

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

1.1 Product identifier

Product name : Radiator Paint
Product description : Paint
Product type : Liquid.
UFI : UVF1-E040-Y00N-2K89

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	
Consumer use Industrial use Professional use	
Uses advised against	Reason
None identified.	-

1.3 Details of the supplier of the safety data sheet

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Tor Coatings Limited
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Fax no.: +44 (0) 191 4920125
enquiries@tor-coatings.com

e-mail address of person responsible for this SDS : rpmeurohas@rustoleum.eu

1.4 Emergency telephone number

National advisory body/Poison Centre

Supplier

Telephone number United Kingdom: : +44 870 8200418 / +44 2038073798
Great Britain
Hours of operation : 24 / 7

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK CLP/GHS

Skin Sens. 1, H317
Aquatic Chronic 3, H412

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Radiator Paint

SECTION 2: Hazards identification

Hazard pictograms	: 
Signal word	: Warning
Hazard statements	: H317 - May cause an allergic skin reaction. H412 - Harmful to aquatic life with long lasting effects.
<u>Precautionary statements</u>	
General	: P103 - Read carefully and follow all instructions. P102 - Keep out of reach of children. P101 - If medical advice is needed, have product container or label at hand.
Prevention	: P280 - Wear protective gloves.
Response	: Not applicable.
Storage	: Not applicable.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	: 1,2-benzisothiazol-3(2H)-one 2-octyl-2H-isothiazol-3-one
Supplemental label elements	: EUH211 - Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
Supplemental label elements : Detergents - Regulation (EC) No 907/2006	: Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Not applicable.
<u>Special packaging requirements</u>	
Containers to be fitted with child-resistant fastenings	: Not applicable.
Tactile warning of danger	: Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Other hazards which do not result in classification	: None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

: Mixture

Product/ingredient name	Identifiers	%	Classification	Type
2-octyl-2H-isothiazol-3-one	EC: 247-761-7 CAS: 26530-20-1 Index: 613-112-00-5	≤0,3	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 2, H330	[1]
1,2-benzisothiazol-3(2H)-one	REACH #: 01-2120761540-60 EC: 220-120-9 CAS: 2634-33-5 Index: 613-088-00-6	<0,036	Acute Tox. 4, H302 Acute Tox. 2, H330 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317	[1]

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2/17

SECTION 3: Composition/information on ingredients

2-octyl-2H-isothiazol-3-one	REACH #: 17-2119390467-28 EC: 247-761-7 CAS: 26530-20-1 Index: 613-112-00-5	≤0,013	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 2, H330 Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100) EUH071	[1]
2,2'-dithiobis[N-methylbenzamide]	EC: 219-768-5 CAS: 2527-58-4	≤0,022	Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 2, H411	[1]
pyrithione zinc	REACH #: 01-2119511196-46 EC: 236-671-3 CAS: 13463-41-7 Index: 613-333-00-7	<0,01	Acute Tox. 3, H301 Acute Tox. 2, H310 Acute Tox. 2, H330 Eye Dam. 1, H318 Repr. 1B, H360D STOT RE 1, H372 Aquatic Acute 1, H400 (M=1000) Aquatic Chronic 1, H410 (M=10)	[1]
terbutryn	EC: 212-950-5 CAS: 886-50-0	≤0,011	Acute Tox. 4, H302 Skin Sens. 1B, H317 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100) See Section 16 for the full text of the H statements declared above.	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

This mixture contains ≥ 1% of titanium dioxide. The Annex VI classification of titanium dioxide does not apply to this mixture according to Note 10.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures**4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of

SECTION 4: First aid measures

- decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed**Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

5.3 Advice for firefighters

SECTION 5: Firefighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to British standard BS EN 469 will provide a basic level of protection for chemical incidents.
- Additional information** : No unusual hazard if involved in a fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

6.4 Reference to other sections

- : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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SECTION 7: Handling and storage

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store between the following temperatures: 4 to 26°C (39,2 to 78,8°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations : Not available.
Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
1,2-benzisothiazol-3(2H)-one	DNEL	Long term Inhalation	6,81 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	1,2 mg/m³	General population	Systemic
	DNEL	Long term Dermal	0,966 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	0,345 mg/kg bw/day	General population	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
1,2-benzisothiazol-3(2H)-one	Fresh water	0,00403 mg/l	-
	Marine water	0,000403 mg/l	-
	Sewage Treatment Plant	1,03 mg/l	-
	Fresh water sediment	0,0499 mg/kg dwt	-
	Marine water sediment	0,00499 mg/kg dwt	-
	Soil	3 mg/kg dwt	-
pyrithione zinc	Fresh water	0,00009 mg/l	-
	Marine water	0,00009 mg/l	-

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	Sewage Treatment Plant	0,01 mg/l	-
	Marine water sediment	0,0095 mg/kg	-
	Fresh water sediment	0,0095 mg/kg	-

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Use eye protection according to EN 166. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): nitrile rubber (0.5mm).

