

Antifouling SeaGuardian

| Section 1. Identification | | |
|---|--|--|
| Product name | : Antifouling SeaGuardian | |
| Product code | : 356 | |
| Other means of identification | : Not available. | |
| Product description | : Paint. | |
| Product type | : Liquid. | |
| Relevant identified uses | of the substance or mixture and uses ad | vised against |
| Identified uses | | |
| Use in coatings - Profess | sional use | |
| Supplier | : Jotun Australia Pty. Ltd. 59 Calarco Drive, Derrimut, VIC 3026, Australia | Proline Protective Coatings 176 Ossie James Drive, Hamilton Airport, Hamilton 3282 New Zealand |
| | Phone: + 61 39314 0722 | |
| | E-mail: SDSJotun@jotun.com | Email: info@prolinepc.nz Contact: +(64) 0508568867 |
| Emergency telephone nu | | al Emergencies 24 hours: s Information Centre (New Zealand) 0800 764 |
| e-mail address of person responsible for this SDS | | ın@jotun.com |

Section 2. Hazards identification

| : FLAMMABLE LIQUIDS - Category 3 |
|---|
| EYE IRRITATION - Category 2 |
| SKIN SENSITISATION - Category 1 |
| CARCINOGENICITY - Category 2 |
| REPRODUCTIVE TOXICITY - Category 2 |
| SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 2 |
| SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 |
| SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 |
| LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 |
| |

This material is classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

This material is classified as DANGEROUS GOODS according to criteria in New Zealand Standard 5433:2012 Transport of Dangerous Goods on Land.

GHS label elements

Signal word

: Warning.

Section 2. Hazards identification

| Hazard statements | : | H226 - Flammable liquid and vapour. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H351 - Suspected of causing cancer. H361 - Suspected of damaging fertility or the unborn child. H371 - May cause damage to organs. H373 - May cause damage to organs through prolonged or repeated exposure. H410 - Very toxic to aquatic life with long lasting effects. |
|---|---|---|
| Precautionary statements | | |
| Prevention | : | P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P273 - Avoid release to the environment. P260 - Do not breathe vapour or spray. P270 - Do not eat, drink or smoke when using this product. |
| Response | : | P391 - Collect spillage. P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention. |
| Storage | 1 | Not applicable. |
| Disposal | : | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Symbol | : | |
| Other hazards which do not result in classification | : | None known. |
| HSNO Approval Number | : | HSR000931 |
| In compliance | : | IMO Antifouling System Convention compliant AFS/CONF/26 + IMO MEPC.331(76). |

Section 3. Composition/information on ingredients

| Substance/mixture | : Mixture |
|-------------------|------------------|
| Other means of | : Not available. |
| identification | |

| Ingredient name | % (w/w) | CAS number | |
|-----------------------------|-----------|------------|--|
| dícopper oxide | ≥30 - ≤45 | 1317-39-1 | |
| zinc oxide | ≥10 - ≤30 | 1314-13-2 | |
| hydrocarbons, C9, aromatics | ≥10 - <20 | 64742-95-6 | |
| colophony | ≤10 | 8050-09-7 | |
| xylene | ≤8 | 1330-20-7 | |
| Benzene, ethyl- | ≤3 | 100-41-4 | |
| triaryl phosphates | ≤3 | - | |

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 and hence require reporting in this section.

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

| Version | : 1.04 |
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Section 4. First aid measures

| Description of necessary 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 necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. | | |
| 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 necessary, call a poison center or physician. 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. | | |
| 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. If necessary, call a poison center or physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. | | |
| 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 necessary, call a poison center or physician. | | |

Most important symptoms/effects, acute and delayed

| Potential acute health effect | | |
|-------------------------------|---|---------|
| Inhalation | known significant effects or critical hazards. | |
| Ingestion | known significant effects or critical hazards. | |
| Skin contact | / cause damage to organs following a single exposure in contact with sk se an allergic skin reaction. | in. May |
| Eye contact | ises serious eye irritation. | |
| Over-exposure signs/sympt | | |
| Inhalation | erse symptoms may include the following: uced foetal weight ease in foetal deaths letal malformations | |
| Ingestion | erse symptoms may include the following: uced foetal weight ease in foetal deaths letal malformations | |
| Skin | erse symptoms may include the following: ation ness uced foetal weight ease in foetal deaths letal malformations | |
| Eyes | erse symptoms may include the following: n or irritation ering ness | |

