



SAFETY DATA SHEET

Murfill Waterproofing Coating

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

1.1 Product identifier

Product name : Murfill Waterproofing Coating
Product description : Paint
Product type : Liquid.
UFI : PUE1-A0U8-900Q-4G8H

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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 Martin Mathys NV, Kolenbergstraat 23, B-3545 Zelem, Belgium
 Telephone no.: +32 (0) 13 460 200
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Tor Coatings Limited
 Unit 21, White Rose Way, Follingsby Park, Gateshead, Tyne & Wear, NE10 8YX United Kingdom
 Telephone no.: +44 (0) 191 4106611
 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 : +44 870 8200418 / +44 2038073798
Hours of operation : 24 / 7

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Skin Sens. 1, H317

Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 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.

SECTION 2: Hazards identification

2.2 Label elements

Hazard pictograms

:



Signal word

: Warning

Hazard statements

: May cause an allergic skin reaction.
Harmful to aquatic life with long lasting effects.

Precautionary statements

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

: Poly[oxy(methyl-1,2-ethanediyl)], α -(methylphenyl)- ω -hydroxy-Octene, hydroformylation products, high-boiling 1,2-benzisothiazol-3(2H)-one 2-octyl-2H-isothiazol-3-one reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

Supplemental label elements

: 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.

Special packaging requirements

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

United Kingdom: Great Britain

| Product/ingredient name | Identifiers | % | Regulation (EC) No. 1272/2008 [CLP] | Type |
|---|---|------|---|---------|
| barium diboron tetraoxide | REACH #: 01-2119983530-36 EC: 237-222-4 CAS: 13701-59-2 | ≤3 | Acute Tox. 4, H302 Repr. 1B, H360F | [1] [2] |
| Poly[oxy(methyl-1,2-ethanediyl)], α-(methylphenyl)-ω-hydroxy- | REACH #: 02-2119549982-25 EC: 618-605-9 CAS: 9064-13-5 | ≤1 | Skin Sens. 1B, H317 | [1] |
| Octene, hydroformylation products, high-boiling | REACH #: 01-2119486463-31 EC: 271-237-7 CAS: 68526-89-6 | ≤0,3 | Skin Sens. 1B, H317 | [1] |
| 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 | ≤0,1 | Acute Tox. 4, H302 Acute Tox. 2, H330 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411 | [1] |
| 2-octyl-2H-isothiazol-3-one | REACH #: 17-2119390467-28 EC: 247-761-7 CAS: 26530-20-1 Index: 613-112-00-5 | ≤0,1 | 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) | [1] |
| pyrithione zinc | REACH #: 01-2119511196-46 EC: 236-671-3 CAS: 13463-41-7 | ≤0,1 | Acute Tox. 3, H301 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 | ≤0,1 | Acute Tox. 4, H302 Skin Sens. 1B, H317 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100) | [1] |
| reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) | REACH #: 01-2120764691-48 EC: 611-341-5 CAS: 55965-84-9 Index: 613-167-00-5 | ≤0,1 | Acute Tox. 3, H301 Acute Tox. 2, H310 Acute Tox. 2, H330 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 | [1] |

SECTION 3: Composition/information on ingredients

| | | | | |
|--|--|--|---|--|
| | | | 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. | |
|--|--|--|---|--|

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy

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

| | |
|---|-----------------|
| SCL (Specific Concentration Limits) | |
| 1,2-benzisothiazol-3(2H)-one | H317 = 0.05 % |
| reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) | H317 = 0.0015 % |
| 2-octyl-2H-isothiazol-3-one | H317 = 0.0015 % |

| | |
|---------------------------------------|--|
| ATE (acute toxicity estimates) | |
| 2-octyl-2H-isothiazol-3-one | H330: ATE= 0,27 mg/L (dusts/mists) H311: ATE= 311 mg/kg H301: ATE= 125 mg/kg |

| | |
|---|----------------------|
| Nanoform | |
| Particle characteristics | Particle Size |
| This product does not contains nanomaterials. | Not applicable. |

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.

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.

SECTION 4: First aid measures

- 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.
- 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** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- 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.

SECTION 5: Firefighting measures

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
metal oxide/oxides

5.3 Advice for firefighters

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 European standard 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. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

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.

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.
- 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

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

United Kingdom: Great Britain

| Product/ingredient name | Exposure limit values |
|---------------------------|--|
| barium diboron tetraoxide | EH40/2005 WELs (United Kingdom (UK), 12/2011). Notes: as Ba TWA: 0,5 mg/m ³ , (as Ba) 8 hours. |

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard 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

SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|---|------|----------------------|-------------------------|--------------------|----------|
| Octene, hydroformylation products, high-boiling | DNEL | Long term Oral | 25 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 50 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 87 mg/m ³ | General population | Systemic |
| | DNEL | Long term Dermal | 116,7 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 411,4 mg/m ³ | Workers | Systemic |

PNECs

No PNECs available

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.