The recommendation for the type or types of glove to use when handling this product is based on information from the following source: EN374. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Wear overalls or long sleeved shirt. (EN 467)

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: In case of insufficient ventilation, wear suitable respiratory equipment. organic vapour filter (Type A) (EN 140)

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Physical state	: Liquid. [Viscous liquid.]
Colour	: Various
Odour	: Not available.
Odour threshold	: Not available.
Melting point/freezing point	: 0°C [Literature]
Initial boiling point and boiling range	: Not relevant due to nature of the product.
Flammability (solid, gas)	: Non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and shocks and mechanical impacts. Nonflammable, but will burn on prolonged exposure to flame or high temperature.
Lower and upper explosion limit	: Not available.
Flash point	: Not relevant due to nature of the product.
Auto-ignition temperature	: Not relevant due to nature of the product.
Decomposition temperature	: Not available.
pH	: 8 [Conc. (% w/w): 100%] [OECD 122]
pH : Justification	: Not available.
Viscosity	: Dynamic (room temperature): 900 to 1100 mPa·s [ICI Rotothinner] Kinematic (room temperature): 700 to 850 mm ² /s [calculated.] Kinematic (40°C): Not available.

Solubility(ies)

:

Media	Result
cold water	Soluble
hot water	Soluble
methanol	Very slightly soluble
acetone	Very slightly soluble

Solubility in water	: Not available.
Partition coefficient: n-octanol/ water	: Not applicable.
Vapour pressure	: 2,3 kPa (17,25 mm Hg) [Literature]
Evaporation rate	: <1 (butyl acetate = 1) [Literature]
Relative density	: Not available.
Density	: 1,2 to 1,3 g/cm ³ [20°C (68°F)] [DIN 53217]
Vapour density	: >1 [Air = 1]
Explosive properties	: Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat. No unusual hazard if involved in a fire.
Oxidising properties	: Not available.
Particle characteristics	
Median particle size	: Not applicable.

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SECTION 10: Stability and reactivity

- 10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability : The product is stable.
- 10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid : No specific data.
- 10.5 Incompatible materials : No specific data.
- 10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-octyl-2H-isothiazol-3-one	LC50 Inhalation Dusts and mists	Rat	0,27 mg/l	4 hours
	LD50 Dermal	Rabbit	311 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	248 mg/kg	-
1,2-benzisothiazol-3(2H)-one	LC50 Inhalation Dusts and mists	Rat	0,11 mg/l	4 hours
	LC50 Inhalation Dusts and mists	Rat - Male, Female	0,5 mg/l	4 hours
	LD50 Oral	Rat - Male	490 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	0,27 mg/l	4 hours
2-octyl-2H-isothiazol-3-one	LD50 Oral	Rat	248 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	140 mg/m³	4 hours
	LD50 Dermal	Rabbit	100 mg/kg	-
	LD50 Oral	Rat	177 mg/kg	-
pyrithione zinc	LC50 Inhalation Dusts and mists	Rat	>2200 mg/l	4 hours
	LD50 Dermal	Rabbit	>10200 mg/kg	-
	LD50 Oral	Rat	2045 mg/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Radiator Paint	115740,7	287963,0	N/A	N/A	250
2-octyl-2H-isothiazol-3-one	125	311	N/A	N/A	0,27
1,2-benzisothiazol-3(2H)-one	450	N/A	N/A	N/A	0,21
2-octyl-2H-isothiazol-3-one	125	311	N/A	N/A	0,27
pyrithione zinc	221	100	N/A	N/A	0,14
terbutryn	500	N/A	N/A	N/A	N/A

Irritation/Corrosion

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SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-octyl-2H-isothiazol-3-one terbutryn	Eyes - Severe irritant	Rabbit	-	-	-
	Eyes - Moderate irritant	Rabbit	-	76 milligrams	-
	Skin - Mild irritant	Rabbit	-	380 milligrams	-

- Skin** : Based on available data, the classification criteria are not met.
- Eyes** : Based on available data, the classification criteria are not met.
- Respiratory** : Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Product/ingredient name	Route of exposure	Species	Result
1,2-benzisothiazol-3(2H)-one	skin	Guinea pig	Sensitising
2-octyl-2H-isothiazol-3-one	skin	Rat	Sensitising

- Skin** : May cause an allergic skin reaction.
- Respiratory** : Based on available data, the classification criteria are not met.

Mutagenicity

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Carcinogenicity

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Reproductive toxicity

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Teratogenicity

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
pyrithione zinc	Category 1	-	-

Aspiration hazard

Not available.