Indication of immediate medical attention and special treatment needed, if necessary

| Vers | ion | 1 | 1.04 |
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| | | | |

Section 4. First aid measures

| Specific treatments | : No specific treatment. |
|----------------------------|---|
| 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. |
| 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. |

See toxicological information (Section 11)

| Section 5. Firefig | Section 5. Firefighting measures | | |
|--|---|--|--|
| Extinguishing media | | | |
| Suitable | : Use dry chemical, CO ₂ , water spray (fog) or foam. | | |
| Not suitable | : Do not use water jet. | | |
| Specific hazards arising from the chemical | : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very toxic 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 metal oxide/oxides | | |
| Hazchem code | : •3Y | | |
| Special precautions 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. | | |
| 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. | | |

Section 6. Accidental release measures

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. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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". |
| 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. Collect spillage. |

Methods and material for containment and cleaning up

Section 6. Accidental release measures

| Small spill | : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Use spark-proof tools and explosion-proof equipment. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. |

Section 7. Handling and storage

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. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. 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. |
| Conditions for safe storage, including any incompatibilities | : Store in accordance with local regulations. Store in a segregated and approved area. 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. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. 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. |

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|----------------------------|---|
| ₫copper oxide colophony | HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 4/2022). [copper and its inorganic compounds as Cu] Skin sensitiser. WES-TWA: 0.01 mg/m ³ , (as Cu) 8 hours. Form: The value for respirable dust. ACGIH TLV (United States, 1/2023). [resin |
| /ersion : 1.04 | Date of issue/Date of revision : 23.10.2023 |

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Santian 0 ntrala/nargonal protoction ----

| Section 8. Expos | sure controls/personal protection | |
|-------------------------------------|--|------------------------|
| xylene | acids as total Resin acids] Skin ser Inhalation sensitiser. TWA: 0.001 mg/m ³ , (as total Resin a hours. Form: Inhalable fraction HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WI (New Zealand, 4/2022). [xylene (o-, i isomers)] WES-TWA: 217 mg/m ³ 8 hours. WES-TWA: 50 ppm 8 hours. | acids) 8 ES) |
| Benzene, ethyl- | HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WI (New Zealand, 4/2022). Absorbed th skin. WES-TWA: 20 ppm 8 hours. WES-TWA: 88 mg/m ³ 8 hours. WES-STEL: 176 mg/m ³ 15 minutes. WES-STEL: 40 ppm 15 minutes. | hrough |
| Appropriate engineering controls | : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering also need to keep gas, vapour or dust concentrations below any lower explosion limits. Use explosion-proof ventilation equipment. | controls |
| Environmental exposure controls | : Emissions from ventilation or work process equipment should be checked to they comply with the requirements of environmental protection legislation. In cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. | |
| ndividual protection meas | <u>sures</u> | |
| Hygiene measures | : Wash hands, forearms and face thoroughly after handling chemical products, eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated cl Contaminated work clothing should not be allowed out of the workplace. Was contaminated clothing before reusing. Ensure that eyewash stations and safe showers are close to the workstation location. | lothing. sh |
| Eye/face protection | : Safety eyewear complying to ISO 16321-1:2022 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, a gases or dusts. If contact is possible, the following protection should be worr unless the assessment indicates a higher degree of protection: chemical spla goggles. | ١, |
| Skin protection | | |
| Hand protection | : Chemical-resistant, impervious gloves complying with an approved standard be worn at all times when handling chemical products if a risk assessment inc | |

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. 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

