



SAFETY DATA SHEET

Metal / Cladding Topcoat

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

1.1 Product identifier

Product name : Metal / Cladding Topcoat
Product description : Paint.
Product type : Liquid.
UFI : W4P0-N0AP-S004-J8EQ

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

| Identified uses | |
|--------------------------------------|-------------------------------------------|
| Industrial uses Professional uses | |
| Uses advised against | Reason |
| Consumer use | Product is not intended for consumer use. |

1.3 Details of the supplier of the safety data sheet

Rust-Oleum Europe - Martin Mathys NV, Kolenbergstraat 23, B-3545 Zelem, Belgium
 Telephone no.: +32 (0) 13 460 200
 Fax no.: +32 (0) 13 460 201

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

1.4 Emergency telephone number

Supplier

Telephone number : +44 (0) 207 858 1228
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]

Eye Irrit. 2, H319
 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.

2.2 Label elements

SECTION 2: Hazards identification

Hazard pictograms :



Signal word :

Danger

Hazard statements :

Causes serious eye damage.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General :

Not applicable.

Prevention :

P280 - Wear eye or face protection: Recommended: safety glasses with side-shields .

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 :

Not applicable.

Supplemental label elements :

Contains 1,2-benzisothiazol-3(2H)-one, 2-octyl-2H-isothiazol-3-one and 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). May produce an allergic reaction.
Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

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

| Product/ingredient name | Identifiers | % | Classification | |
|-------------------------|-------------|---|-------------------------------------|------|
| | | | Regulation (EC) No. 1272/2008 [CLP] | Type |
| | | | | |

SECTION 3: Composition/information on ingredients

| | | | | |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------|---------|
| titanium dioxide | REACH #: 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7 | ≥10 - ≤25 | Carc. 2, H351 | [1] |
| propane-1,2-diol | REACH #: 01-2119456809-23 EC: 200-338-0 CAS: 57-55-6 | ≤5 | Not classified. | [2] |
| 2-Propenoic acid, polymer with butyl 2-propenoate, ammonium salt | CAS: 57167-10-9 | ≤3 | Eye Dam. 1, H318 | [1] |
| 2-(2-butoxyethoxy) ethanol | REACH #: 01-2119475104-44 EC: 203-961-6 CAS: 112-34-5 Index: 603-096-00-8 | ≤3 | Eye Irrit. 2, H319 | [1] [2] |
| alkanes, C11-15-iso- | REACH #: 01-2119456810-40 EC: 920-901-0 CAS: 90622-58-5 | ≤3 | Asp. Tox. 1, H304 EUH066 | [1] |
| hydrocarbons, C11-C12, isoalkanes, <2% aromatics | REACH #: 01-2119472146-39 EC: 918-167-1 | ≤3 | Flam. Liq. 3, H226 Asp. Tox. 1, H304 EUH066 | [1] |
| ammonia | REACH #: 01-2119488876-14 EC: 215-647-6 CAS: 1336-21-6 Index: 007-001-01-2 | ≤1 | Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411 | [1] |
| zinc oxide | REACH #: 01-2119463881-32 EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7 | ≤0,3 | Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) | [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 Aquatic Acute 1, H400 (M=100) 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] |
| | | | See Section 16 for the full text of the H statements declared above. | |

Notes

The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm.

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
- [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

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

SECTION 4: First aid measures

4.1 Description of first aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains 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). May produce an allergic reaction.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

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.

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO₂, powders, water spray.

Unsuitable extinguishing media : Do not use water jet.

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 thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
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. Do not breathe 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.

SECTION 6: Accidental release measures

- 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** : Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Put on appropriate personal protective equipment (see Section 8).
Never use pressure to empty. Container is not a pressure vessel.
Always keep in containers made from the same material as the original one.
Comply with the health and safety at work laws.
- When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. Do not store below the following temperature: 0°C (32°F). Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.

Keep container tightly closed.

Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

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

SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Exposure limit values |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| propane-1,2-diol | EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 8 hours. Form: Particulate TWA: 474 mg/m ³ 8 hours. Form: Sum of vapour and particulates TWA: 150 ppm 8 hours. Form: Sum of vapour and particulates |
| 2-(2-butoxyethoxy)ethanol | EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes. TWA: 67,5 mg/m ³ 8 hours. STEL: 101,2 mg/m ³ 15 minutes. |

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

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|---------------------------|------|-----------------------|------------------------|--------------------------------|----------|
| titanium dioxide | DNEL | Long term Inhalation | 10 mg/m ³ | Workers | Local |
| | DNEL | Long term Oral | 700 mg/kg bw/day | General population [Consumers] | Systemic |
| 2-(2-butoxyethoxy)ethanol | DNEL | Long term Inhalation | 67,5 mg/m ³ | Workers | Local |
| | DNEL | Long term Inhalation | 67,5 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 20 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Inhalation | 50,6 mg/m ³ | General population [Consumers] | Local |
| | DNEL | Long term Inhalation | 34 mg/m ³ | General population [Consumers] | Local |
| | DNEL | Long term Inhalation | 34 mg/m ³ | General population [Consumers] | Systemic |
| | DNEL | Long term Dermal | 10 mg/kg bw/day | General population [Consumers] | Systemic |
| zinc oxide | DNEL | Long term Inhalation | 5 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 2,5 mg/m ³ | General population [Consumers] | Systemic |
| | DNEL | Long term Dermal | 83 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 83 mg/kg bw/day | General population [Consumers] | Systemic |
| | DNEL | Long term Oral | 0,83 mg/ | General | Systemic |

SECTION 8: Exposure controls/personal protection

| | | | | | |
|--|--|--|-----------|---------------------------|--|
| | | | kg bw/day | population [Consumers] | |
|--|--|--|-----------|---------------------------|--|

PNECs

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|---------------------------|------------------------|----------------|---------------|
| titanium dioxide | Fresh water | 0,127 mg/l | - |
| | Marine | >1 mg/l | - |
| | Sewage Treatment Plant | >100 mg/l | - |
| | Fresh water sediment | >1000 mg/kg | - |
| | Marine water sediment | >100 mg/kg | - |
| | Soil | 100 mg/kg | - |
| 2-(2-butoxyethoxy)ethanol | Fresh water | 1 mg/l | - |
| | Marine | 0,1 mg/l | - |
| | Fresh water sediment | 4 mg/kg | - |
| | Marine water sediment | 0,4 mg/kg | - |
| | Sewage Treatment Plant | 200 mg/l | - |
| | Soil | 100 mg/kg | - |
| zinc oxide | Fresh water | 25,6 µg/l | - |
| | Marine | 7,6 µg/l | - |
| | Sewage Treatment Plant | 64,7 µg/l | - |
| | Fresh water sediment | 146 mg/kg dwt | - |
| | Marine water sediment | 70,3 mg/kg dwt | - |
| | Soil | 44,3 mg/kg dwt | - |

8.2 Exposure controls

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

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. 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. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: safety glasses with side-shields (EN 166)

Skin protection

Hand 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.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: > 8 hours (breakthrough time): nitrile rubber (0.5mm)

SECTION 8: Exposure controls/personal protection

The recommendation for the type or types of glove to use when handling this product is based on information from the following source:

EN 374

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: organic vapour (Type A) and particulate filter (EN 141).
- 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**9.1 Information on basic physical and chemical properties****Appearance**

- Physical state** : Liquid.
- Colour** : Various
- Odour** : Ammoniacal.
- Odour threshold** : Not available.
- pH** : 8 to 9
- Melting point/freezing point** : 0°C
- Initial boiling point and boiling range** : >100°C
- Flash point** : [Product does not sustain combustion.]
- Evaporation rate** : <1 (butyl acetate = 1)
- 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. Non-flammable but will burn on prolonged exposure to flame or high temperature.
- Upper/lower flammability or explosive limits** : Not available.
- Vapour pressure** : 2,3 kPa [room temperature]
- Vapour density** : >1 [Air = 1]
- Relative density** : 1,28 to 1,32
- Solubility(ies)** : Soluble in the following materials: cold water and hot water.
Very slightly soluble in the following materials: methanol and acetone.
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (room temperature): 5500 to 6500 mPa·s

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.