SECTION 8: Exposure controls/personal protection

- 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** : Beige. Black. Blue. Brown. Grey. Green. Orange. Pink Purple. Red. White. Yellow. [Light]
- Odour** : Faint odour.
- Odour threshold** : Not available.
- Melting point/freezing point** : 0°C [Literature]
- Initial boiling point and boiling range** : >100°C (>212°F) [Literature]
- 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.
- Upper/lower flammability or explosive limits** : Not available.
- Flash point** : Closed cup: >100°C (>212°F) [Literature] [Product does not sustain combustion.]
- Auto-ignition temperature** : Not relevant due to nature of the product.
- Decomposition temperature** : Not available.
- pH** : 8 to 9 [OECD 122]
- pH : Justification** : Not available.
- Viscosity** : Dynamic: 18000 to 26000 mPa·s [ISO EN BS DIN 3219]
- Solubility(ies)** : Soluble in the following materials: cold water and hot water. Very slightly soluble in the following materials: methanol and acetone.
- 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)
- Relative density** : 1,32 to 1,37 [DIN 53217]
- Density** : 1,32 to 1,37 g/cm³ [20°C (68°F)] [DIN 53217]
- Vapour density** : >1 [Air = 1]

SECTION 9: Physical and chemical properties

- 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.

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 hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---------------------------------|--------------------|-----------------------|----------|
| barium diboron tetraoxide | LC50 Inhalation Dusts and mists | Rat | 3,54 mg/l | 4 hours |
| | LD50 Oral | Rat - Female | 530 mg/kg | - |
| | LD50 Oral | Rat - Male | 850 mg/kg | - |
| Poly[oxy(methyl-1,2-ethanediyl)], α -(methylphenyl)- ω -hydroxy- | LD50 Oral | Rat | 6000 mg/kg | - |
| 2-octyl-2H-isothiazol-3-one | LD50 Oral | Rat | >2000 mg/kg | - |
| | 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 |
| 2-octyl-2H-isothiazol-3-one | LD50 Oral | Rat - Male | 490 mg/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | 0,27 mg/l | 4 hours |
| | LD50 Oral | Rat | 248 mg/kg | - |
| pyrithione zinc | LC50 Inhalation Dusts and mists | Rat | 140 mg/m ³ | 4 hours |
| | LD50 Dermal | Rabbit | 100 mg/kg | - |
| | LD50 Oral | Rat | 177 mg/kg | - |
| terbutryn | LC50 Inhalation Dusts and mists | Rat | >2200 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >10200 mg/kg | - |
| | LD50 Oral | Rat | 2045 mg/kg | - |
| reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3: | LC50 Inhalation Dusts and mists | Rat - Male, Female | 0,171 mg/l | 4 hours |

SECTION 11: Toxicological information

| | | | | |
|----|--------------------------|---------------|------------------------|--------|
| 1) | LD50 Dermal LD50 Oral | Rabbit Rat | 92,4 mg/kg 64 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) |
|---|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| barium diboron tetraoxide | 530 | N/A | N/A | N/A | N/A |
| Poly[oxy(methyl-1,2-ethanediyl)], α -(methylphenyl)- ω -hydroxy- | 6000 | N/A | N/A | N/A | N/A |
| 2-octyl-2H-isothiazol-3-one | 125 | 311 | N/A | N/A | 0,27 |
| 1,2-benzisothiazol-3(2H)-one | 490 | N/A | N/A | 0,5 | N/A |
| 2-octyl-2H-isothiazol-3-one | 125 | 311 | N/A | N/A | 0,27 |
| pyrithione zinc | 221 | N/A | N/A | N/A | 0,14 |
| terbutryn | 500 | N/A | N/A | N/A | N/A |
| reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) | 64 | 92,4 | N/A | N/A | 0,171 |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|--------------------------|---------|-------|----------------|--------------|
| 2-octyl-2H-isothiazol-3-one | Eyes - Severe irritant | Rabbit | - | - | - |
| terbutryn | Eyes - Moderate irritant | Rabbit | - | 76 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 380 milligrams | - |
| reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) | Skin - Severe irritant | Human | - | 0.01 Percent | - |
| | Skin - Severe irritant | Rabbit | - | - | 1 to 4 hours |
| | Eyes - Severe irritant | Rabbit | - | - | - |

Conclusion/Summary

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.