- Information on likely routes of exposure** : Routes of entry anticipated: Oral, Inhalation, Eyes.
Routes of entry not anticipated: Dermal.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

SECTION 11: Toxicological information**Short term exposure****Potential immediate effects** : Not available.**Potential delayed effects** : Not available.**Long term exposure****Potential immediate effects** : Not available.**Potential delayed effects** : Not available.**Potential chronic health effects**

Not available.

Conclusion/Summary : Based on available data, the classification criteria are not met.**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.**Carcinogenicity** : No known significant effects or critical hazards.**Mutagenicity** : No known significant effects or critical hazards.**Reproductive toxicity** : No known significant effects or critical hazards.**Other information** : Not available.**SECTION 12: Ecological information****12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
1,2-benzisothiazol-3(2H)-one	Acute EC50 0,11 mg/l	Algae - Algae	72 hours
	Acute EC50 0,067 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
	Acute EC50 0,9893 mg/l Marine water	Crustaceans - <i>Opossum Shrimp</i>	96 hours
	Acute EC50 2,94 mg/l Fresh water	Daphnia spec. - Daphnia spec.	48 hours
	Acute LC50 2,18 mg/l Fresh water	Fish - Rainbow trout (oncorhynchus mykiss)	96 hours
	Acute LC50 8 to 13 mg/l	Fish - <i>Alburnus alburnus</i>	96 hours
	Acute LC50 1,6 to 2,8 ppm Fresh water	Fish - Rainbow trout, donaldson trout - <i>Oncorhynchus mykiss</i>	96 hours
	Chronic NOEC 90 mg/l	Aquatic plants - <i>Phaseolus vulgaris</i>	20 days
	Chronic NOEC 1,2 mg/l	Daphnia spec. - Daphnia spec.	21 days
	Chronic NOEC 0,21 mg/l	Fish - Rainbow trout (oncorhynchus mykiss)	28 days
2-octyl-2H-isothiazol-3-one	Chronic NOEL 0,0403 mg/l	Algae - Algae	72 hours
	Acute EC50 0,32 to 0,834 mg/l Fresh water	Daphnia spec. - Water flea - <i>Daphnia magna</i>	48 hours
	Acute IC50 0,084 mg/l	Algae - <i>Scenedesmus subspicatus</i>	72 hours
	Acute LC50 0,0655 to 0,104 mg/l Fresh water	Fish - Rainbow trout (oncorhynchus mykiss)	96 hours
	Acute LC50 0,14 to 0,202 mg/l Fresh water	Fish - Fathead minnow - <i>Pimephales promelas</i>	96 hours
	Acute EC50 0,401 mg/l	Algae - Algae	72 hours
2,2'-dithiobis[N-methylbenzamide]	Acute EC50 0,0289 mg/l	Daphnia spec. - Daphnia spec.	48 hours
	Acute LC50 0,8567 mg/l	Fish - Rainbow trout (oncorhynchus mykiss) - <i>Oncorhynchus mykiss</i>	96 hours
		Algae - Diatom - <i>Thalassiosira pseudonana</i>	96 hours
pyrithione zinc	Acute EC50 0,51 µg/l Marine water	Crustaceans - Water flea - <i>Chydorus sphaericus</i>	48 hours
	Acute EC50 80 µg/l Fresh water	Crustaceans - Ostracod -	48 hours
	Acute EC50 38 µg/l Fresh water		

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terbutryn	Acute EC50 8,25 ppb Fresh water	<i>Ilyocypris dentifera</i>	48 hours
	Acute EC50 61 µg/l Fresh water	Daphnia spec. - Water flea - <i>Daphnia magna</i>	48 hours
	Acute LC50 2,68 ppb Fresh water	Daphnia spec. - Water flea - <i>Daphnia magna</i> - Nauplii	96 hours
	Chronic EC10 0,36 µg/l Marine water	Fish - Fathead minnow - <i>Pimephales promelas</i>	96 hours
	Chronic NOEC 2,7 ppb Marine water	Algae - Diatom - <i>Thalassiosira pseudonana</i>	96 hours
	Acute EC50 0,1 µg/l Fresh water	Daphnia spec. - Water flea - <i>Daphnia magna</i>	21 days
	Acute EC50 2 µg/l Fresh water	Algae - Diatom - <i>Fragilaria capucina ssp. rumpens</i>	96 hours
	Acute EC50 2,66 ppm Fresh water	Algae - Green algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
	Acute IC50 0,0055 mg/l	Daphnia spec. - Water flea - <i>Daphnia magna</i>	48 hours
	Acute LC50 579,3 mg/l Fresh water	Algae	72 hours
		Crustaceans - Signal crayfish - <i>Pacifastacus leniusculus</i> - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 1,8 to 1400 µg/l Fresh water	Fish - Crucian carp - <i>Carassius carassius</i>	96 hours