9.2 Other information

No additional information.

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** : Stable under recommended storage and handling conditions (see Section 7).
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : When exposed to high temperatures may produce hazardous decomposition products.
- 10.5 Incompatible materials** : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO₂ and smoke can be generated.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---------------------------|---------------------------------|--------------------|-------------------------|------------|
| titanium dioxide | LC50 Inhalation Dusts and mists | Rat - Male, Female | 3,43 to 5,09 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >10 g/kg | - |
| | LD50 Oral | Rat | >24 g/kg | - |
| 2-(2-butoxyethoxy)ethanol | LD50 Dermal | Rabbit | 2700 mg/kg | - |
| | LD50 Oral | Rat | 4500 mg/kg | - |
| alkanes, C11-15-iso- | LC50 Inhalation Vapour | Rat | >5000 mg/m ³ | 8 hours |
| | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| | LD50 Oral | Rat | >5000 mg/kg | - |
| ammonia | LC50 Inhalation Vapour | Human/30 min | 5000 mg/m ³ | 0,5 hours |
| | LC50 Inhalation Vapour | Rat | 7035 mg/m ³ | 30 minutes |
| | LC50 Inhalation Vapour | Rat | 2000 mg/m ³ | 4 hours |
| | LD50 Oral | Rat | 350 mg/kg | - |
| zinc oxide | LC50 Inhalation Dusts and mists | Mouse | 2500 mg/m ³ | 4 hours |
| | LC50 Inhalation Dusts and mists | Rat | >5700 mg/m ³ | 4 hours |
| pyrithione zinc | LD50 Oral | Rat | >15 g/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | 140 mg/m ³ | 4 hours |
| | LD50 Dermal | Rabbit | 100 mg/kg | - |
| terbutryn | LD50 Oral | Rat | 177 mg/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | >2200 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >10200 mg/kg | - |

SECTION 11: Toxicological information

| | | | | |
|--|-----------|-----|------------|---|
| | LD50 Oral | Rat | 2045 mg/kg | - |
|--|-----------|-----|------------|---|

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

Acute toxicity estimates

Not available.

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---------------------------|--------------------------|---------|-------|--------------------------------------|-------------|
| titanium dioxide | Skin - Mild irritant | Human | - | 72 hours 300 Micrograms Intermittent | - |
| 2-(2-butoxyethoxy)ethanol | Eyes - Moderate irritant | Rabbit | - | 24 hours 20 milligrams | - |
| ammonia | Eyes - Severe irritant | Rabbit | - | 20 milligrams | - |
| | Eyes - Severe irritant | Rabbit | - | 250 Micrograms | - |
| zinc oxide | Eyes - Severe irritant | Rabbit | - | 0,5 minutes 1 milligrams | - |
| | Eyes - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| terbutryn | Skin - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| | Eyes - Moderate irritant | Rabbit | - | 76 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 380 milligrams | - |

Conclusion/Summary

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

Eyes : Causes serious eye irritation.

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

Sensitisation

| Product/ingredient name | Route of exposure | Species | Result |
|-------------------------|-------------------|------------|-----------------|
| titanium dioxide | skin | Guinea pig | Not sensitizing |
| | skin | Mouse | Not sensitizing |

Conclusion/Summary

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

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

Mutagenicity

| Product/ingredient name | Test | Experiment | Result |
|-------------------------|----------|---------------------------------------------------|----------|
| titanium dioxide | OECD 471 | Experiment: In vitro Subject: Bacteria | Negative |
| | OECD 476 | Experiment: In vitro Subject: Mammalian-Animal | Negative |
| | OECD 474 | Experiment: In vivo Subject: Mammalian-Animal | Negative |
| | OECD 474 | Experiment: In vivo Subject: Mammalian-Animal | Negative |