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Section 8. Exposure controls/personal protection

| | 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. |
|------------------------|---|
| | ₩ear suitable gloves tested to ISO 374-1:2016. Not recommended, gloves(breakthrough time) < 1 hour: butyl rubber (> 0.4 mm), PVC (> 0.5 mm) |
| | May be used, gloves(breakthrough time) 4 - 8 hours: neoprene (> 0.35 mm) Recommended, gloves(breakthrough time) > 8 hours: 4H/Silver Shield® (> 0.07 mm), Teflon (> 0.35 mm), nitrile rubber (> 0.75 mm), polyvinyl alcohol (PVA) (> 0.3 mm) |
| 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. |
| 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 | : If workers are exposed to concentrations above the exposure limit, they must use a respirator according to EN 140. Use respiratory mask with charcoal and dust filter when spraying this product, according to EN 14387(as filter combination A2-P2). In confined spaces, use compressed-air or fresh-air respiratory equipment. When use of roller or brush, consider use of charcoalfilter. |

Section 9. Physical and chemical properties and safety characteristics

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

| <u>Appearance</u> | | |
|---|---|--------|
| Physical state | Liquid. | |
| Colour | Red, Black, Blue. | |
| Odour | Characteristic. | |
| Odour threshold | Not available. | |
| рН | Not applicable. | |
| Melting point/freezing point | May start to solidify at the following temperature: <-60°C (<-76°F) This is base data for the following ingredient: hydrocarbons, C9, aromatics. Weighted avera -77.83°C (-108.1°F) | |
| Boiling point, initial boiling point, and boiling range | Lowest known value: 136.1°C (277°F) (ethylbenzene). Weighted average: 157 (315.8°F) | ′.64°C |
| Flash point | Closed cup: 35°C (95°F) | |
| Evaporation rate | Highest known value: 0.84 (ethylbenzene) Weighted average: 0.79compared butyl acetate | with |
| Flammability | Not available. | |
| Lower and upper explosion limit/flammability limit | 0.8 - 7.6% | |
| Vapour pressure | Highest known value: 1.2 kPa (9.3 mm Hg) (at 20°C) (ethylbenzene). Weighte average: 0.58 kPa (4.35 mm Hg) (at 20°C) | əd |
| Relative vapour density | Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.7 (Air = 1) | 1 |
| Relative density | Not available. | |
| Density | 1.923 to 1.98 g/cm ³ | |
| Solubility | Insoluble in the following materials: cold water and hot water. | |
| Solubility in water | Not available. | |
| Partition coefficient: n- octanol/water | Not available. | |

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Section 9. Physical and chemical properties and safety characteristics

| Auto-ignition temperature | : | Lowest known value: 280 to 470°C (536 to 878°F) (hydrocarbons, C9, aromatics). |
|---------------------------|---|--|
| Decomposition temperature | | Not available. |
| Viscosity | : | Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt) |
| Flow time (ISO 2431) | : | Not available. |
| Particle characteristics | | |
| Median particle size | : | Not applicable. |
| | | |

Section 10. Stability and reactivity

| products | should not be produced. |
|------------------------------------|---|
| Hazardous decomposition | : Under normal conditions of storage and use, hazardous decomposition products |
| Incompatible materials | : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids. |
| Conditions to avoid | : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | : The product is stable. |

Section 11. Toxicological information

Information on likely routes of exposure

| Inhalation | No known significant effects or critical hazards. |
|---------------------|---|
| Ingestion | : No known significant effects or critical hazards. |
| Skin contact | : May cause damage to organs following a single exposure in contact with skin. May cause an allergic skin reaction. |
| Eye contact | : Causes serious eye irritation. |
| Symptoms related to | the physical, chemical and toxicological characteristics |
| Inhalation | Adverse symptoms may include the following: |

| Inhalation | : Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations |
|--------------|--|
| Ingestion | : Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations |
| Skin contact | : Adverse symptoms may include the following: irritation redness reduced foetal weight increase in foetal deaths skeletal malformations |
| Eye contact | : Adverse symptoms may include the following: pain or irritation watering redness |

