



MPM Radiator Flush

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 19-8-2014 Revision date: 14-2-2023 Supersedes: 14-12-2022 version: 2.1

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

1.1. Product identifier

Product form : Mixture
Trade name : MPM Radiator Flush
UFI : GE2U-SS69-W10A-KWGA
Product code : AD25000
Type of product : Additives
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 : Industrial use, Professional use
Use of the substance/mixture : Automotive care products

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)	
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9	+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

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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)	: P102 - Keep out of reach of children. P273 - Avoid release to the environment. P280 - Wear eye protection, protective gloves. P501 - Dispose of contents/container in accordance with local and national regulations.
EUH-statements	: EUH208 - Contains: 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one. May produce an allergic reaction.

2.3. Other hazards

The product does not meet the PBT and vPvB classification criteria

Contains no PBT and/or 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 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

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
amines, tallow alkyl, ethoxylated	CAS-No.: 61791-26-2 EC-No.: 500-153-8	< 1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS-No.: 2634-33-5 EC-No.: 220-120-9 EC Index-No.: 613-088-00-6 REACH-no: 01-2120761540-60	< 0,05	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1)

Specific concentration limits

Name	Product identifier	Specific concentration limits
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS-No.: 2634-33-5 EC-No.: 220-120-9 EC Index-No.: 613-088-00-6 REACH-no: 01-2120761540-60	(0,05 \leq C < 100) Skin Sens. 1, H317

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General	: Remove the victim away from contaminated area.
After inhalation	: Remove person to fresh air and keep comfortable for breathing.

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After skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
After eye contact	: Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.
After ingestion	: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Aspiration hazard. Go into open air and ventilate suspected area.

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

After inhalation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
After skin contact	: Repeated exposure may cause skin dryness or cracking.
After eye contact	: Causes eye irritation.
After ingestion	: Aspiration hazard. Ingestion may cause nausea, vomiting and diarrhea. Entering the lungs by ingestion or vomiting may cause severe lung damage.

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

Symptoms of respiratory complications (lung oedema) may occur several hours after.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Powder, alcohol-resistant foam, water spray, carbon dioxide.
Unsuitable extinguishing media	: High power water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: May form flammable/explosive vapour-air mixture.
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5.3. Advice for firefighters

Precautionary measures fire	: Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: Exercise caution when fighting any chemical fire. Do not enter fire area without proper protective equipment, including respiratory protection. Use a water spray to cool exposed surfaces and to protect fire-fighters.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources. Do not breathe gas/fumes/vapour/spray. Ensure adequate ventilation.
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6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up	: Absorb spillage to prevent material damage.

6.4. Reference to other sections

Information on personal protective equipment - see Chapter 8. Information on disposal - see Section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Obtain special instructions before use. Provide adequate ventilation to minimize dust and/or vapour concentrations. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge.
- Hygiene measures : Avoid all unnecessary exposure. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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 : Keep container tightly closed. Keep cool. Store in a dry place.
- Information on mixed storage : May react violently with oxidants.
- Storage area : Store according to local legislation.

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

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 : Lists that were valid at the time of compilation serve as the basis.

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Technical measures:

If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn.

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			
Type	Field of application	Characteristics	Standard
Safety goggles	Droplet	With side shields	EN 166

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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), Neoprene rubber (HNBR)	5 (> 240 minutes)	> 0,65		EN 374-3, EN 388, EN 374-2

8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid.
Colour	: Yellow.
Odour	: Characteristic.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Testing not relevant or not possible due to the nature of the product.
Flammability	: Not available
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: > 200 °C
Decomposition temperature	: Not available
pH	: 10 (9,5 – 10,5)
Viscosity, kinematic	: Not available
Solubility	: In water, material soluble.
Log Kow	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1000 kg/m ³ @ 15°C
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

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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

No information available.

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

Heat. Risk of explosion by shock, friction, fire or other sources of ignition. Do not breathe vapour/aerosol.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agent. Strong reducing agents.

