteria are not met.)
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)

LD50 oral rat	> 5000 mg/kg bodyweight OECD 401
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Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)

LD50 oral rat	3100 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
ATE CLP (oral)	3100 mg/kg bodyweight

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)

LD50 oral rat	> 5000 mg/kg OECD 401
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Triphenyl phosphite (101-02-0)

ATE CLP (oral)	500 mg/kg bodyweight
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Skin corrosion/irritation	: Not classified
Additional information	: Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation	: Not classified.
Respiratory or skin sensitisation	: Skin sensitization: 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
Additional information	: At high concentrations, the vapours can be irritating to the respiratory system

MPM BorgWarner Fluid Gen II-V

Viscosity, kinematic	29 mm ² /s @ 40°C (DIN EN ISO 3104)
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11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties	: 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 substance(s) are 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 %
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MPM BorgWarner Fluid Gen II-V

Safety Data Sheet

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

11.2.2. Other information

SECTION 12: Ecological information

12.1. Toxicity

General	: Based on available data, the classification criteria are not met.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met.) (Based on available data, the classification criteria are not met.)
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)

LC50 fish 1	10 – 35 mg/l 96h Pimephales promelas (semi static)
LC50 fish 2	1 – 5 mg/l 96h Pimephales promelas (static)
EC50 Daphnia 1	1 – 1,5 mg/l 48h Daphnia magna
EC50 other aquatic organisms 1	1 – 5 mg/l 96h Pseudokirchneriella subcapitata
EC50 96h - Algae [1]	240 mg/l Scenedesmus Subspicatus OECD 201 @21d
NOEC (chronic)	0,4 mg/l Daphnia Magna OECD211 @21d
NOEC (acute)	NOEC Acute 220 mg/l Scenedesmus Subspicatus OECD 201-biomass

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)

EC50 72h - Algae [1]	100 mg/l
NOEC (acute)	10 – 100 mg/l 72h

Triphenyl phosphite (101-02-0)

LC50 fish 1	0,94 mg/l (Daphnia magna)
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12.2. Persistence and degradability

MPM BorgWarner Fluid Gen II-V

Persistence and degradability	Not readily biodegradable.
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Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)

Persistence and degradability	Under test conditions no biodegradation observed.
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Triphenyl phosphite (101-02-0)

BOD (% of ThOD)	0,14 % ThOD @28D OECD TTG 301 D
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12.3. Bioaccumulative potential

MPM BorgWarner Fluid Gen II-V

Log Pow	> 3
Bioaccumulative potential	Not applicable to mixtures.

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (72623-87-1)

Bioaccumulative potential	highly bioaccumulative.
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Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)

Bioconcentration factor (BCF REACH)	> 1719
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Triphenyl phosphite (101-02-0)

Log Kow	6,25 @25C Calc.
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MPM BorgWarner Fluid Gen II-V

Safety Data Sheet

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

12.4. Mobility in soil

MPM BorgWarner Fluid Gen II-V

Soil	Not applicable to mixtures.
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Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)

Log Koc	> 5730
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12.5. Results of PBT and vPvB assessment

MPM BorgWarner Fluid Gen II-V

The product does not meet the PBT and vPvB classification criteria

Component

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)	This substance meets the PBT criteria of REACH regulation, annex XIII This substance meets the vPvB criteria of REACH regulation, annex XIII
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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

Other adverse effects : No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose as hazardous waste. Avoid release to the environment.
European List of Waste (LoW, EC 2000/532)	: 13 02 06* - synthetic engine, gear and lubricating oils

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

MPM BorgWarner Fluid Gen II-V

Safety Data Sheet

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

Packing group (IMDG) : Not regulated

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
	Display additional SDS EU addresses	Added	
	Revision date	Modified	
	Supersedes	Modified	
1.1	UFI on SDS 1.1	Added	
3	Composition/information on ingredients	Modified	

Full text of H- and EUH-statements

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1

MPM BorgWarner Fluid Gen II-V

Safety Data Sheet

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

Full text of H- and EUH-statements	
EUH208	Contains: Olefin derivative, Triphenyl phosphite. May produce an allergic reaction.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361f	Suspected of damaging fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B

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.