



# Radiator Flush

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 19/08/2014

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version: 1.1

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

#### 1.1. Product identifier

Product form : Mixture  
 Product name : Radiator Flush  
 Product code : AD25000

#### 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

MPM International Oil Company  
 Cyclotronweg 1  
 2629 HN Delft - Nederland  
 T +31 (0)15 2514030 - F +31 (0)15 2514031  
[info@mpmoil.nl](mailto:info@mpmoil.nl) - [www.mpmoil.nl](http://www.mpmoil.nl)

#### 1.4. Emergency telephone number

Emergency number : +31 (0)15 2514030 (08.00 - 17.00)

Country	Official advisory body	Address	Emergency number
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	: +353 1 8379964
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Centre Hospitalier Universitaire de Constantine	Avonley Road SE14 5ER London	0870 243 2241

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Precautionary statements (CLP) : P102 - Keep out of reach of children  
 P280 - Wear eye protection, face protection, protective clothing, protective gloves  
 P501 - Dispose of contents/container to officially registered waste disposal company

EUH-statements : EUH208 - Contains 1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one(2634-33-5). May  
 produce an allergic reaction  
 EUH210 - Safety data sheet available on request

Extra phrases : cationic surfactants <5% benzisothiazolinone

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
amines, tallow alkyl, ethoxylated	(CAS No) 61791-26-2 (EC no) 500-153-8 (NLP)	< 2,5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400
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	< 0,05	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400
2-Ethylhexanol	(CAS No) 104-76-7 (EC no) 203-234-3 (REACH-no) 01-2119487289-20	< 0,01	Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

### 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	(C >= 0,05) Skin Sens. 1, H317

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

General	: If you feel unwell, seek medical advice (show the label where possible).
After inhalation	: Call a POISON CENTER or doctor/physician if you feel unwell. Remove to fresh air and keep at rest in a position comfortable for breathing.
After skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash contaminated clothing before reuse.
After eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persist.
After ingestion	: Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

After skin contact	: May cause sensitization by skin contact.
After ingestion	: Ingestion may cause nausea, vomiting and diarrhea.

### 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	: hazy water, powder, foam and CO2.
Unsuitable extinguishing media	: High power water jet.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: Exercise caution when fighting any chemical fire. Use water spray/stream to protect personnel and to cool endangered containers.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment	: Wear suitable protective clothing and gloves.
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#### 6.1.2. For emergency responders

Protective equipment	: Wear suitable protective clothing and gloves.
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### 6.2. Environmental precautions

Do not release in groundwater, surfacewater or sewerage. Notify authorities if liquid enters sewers or public waters.

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### 6.3. Methods and material for containment and cleaning up

For containment	: Prevent spreading over great surfaces (e.g. by damming or installing oil booms).
Methods for cleaning up	: Clean with the help of detergents. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Other information	: Can be slippery on hard, smooth walking area.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	: Avoid all unnecessary exposure. Both local exhaust and general room ventilation are usually required.
Handling temperature	: < 40 °C
Hygiene measures	: When using do not eat, drink or smoke. Wash hands before breaks and at the end of work.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage temperature	: < 40 °C
Storage area	: Keep container tightly closed in a cool, well-ventilated place.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Additional information	: Based on ACGIH TLV, a concentration of 5 mg/m <sup>3</sup> oilspray (TWA, 8 hour workday) is recommended.
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### 8.2. Exposure controls

Personal protective equipment	: Safety glasses. Gloves.
Materials for protective clothing	: Type of chemical protective gloves to choose depends on the concentration and quantity of dangerous substances as well as on work place specifications. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Suitable material: nitrile rubber
Hand protection	: Wear suitable gloves resistant to chemical penetration
Eye protection	: Safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation



Other information	: The usual precautions for handling chemicals should be observed.
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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless. Yellow.
Odour	: No data available
Odour threshold	: No data available
pH	: 9,5 - 10
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: > 200 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available

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Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1000 g/l @ 15°C
Solubility	: Soluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

None under normal conditions.

### 10.2. Chemical stability

No additional information available

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Strong oxidizing agent. Acids and bases.

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified  
May cause gastrointestinal irritation, nausea, vomiting and diarrhoea

2-Ethylhexanol (104-76-7)	
LD50 oral rat	2049 mg/kg
LD50 dermal rat	> 3000 mg/kg OECD 402
LC50 inhalation rat (mg/l)	2,7 mg/l/4h

Skin corrosion/irritation : May produce an allergic reaction  
pH: 9,5 - 10

Serious eye damage/irritation : May cause irritation to the eyes  
pH: 9,5 - 10

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

2-Ethylhexanol (104-76-7)	
NOAEL (chronic, oral, animal/male, 2 years)	750 mg/kg bodyweight
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified

2-Ethylhexanol (104-76-7)	
NOAEL (oral, rat, 90 days)	≈ mg/kg bodyweight/day
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

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<b>amines, tallow alkyl, ethoxylated (61791-26-2)</b>	
LC50 fish 1	0,13 mg/l
EC50 Daphnia 1	0,17 mg/l

<b>2-Ethylhexanol (104-76-7)</b>	
LC50 fish 1	17,1 mg/l @96h <i>Leuciscus idus</i>
EC50 Daphnia 1	39 mg/l @48h <i>Daphnia magna</i>
EC50 other aquatic organisms 1	11,5 mg/l @72h Algae <i>Scenedesmus subspicatus</i>

### 12.2. Persistence and degradability

<b>2-Ethylhexanol (104-76-7)</b>	
Persistence and degradability	Readily biodegradable.
Biodegradation	> 95 % @5d

### 12.3. Bioaccumulative potential

<b>2-Ethylhexanol (104-76-7)</b>	
Bioconcentration factor (BCF REACH)	25,33
Log Kow	2,9

### 12.4. Mobility in soil

<b>Radiator Flush</b>	
Soil	In water, material soluble.

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste) : Waste disposal according to official state regulations.  
Waste disposal recommendations : Remove to an authorized waste treatment plant.

## SECTION 14: Transport information

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

### 14.1. UN number

Not regulated for transport

### 14.2. UN proper shipping name

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

### 14.3. Transport hazard class(es)

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

### **IMDG**

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

### 14.4. Packing group

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

### 14.5. Environmental hazards

Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

No data available

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### - Transport by sea

No data available

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the substance or the mixture by the supplier

## SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Sensitisation — Skin, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation
H400	Very toxic to aquatic life.
EUH208	Contains . May produce an allergic reaction.
EUH210	Safety data sheet available on request.

SDS MPM REACH

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*