Sensitisation

| Product/ingredient name | Route of exposure | Species | Result |
|---|-------------------|------------|-------------|
| Poly[oxy(methyl-1,2-ethanediyl)], α -(methylphenyl)- ω -hydroxy- | skin | Mouse | Sensitising |
| 1,2-benzisothiazol-3(2H)-one | skin | Guinea pig | Sensitising |
| 2-octyl-2H-isothiazol-3-one | skin | Rat | Sensitising |
| reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) | skin | Guinea pig | Sensitising |

Conclusion/Summary

Skin : May cause an allergic skin reaction.

Respiratory : Based on available data, the classification criteria are not met.

SECTION 11: Toxicological information

Mutagenicity

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

Carcinogenicity

It has been observed that the carcinogenic hazard of this product arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.

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.
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

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

| Product/ingredient name | Result | Species | Dose | Exposure |
|---------------------------|------------------------|------------|----------|--------------------------|
| barium diboron tetraoxide | Sub-chronic NOAEL Oral | Rat - Male | 70 mg/kg | 91 days; 7 days per week |

SECTION 11: Toxicological information

| | |
|--|---|
| 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. |
| Endocrine disrupting properties | : Not available. |
| Other information | : Not available. |

SECTION 12: Ecological information

12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|------------------------------|---|--|----------|
| barium diboron tetraoxide | Acute EC50 20,3 to 22,4 ppm Fresh water | Daphnia spec. - Daphnia magna - Larvae | 48 hours |
| | Acute LC50 151 to 299 ppm Fresh water | Fish - Lepomis macrochirus | 96 hours |
| | Acute LC50 145 µg/l Fresh water | Fish - Rasbora heteromorpha | 96 hours |
| | Acute LC50 62 to 84,5 ppm Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| | Acute EC50 0,067 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Acute EC50 0,11 mg/l | Algae | 72 hours |
| | Acute EC50 0,9893 mg/l Marine water | Crustaceans - Opossum Shrimp | 96 hours |
| | Acute EC50 2,94 mg/l Fresh water | Daphnia spec. | 48 hours |
| | Acute LC50 8 to 13 mg/l | Fish - Alburnus alburnus | 96 hours |
| | Acute LC50 2,18 mg/l Fresh water | Fish | 96 hours |
| 1,2-benzisothiazol-3(2H)-one | Acute LC50 1,6 to 2,8 ppm Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| | Chronic NOEC 90 mg/l | Aquatic plants - Phaseolus vulgaris | 20 days |
| | Chronic NOEC 1,2 mg/l | Daphnia spec. | 21 days |
| | Chronic NOEC 0,21 mg/l | Fish | 28 days |
| | Chronic NOEL 0,0403 mg/l | Algae | 72 hours |
| | Acute EC50 0,32 to 0,834 mg/l Fresh water | Daphnia spec. - Daphnia magna | 48 hours |
| | Acute IC50 0,084 mg/l | Algae | 72 hours |
| | Acute LC50 0,14 to 0,202 mg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute LC50 0,0655 to 0,104 mg/l Fresh water | Fish | 96 hours |
| | Acute EC50 0,51 µg/l Marine water | Algae - Thalassiosira pseudonana | 96 hours |
| pyrithione zinc | Acute EC50 38 µg/l Fresh water | Crustaceans - Ilyocypris dentifera | 48 hours |
| | Acute EC50 80 µg/l Fresh water | Crustaceans - Chydorus sphaericus | 48 hours |
| | Acute EC50 8,25 ppb Fresh water | Daphnia spec. - Daphnia magna | 48 hours |
| | Acute EC50 61 µg/l Fresh water | Daphnia spec. - Daphnia magna - Nauplii | 48 hours |
| | Acute LC50 2,68 ppb Fresh water | Fish - Pimephales promelas | 96 hours |
| | Chronic EC10 0,36 µg/l Marine water | Algae - Thalassiosira pseudonana | 96 hours |
| | Chronic NOEC 2,7 ppb Marine water | Daphnia spec. - Daphnia magna | 21 days |
| | Acute EC50 0,1 µg/l Fresh water | Algae - Fragilaria capucina ssp. rumpens | 96 hours |
| | Acute EC50 2 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | | | |
| terbutryn | | | |