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

SECTION 11: Toxicological information

| Product/ingredient name | Maternal toxicity | Fertility | Developmental toxin | Species | Dose | Exposure |
|-------------------------|-------------------|-----------|---------------------|--------------------|----------------------------|--------------------------|
| titanium dioxide | Negative | Negative | Negative | Rat - Male, Female | Oral: 100 to 3001000 mg/kg | 20 days; 7 days per week |

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)

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|------------------------------|
| ammonia | Category 3 | - | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

| Product/ingredient name | Result |
|----------------------------------------------------------------------|------------------------------------------------------------------|
| alkanes, C11-15-iso-hydrocarbons, C11-C12, isoalkanes, <2% aromatics | ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 |

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 |
|-------------------------|-------------------------------------------------------------------|------------|------------------------------------|---------------|
| titanium dioxide | Chronic NOAEL Oral Chronic NOAEL Inhalation Dusts and mists | Rat Rat | 3500 mg/kg 10 mg/m ³ | - 24 hours |

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

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

| Product/ingredient name | Result | Species | Exposure |
|-------------------------------------|---------------------------------------|--------------------------------------------------------------------|----------|
| titanium dioxide | Acute LC50 3 mg/l Fresh water | Crustaceans - Ceriodaphnia dubia - Neonate | 48 hours |
| | Acute LC50 6,5 mg/l Fresh water | Daphnia spec. - Daphnia pulex - Neonate | 48 hours |
| | Acute LC50 >1000000 µg/l Marine water | Fish - Fundulus heteroclitus | 96 hours |
| 2-(2-butoxyethoxy)ethanol | Acute EC50 2850 mg/l | Daphnia spec. | 48 hours |
| | Acute IC50 >100 mg/l | Algae | 96 hours |
| | Acute LC50 1300000 µg/l Fresh water | Fish - Lepomis macrochirus | 96 hours |
| alkanes, C11-15-iso- | Acute LC50 >2500 mg/l | Fish | 96 hours |
| | Acute LC50 >2000 mg/l | Fish | 48 hours |
| | Acute LOAEL >1000 mg/l | Fish | 96 hours |
| | Acute NOEC 1000 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Chronic NOEC 1 mg/l | Daphnia spec. | 21 days |
| | Acute EC50 110 mg/l | Daphnia spec. | 48 hours |
| ammonia | Acute LC50 7 mg/l | Fish | 48 hours |
| | Acute LC50 17 mg/l | Fish | 24 hours |
| | Acute LC50 0,89 mg/l | Fish | 96 hours |
| | Acute LC50 15000 µg/l Fresh water | Fish - Gambusia affinis - Adult | 96 hours |
| | Acute NOEC 0,06 mg/l | Fish - Lctalurus punctatus | 27 days |
| | Chronic NOEC 0,42 mg/l | Daphnia spec. | 21 days |
| zinc oxide | Chronic NOEC 0,79 mg/l | Daphnia spec. | 96 hours |
| | Acute EC50 0,024 mg/l | Algae | 72 hours |
| | Acute EC50 0,137 mg/l | Algae | 72 hours |
| | Acute EC50 0,413 mg/l | Daphnia spec. | 48 hours |
| | Acute EC50 0,481 mg/l Fresh water | Daphnia spec. - Daphnia magna - Neonate | 48 hours |
| | Acute IC50 46 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata - Exponential growth phase | 72 hours |
| pyrithione zinc | Acute LC50 98 µg/l Fresh water | Daphnia spec. - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 0,33 to 0,78 mg/l | Fish | 96 hours |
| | Chronic NOEC 0,019 mg/l | Algae | 7 days |
| | Chronic NOEC 0,037 mg/l | Daphnia spec. | 21 days |
| | Chronic NOEC 0,082 mg/l | Daphnia spec. | 7 days |
| | Chronic NOEC 0,199 mg/l | Fish | 30 days |
| | Acute EC50 0,51 µg/l Marine water | Algae - Thalassiosira pseudonana | 96 hours |
| | 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 | |
| terbutryn | 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 | 72 hours |