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide.

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 (Based on available data, the classification criteria are not met.) (Based on available data, the classification criteria are not met.)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met.) (Based on available data, the classification criteria are not met.)
Additional information	: May cause gastrointestinal irritation, nausea, vomiting and diarrhoea

amines, tallow alkyl, ethoxylated (61791-26-2)

ATE CLP (oral)	500 mg/kg bodyweight
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1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)

ATE CLP (oral)	500 mg/kg bodyweight
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Skin corrosion/irritation	: May produce an allergic reaction (Based on available data, the classification criteria are not met.) pH: 10 (9,5 – 10,5)
Serious eye damage/irritation	: May cause irritation to the eyes (Based on available data, the classification criteria are not met.) pH: 10 (9,5 – 10,5)
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met.) (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.) (Based on available data, the classification criteria are not met.)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met.) (Based on available data, the classification criteria are not met.)

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Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met.) (Based on available data, the classification criteria are not met.)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met.) (Based on available data, the classification criteria are not met.)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met.) (Based on available data, the classification criteria are not met.)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met.) (Based on available data, the classification criteria are not met.)

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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11.2.2. Other information

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water	: Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

amines, tallow alkyl, ethoxylated (61791-26-2)

LC50 fish 1	0,13 mg/l
EC50 Daphnia 1	0,17 mg/l

12.2. Persistence and degradability

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Persistence and degradability	No data available.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	No data available.
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12.4. Mobility in soil

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Soil	In water, material soluble.
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12.5. Results of PBT and vPvB assessment

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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.
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12.7. Other adverse effects

Other adverse effects : The product contains ecotoxic substances, which can have harmful side effects for aquatic organisms, The product contains substances that can cause undesirable long-term side effects to the aquatic environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Comply with local regulations for disposal.
Product/Packaging disposal recommendations : Do not dispose of with domestic waste. Dispose of contents/container in accordance with licensed collector's sorting instructions.
Waste materials : Dispose of contents/container in accordance with licensed collector's sorting instructions and in accordance to local and regional legislation.
European List of Waste (LoW, EC 2000/532) : 07 02 15 - wastes from additives other than those mentioned in 07 02 14
HP Code : HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

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

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

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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 chemical safety assessment has been carried out for the substance or the mixture by the supplier

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Adverse health effects caused by endocrine disrupting properties	Added	
	Adverse effects on the environment caused by endocrine disrupting properties	Added	
	Revision date	Modified	
	Supersedes	Modified	

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
ED	Endocrine disrupting properties
EC-No.	European Community number
vPvB	Very Persistent and Very Bioaccumulative
SDS	Safety Data Sheet
TRGS	Technical Rules for Hazardous Substances
TLM	Median Tolerance Limit
ThOD	Theoretical oxygen demand (ThOD)

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Abbreviations and acronyms	
STP	Sewage treatment plant
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
PBT	Persistent Bioaccumulative Toxic
OEL	Occupational Exposure Limit
OECD	Organisation for Economic Co-operation and Development
NOEC	No-Observed Effect Concentration
NOAEC	No-Observed Adverse Effect Concentration
LOAEL	Lowest Observed Adverse Effect Level
LD50	Median lethal dose
N.O.S.	Not Otherwise Specified
NOAEL	No-Observed Adverse Effect Level
LC50	Median lethal concentration
IOELV	Indicative Occupational Exposure Limit Value
IATA	International Air Transport Association
IARC	International Agency for Research on Cancer
IMDG	International Maritime Dangerous Goods
EN	European Standard

Data sources	: Supplier's safety documents. ECHA (European Chemicals Agency).
Training advice	: Normal use of this product shall imply use in accordance with the instructions on the packaging.
Other information	: The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

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 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
EUH208	Contains: 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one. May produce an allergic reaction.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

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Full text of H- and EUH-statements

H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1

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.