SECTION 12: Ecological information

| | | | |
|---|--|--|--|
| reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) | Acute EC50 2,66 ppm Fresh water Acute IC50 0,0055 mg/l Acute LC50 579,3 mg/l Fresh water | Daphnia spec. - Daphnia magna Algae Crustaceans - Pacifastacus leniusculus - Juvenile (Fledgling, Hatchling, Weanling) | 48 hours 72 hours 48 hours |
| | Acute LC50 1,8 to 1400 µg/l Fresh water Acute LC50 0,82 ppm Fresh water Chronic EC10 0,015 µg/l Fresh water | Fish - Carassius carassius Fish - Oncorhynchus mykiss Algae - Fragilaria capucina ssp. rumpens | 96 hours 96 hours 96 hours |
| | Acute EC50 0,037 mg/l Fresh water | Algae | 48 hours |
| | Acute EC50 0,16 mg/l Fresh water Acute LC50 0,19 mg/l Fresh water Acute NOEC 0,004 mg/l Marine water Chronic NOEC 0,18 mg/l Chronic NOEC 0,02 mg/l Fresh water | Daphnia spec. Fish Algae Daphnia spec. Fish | 48 hours 96 hours 48 hours 21 days 38 days |
| | | | |
| | | | |

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

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|-----------|--------------------------------|------------------|------------------|
| Poly[oxy(methyl-1,2-ethanediyl)], α-(methylphenyl)-ω-hydroxy- | OECD 301F | 80 to 90 % - Readily - 28 days | - | Activated sludge |
| 1,2-benzisothiazol-3(2H)-one | OECD 303A | >90 % - Readily - 1 days | - | - |
| 2-octyl-2H-isothiazol-3-one | OECD 309 | 90 % - Readily - 4 days | 0,01 to 0,1 mg/l | - |
| | OECD 303A | >80 % - Readily - 4 days | - | - |
| | OECD 309 | 50 % - Readily - 2 days | 0,01 to 0,1 mg/l | - |
| | OECD 301D | >60 % - Readily - 28 days | - | - |
| reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) | - | <50 % - 10 days | - | - |

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

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|--------------------------|------------|------------------|
| Poly[oxy(methyl-1,2-ethanediyl)], α-(methylphenyl)-ω-hydroxy- | - | - | Readily |
| 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 |
| reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) | - | - | Readily |

12.3 Bioaccumulative potential

SECTION 12: Ecological information

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---|--------------------|-----|-----------|
| Poly[oxy(methyl-1,2-ethanediyl),α-(methylphenyl)-ω-hydroxy- | 2,78 | - | low |
| Octene, hydroformylation products, high-boiling | >3.8 | - | high |
| 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 |
| reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) | -0.83 to 0.75 | - | low |

12.4 Mobility in soil

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 Endocrine disrupting properties : No known significant effects or critical hazards.

12.7 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 : Yes.

European waste catalogue (EWC)

| Waste code | Waste designation |
|------------|---|
| 08 01 15* | aqueous sludges containing paint or varnish containing organic solvents or other hazardous substances |

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.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

VOC

:

VOC for Ready-for-Use Mixture

: IIA/i. One-pack performance coatings. EU limit value for this product : 140g/l (2010.)
This product contains a maximum of 25 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 (1005/2009/EC)

SECTION 15: Regulatory information

Not listed.

Prior Informed Consent (PIC) (649/2012/EC)

Not listed.

Persistent Organic Pollutants (850/2004/EC)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

United Kingdom: Great Britain

References : EH40/2005 Workplace exposure limits
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

International regulations

Stockholm Convention on Persistent Organic Pollutants

| List name | Ingredient name | Status |
|-------------|-----------------|--------|
| Not listed. | | |

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

| List name | Ingredient name | Status |
|-------------|-----------------|--------|
| Not listed. | | |

CN code : 3209 10 00 00

Inventory list

| | |
|--------------------------|--|
| Australia | : At least one component is not listed. |
| Canada | : At least one component is not listed. |
| China | : At least one component is not listed. |
| Europe | : All components are listed or exempted. |
| Japan | : Japan inventory (CSCL) : At least one component is not listed. Japan inventory (ISHL) : At least one component is not listed. |
| New Zealand | : At least one component is not listed. |
| Philippines | : At least one component is not listed. |
| Republic of Korea | : At least one component is not listed. |
| Taiwan | : At least one component is not listed. |
| Thailand | : Not determined. |
| Turkey | : Not determined. |
| United States | : At least one component is not listed. |
| 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
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = 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 according to Regulation (EC) No. 1272/2008 [CLP/GHS]

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

Full text of abbreviated H statements

United Kingdom: Great Britain

Full text of abbreviated H statements

| | |
|-------|---|
| 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. |
| H360F | May damage fertility. |
| 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. |

Full text of classifications [CLP/GHS]

| | |
|-------------------|---|
| 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 Corr. 1B | SKIN CORROSION/IRRITATION - Category 1B |
| 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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SECTION 16: Other information

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Version : 9

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.

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