SECTION 12: Ecological information

| | | | |
|--|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| | Acute EC50 2,66 ppm Fresh water Acute IC50 0,0055 mg/l Acute LC50 579,3 mg/l Fresh water | subcapitata 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 |

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

12.2 Persistence and degradability

Conclusion/Summary : This product has not been tested for biodegradation. Based on available data, the classification criteria are not met.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---------------------------|-------------------|------------|------------------|
| titanium dioxide | - | - | Not readily |
| 2-(2-butoxyethoxy)ethanol | - | - | Readily |
| alkanes, C11-15-iso- | - | - | Inherent |
| hydrocarbons, C11-C12, | - | - | Inherent |
| isoalkanes, <2% aromatics | - | - | |
| ammonia | - | - | Readily |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---------------------------|--------------------|------|-----------|
| 2-(2-butoxyethoxy)ethanol | 1 | - | low |
| alkanes, C11-15-iso- | >5 | >100 | low |
| ammonia | -1,3 | - | low |
| zinc oxide | - | 177 | low |
| pyrithione zinc | 0,9 | 11 | low |
| terbutryn | 3,74 | - | 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 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

SECTION 13: Disposal considerations

- 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.
- Disposal considerations** : Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

European waste catalogue (EWC)

The European Waste Catalogue classification of this product, when disposed of as waste, is:

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

Packaging

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Disposal considerations** : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.
- 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 | 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. |
| Additional information | - | - | - | - |

SECTION 14: Transport information

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.

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 : 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 : 2004/42/EC - IIA/c: 40g/l (2010). <= 15g/l VOC.

Europe inventory : All components are listed or exempted.

Black List Chemicals (76/464/EEC) :

| Product/ingredient name | Carcinogenic effects | Mutagenic effects | Developmental effects | Fertility effects |
|-------------------------|----------------------|-------------------|-----------------------|-------------------|
| titanium dioxide | Not supported | Not supported | Not supported | Not supported |

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

References : EH40/2005 Workplace exposure limits
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2016/918

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

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

International lists

National inventory

| | |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Australia | : At least one component is not listed. |
| Canada | : At least one component is not listed. |
| China | : Not determined. |
| Japan | : Japan inventory (ENCS) : At least one component is not listed. Japan inventory (ISHL) : Not determined. |
| Malaysia | : Not determined |
| 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 | : Not determined. |
| Turkey | : Not determined. |
| United States | : Not determined. |
| Thailand | : Not determined. |
| Viet Nam | : Not determined. |

15.2 Chemical safety assessment : No Chemical Safety Assessment has been carried out.

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
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

Contains TiO2 : Yes

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| Classification | Justification |
|-----------------------------------------------|------------------------------------|
| Eye Irrit. 2, H319 Aquatic Chronic 3, H412 | Expert judgment Expert judgment |

Full text of H-phrases referred to in sections 2 and 3

SECTION 16: Other information

| | | |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Full text of abbreviated H statements | : H226 H301 H302 H304 H314 H317 H318 H319 H330 H335 H351 H400 H410 H411 H412 EUH066 | Flammable liquid and vapour. Toxic if swallowed. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Causes serious eye irritation. Fatal if inhaled. May cause respiratory irritation. Suspected of causing cancer. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects. Repeated exposure may cause skin dryness or cracking. |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| | | |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Full text of classifications [CLP/GHS] | : Acute Tox. 2 Acute Tox. 3 Acute Tox. 4 Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 2 Aquatic Chronic 3 Asp. Tox. 1 Carc. 2 Eye Dam. 1 Eye Irrit. 2 Flam. Liq. 3 Skin Corr. 1B Skin Sens. 1B STOT SE 3 | ACUTE TOXICITY - Category 2 ACUTE TOXICITY - Category 3 ACUTE TOXICITY - Category 4 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 ASPIRATION HAZARD - Category 1 CARCINOGENICITY - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 1B SKIN SENSITISATION - Category 1B SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3 |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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Notice to reader

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 product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.