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

Section 11. Toxicological information

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|---------------------------------|------------|-------------|----------|
| dícopper oxide | LC50 Inhalation Dusts and mists | Rat | 3.34 mg/l | 4 hours |
| | LD50 Oral | Rat | 1340 mg/kg | - |
| xylene | LC50 Inhalation Vapour | Rat | 20 mg/l | 4 hours |
| | LD50 Oral | Rat | 4300 mg/kg | - |
| | TDLo Dermal | Rabbit | 4300 mg/kg | - |
| Benzene, ethyl- | LC50 Inhalation Vapour | Rat - Male | 17.8 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| | LD50 Oral | Rat | 3500 mg/kg | - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|------------------------------------|---------|-------|------------------------|-------------|
| dicopper oxide | Eyes - Cornea opacity | Rabbit | - | 72 hours | - |
| | Eyes - Redness of the conjunctivae | Rabbit | - | 48 hours | - |
| zinc oxide | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 | - |
| xylene | Eyes - Mild irritant | Rabbit | - | 87 milligrams | - |
| - | Skin - Mild irritant | Rat | - | 8 hours 60 microliters | - |

Sensitisation

| • | Route of exposure | Species | Result |
|-----------|-------------------|---------------------------------|-------------|
| colophony | skin | Mammal - species unspecified | Sensitising |

Potential chronic health effects

| General | : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. |
|---|--|
| Inhalation | : No known significant effects or critical hazards. |
| Ingestion | : No known significant effects or critical hazards. |
| Skin contact | Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. |
| Eye contact | : No known significant effects or critical hazards. |
| Carcinogenicity | : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. |
| Mutagenicity | : No known significant effects or critical hazards. |
| Teratogenicity | : Suspected of damaging the unborn child. |
| Developmental effects | : No known significant effects or critical hazards. |
| Fertility effects | : Suspected of damaging fertility. |
| Chronic toxicity | |
| Not available. | |
| Carcinogenicity Not available. | |
| Mutagenicity | |
| Not available. | |
| Teratogenicity | |
| Not available. | |
| Reproductive toxicity Not available. | |

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|---|--------------------------|-----------------------|--------------------------------------|
| dicopper oxide hydrocarbons, C9, aromatics | Category 2 Category 3 | oral, inhalation - | - Respiratory tract irritation |
| xylene | Category 3 Category 2 | oral, inhalation | Narcotic effects - |
| Specific target organ toxicity (repeated e | <u>xposure)</u> | · | • |
| Broduct/ingradiant name | Category | Route of | Target organs |
| Product/ingredient name | Category | exposure | l'aiget organs |
| dicopper oxide | Category 2 | | - |
| - | | exposure | |

| Product/ingredient name | |
|-----------------------------|--|
| hydrocarbons, C9, aromatics | |

Numerical measures of toxicity

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) |
|-------------------------|------------------|-------------------|--------------------------------|-----------------------------------|--|
| Antifouling SeaGuardian | 2223.1 | 7497.0 | N/A | 738.4 | 8.2 |
| dicopper oxide | 1340 | N/A | N/A | N/A | 3.34 |
| colophony | 2500 | N/A | N/A | N/A | N/A |
| xylene | 500 | 1100 | N/A | N/A | N/A |
| ethylbenzene | 3500 | N/A | N/A | 17.8 | N/A |

Section 12. Ecological information

Ecotoxicity

: Water polluting material. May be harmful to the environment if released in large quantities. This material is very toxic to aquatic life with long lasting effects.

Aquatic and terrestrial toxicity

| Product/ingredient name | Result | Species | Exposure |
|-----------------------------|------------------------------------|------------------------------|----------|
| dicopper oxide | Acute LC50 0.075 mg/l Fresh water | Fish - Danio rerio | 96 hours |
| | Chronic NOEC 0.001 mg/l | Algae | - |
| | Chronic NOEC 0.0052 mg/l | Algae | - |
| zinc oxide | Acute LC50 1.1 ppm Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| | Chronic NOEC 0.02 mg/l Fresh water | Algae - Pseudokirchneriella | 72 hours |
| | _ | subcapitata - Exponential | |
| | | growth phase | |
| hydrocarbons, C9, aromatics | Acute EC50 <10 mg/l | Daphnia | 48 hours |
| | Acute IC50 <10 mg/l | Algae | 72 hours |
| | Acute LC50 <10 mg/l | Fish | 96 hours |
| xylene | Acute LC50 8500 µg/l Marine water | Crustaceans - Palaemonetes | 48 hours |
| | | pugio | |
| | Acute LC50 13400 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| Benzene, ethyl- | Acute EC50 7700 µg/l Marine water | Algae - Skeletonema costatum | 96 hours |
| | Acute EC50 2.93 mg/l | Daphnia | 48 hours |
| | Acute LC50 4.2 mg/l | Fish | 96 hours |