Acute LC50 0,82 ppm Fresh water	Fish - Rainbow trout,donaldson trout - <i>Oncorhynchus mykiss</i>	96 hours
Chronic EC10 0,015 µg/l Fresh water	Algae - Diatom - <i>Fragilaria capucina ssp. rumpens</i>	96 hours

Conclusion/Summary : Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
1,2-benzisothiazol-3(2H)-one 2-octyl-2H-isothiazol-3-one	OECD 303A	>90 % - Readily - 1 days	-	-
	OECD 303A	>80 % - Readily - 4 days	-	-
	OECD 309	90 % - Readily - 4 days	0,01 to 0,1 mg/l	-
	OECD 309	50 % - Readily - 2 days	0,01 to 0,1 mg/l	-
2,2'-dithiobis[N-methylbenzamide]	-	<1 % - 28 days	-	-

Conclusion/Summary : This product has not been tested for biodegradation.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Radiator Paint	-	-	Inherent
2-octyl-2H-isothiazol-3-one	-	-	Readily
1,2-benzisothiazol-3(2H)-one	-	-	Readily
2-octyl-2H-isothiazol-3-one	Fresh water 2 days, 20°C	-	Readily
2,2'-dithiobis[N-methylbenzamide]	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2-octyl-2H-isothiazol-3-one	2,9	-	Low
1,2-benzisothiazol-3(2H)-one	0,64	-	Low
2-octyl-2H-isothiazol-3-one	2,9	-	Low
pyrithione zinc	0,9	11	Low
terbutryn	3,74	-	Low

12.4 Mobility in soil

Radiator Paint

SECTION 12: Ecological information

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Nonvolatile liquid.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance.

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

14.6 Special precautions for user : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments : Not available.

Radiator Paint

SECTION 15: Regulatory information

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

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed above the relevant limit.

Substances of very high concern

None of the components are listed above the relevant limit.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
Radiator Paint	≥90	3

Labelling : Not applicable.

Other EU regulations

VOC : The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

VOC for Ready-for-Use Mixture : IIA/d. Interior/exterior trim and cladding paints for wood and metal. EU limit value for this product : 130g/l (2010.)
This product contains a maximum of 1 g/l VOC.

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Radiator Paint

SECTION 15: Regulatory information

[Stockholm Convention on Persistent Organic Pollutants](#)
Not listed.

[Rotterdam Convention on Prior Informed Consent \(PIC\)](#)
Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)
Not listed.

CN code : 3209 10 00 00

Inventory list	
Australia	: At least one component is not listed.
Canada	: Not determined.
China	: All components are listed or exempted.
Eurasian Economic Union	: Russian Federation inventory : Not determined.
Japan	: Japan inventory (CSCL) : At least one component is not listed. Japan inventory (ISHL) : Not determined.
New Zealand	: All components are listed or exempted.
Philippines	: At least one component is not listed.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: Not determined.
15.2 Chemical safety assessment	: This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

 Indicates information that has changed from previously issued version.	
Abbreviations and acronyms	: ATE = Acute Toxicity Estimate GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = GB CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number SGG = Segregation Group vPvB = Very Persistent and Very Bioaccumulative

[Procedure used to derive the classification](#)

Classification	Justification
Skin Sens. 1, H317 Aquatic Chronic 3, H412	Calculation method Calculation method

[Full text of abbreviated H statements](#)

Radiator Paint

SECTION 16: Other information

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
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.
EUH071	Corrosive to the respiratory tract.

Full text of classifications

Acute Tox. 2	ACUTE TOXICITY - Category 2
Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Skin Corr. 1	SKIN CORROSION/IRRITATION - Category 1
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1A	SKIN SENSITISATION - Category 1A
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1

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Version : 2.01

Notice to reader

IMPORTANT NOTE: The information in this Safety Data Sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The information contained in this data sheet (as may be amended from time to time) is not intended to be exhaustive and is presented in good faith and believed to be correct as of the date on which it is prepared. It is the user's responsibility to verify that this data sheet is current prior to using the product to which it relates. Persons using the information must make their own determinations as to the suitability of the relevant product for their purposes prior to use. Where those purposes are other than as specifically recommended in this safety data sheet, then the user uses the product at their own risk.

MANUFACTURER'S DISCLAIMER: the conditions, methods and factors affecting the handling, storage, application, use and disposal of the product are not under the control and knowledge of the manufacturer. Therefore the manufacturer does not assume responsibility for any adverse events which may occur in the handling, storage, application, use, misuse or disposal of the product and, so far as permitted by applicable law, the manufacturer expressly disclaims liability for any and all loss, damages and/or expenses arising out of or in any way connected to the storage, handling, use or disposal of the product. Safe handling, storage, use and disposal are the responsibility of the users. Users must comply with all applicable health and safety laws.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein,

Radiator Paint

SECTION 16: Other information

we cannot guarantee that these are the only hazards that exist.