Persistence/degradability

| Version | : 1.04 | Date of issue/Date of revision : | 23.10.2023 |
|---------|--------|----------------------------------|------------|
|---------|--------|----------------------------------|------------|

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Section 12. Ecological information

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-----------------------------|-------------------|------------|------------------|
| dícopper oxide | - | - | Not readily |
| zinc oxide | - | - | Not readily |
| hydrocarbons, C9, aromatics | - | - | Not readily |
| xylene | - | - | Readily |
| Benzene, ethyl- | - | - | Readily |

Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|---|------------|--------------------------------|------------------------------------|
| Zinc oxide hydrocarbons, C9, aromatics colophony xylene Benzene, ethyl- | 1.9 to 7.7 | 10 to 2500 - 8.1 to 25.9 | high high high low low |

Mobility in soil

| Soil/water partition | : Not available. |
|----------------------|------------------|
| coefficient (Koc) | |

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | New Zealand | IMDG | IATA |
|-------------------------------|-------------|---|--|
| UN number | UN1263 | UN1263 | UN1263 |
| UN proper shipping name | Paint | Paint. Marine pollutant (dicopper oxide) | Paint |
| Transport hazard class(es) | 3 | | 3 |
| Packing group | Ш | Ш | III |
| Environmental hazards | Yes. | Yes. | Yes. The environmentally hazardous substance mark is not required. |

Additional information

Section 14. Transport information

| - | | |
|------------------------------|---|---|
| New Zealand | : | The marine pollutant mark is not required when transported by road or rail. Hazchem code •3Y |
| IMDG | : | The marine pollutant mark is not required when transported in sizes of \leq 5 L or \leq 5 kg. Emergency schedules F-E, <u>S-E</u> |
| ΙΑΤΑ | : | The environmentally hazardous substance mark may appear if required by other transportation regulations. |
| ADR/RID | : | Tunnel restriction code: (D/E) Hazard identification number: 30 |
| 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. |
| | | |

Transport in bulk according : Not available. to IMO instruments

Section 15. Regulatory information

| HSNO Approval Number | : HSR000931 |
|----------------------|--|
| HSNO Group Standard | : HSR000931 Antifouling paint containing 840g/l cuprous oxide and 350 g/l zinc oxide |
| HSNO Classification | FLAMMABLE LIQUIDS - Category 3 EYE IRRITATION - Category 2 SKIN SENSITISATION - Category 1 CARCINOGENICITY - Category 2 REPRODUCTIVE TOXICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 2 |
| | SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 |
| | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 |

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals Not listed.

Montreal Protocol Not listed.

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.

Control of Work Area

A controlled work area is a defined area where the paint is applied. Paint must be prevented from leaving the area (overspray) and entering the environment, or coming into contact with neighbouring boats or bystanders. All application of antifouling paint must take place in the controlled work area. When spray painting, signs must be posted at every entrance to the controlled work area to warn people. Signs must be in place from the time the work is started until it has finished. They must be large enough that they can be read from a distance of at least 10 metres. A sign must:

- warn that a spray paint application is being carried out with paint that is toxic to humans

- identify the person in charge of the application

- state that you cannot enter the controlled work area unless you are wearing the right personal protective equipment.

Section 16. Other information

| <u>History</u> | |
|--------------------------------|--|
| Date of printing | : 23.10.2023 |
| Date of issue/Date of revision | : 23.10.2023 |
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| Version | : 1.04 |
| Key to abbreviations | ADG = Australian Dangerous Goods ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail SGG = Segregation Group UN = United Nations |
| References | : Not available. |

Indicates information that has changed from previously issued version.

Notice to reader

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.