

SeaForce Active Plus

Section 1. Identification

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|--------------------------------------|------------------------|
| Product name | : SeaForce Active Plus |
| Product code | : 43003 |
| Product description | : Paint. |
| Product type | : Liquid. |
| Other means of identification | : Not available. |

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

Use in coatings - Professional use

| | |
|---------------------------|---|
| Supplier's details | : EL MOHANDES JOTUN S.A.E. INDUSTRIAL AREA - ISMAILIA P.O. BOX NO. 203 ISMAILIA - EGYPT FAX NO. : 002064481030 TELF NO: 002064481032 SDSJotun@jotun.com |
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| Emergency telephone number | : Jotun AS, Norway +47 33 45 70 00 |
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Section 2. Hazards identification

| | |
|---|---|
| Classification of the substance or mixture | : FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SKIN SENSITISATION - Category 1 REPRODUCTIVE TOXICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 |
|---|---|

GHS label elements**Hazard pictograms****Signal word**

: Danger.

Hazard statements

: H226 - Flammable liquid and vapour.
H302 + H332 - Harmful if swallowed or if inhaled.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.
H361 - Suspected of damaging fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.

Section 2. Hazards identification

(nervous system)

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.
- P270 - Do not eat, drink or smoke when using this product.

Response

- : P391 - Collect spillage.
- P308 + P313 - IF exposed or concerned: Get medical advice or attention.
- P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
- 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, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Storage

- : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

Disposal

- : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

In compliance

- : IMO Antifouling System Convention compliant AFS/CONF/26 + IMO MEPC.331(76).

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

EC number : Mixture.

Product code : 43003

| Ingredient name | % | CAS number |
|-----------------------------|-----------|------------|
| dicopper oxide | ≥25 - ≤50 | 1317-39-1 |
| xylene | ≥10 - ≤16 | 1330-20-7 |
| colophony | ≤10 | 8050-09-7 |
| zinc oxide | ≤10 | 1314-13-2 |
| zineb | ≤10 | 12122-67-7 |
| ethylbenzene | ≤5 | 100-41-4 |
| 1-methoxy-2-propanol | ≤3 | 107-98-2 |
| hydrocarbons, C9, aromatics | ≤3 | 64742-95-6 |
| copper pyriithione | ≤1.5 | 14915-37-8 |

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.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced foetal weight
increase in foetal deaths
skeletal malformations

Section 4. First aid measures

- Ingestion** : Adverse symptoms may include the following:
 stomach pains
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

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

- 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.
- 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.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : 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
 sulfur oxides
 metal oxide/oxides

- 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. 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. 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".

Section 6. Accidental release measures

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

- 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 |
|----------------------|--|
| dicopper oxide | ACGIH TLV (United States, 1/2022). TWA: 0.2 mg/m ³ 8 hours. Form: Fume |
| xylene | ACGIH TLV (United States, 1/2022). STEL: 651 mg/m ³ 15 minutes. TWA: 434 mg/m ³ 8 hours. TWA: 20 ppm 8 hours. |
| colophony | ACGIH TLV (United States, 1/2022). Skin sensitiser. Inhalation sensitiser. TWA: 0.001 mg/m ³ , (as total Resin acids) 8 hours. Form: Inhalable fraction |
| ethylbenzene | ACGIH TLV (United States, 1/2022). Ototoxicant. Notes: K TWA: 20 ppm 8 hours. Form: |
| 1-methoxy-2-propanol | ACGIH TLV (United States, 1/2022). STEL: 369 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 184 mg/m ³ 8 hours. TWA: 50 ppm 8 hours. |

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 controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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.

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 to ISO 16321-1:2022 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.

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

Section 8. Exposure controls/personal protection

applied once exposure has occurred.

Wear suitable gloves tested to ISO 374-1:2016.

Not recommended, gloves(breakthrough time) < 1 hour: neoprene, butyl rubber, PVC

Recommended, gloves(breakthrough time) > 8 hours: fluor rubber, nitrile rubber, 4H, Teflon, polyvinyl alcohol (PVA)

- 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-P3). 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

Appearance

- Physical state** : Liquid.
- Colour** : Red
- Odour** : Characteristic.
- Odour threshold** : Not applicable.
- pH** : Not applicable.
- Melting point** : Not applicable.
- Boiling point** : Lowest known value: 120.17°C (248.3°F) (1-methoxy-2-propanol). Weighted average: 136.56°C (277.8°F)
- Flash point** : Closed cup: 28°C (82.4°F)
- Evaporation rate** : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.79 compared with butyl acetate
- Flammability (solid, gas)** : Not applicable.
- Lower and upper explosive (flammable) limits** : 0.8 - 13.74%
- Vapour pressure** : Highest known value: 1.2 kPa (9.3 mm Hg) (at 20°C) (ethylbenzene). Weighted average: 0.95 kPa (7.13 mm Hg) (at 20°C)
- Vapour density** : Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.63 (Air = 1)
- Density** : 1.722 to 1.728 g/cm³
- Solubility** : Insoluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Lowest known value: 270°C (518°F) (1-methoxy-2-propanol).
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (40°C): >20.5 mm²/s (>20.5 cSt)

Section 10. Stability and reactivity

| | |
|---|---|
| Reactivity | : No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | : The product is stable. |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| 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. |
| Incompatible materials | : Reactive or incompatible with the following materials: oxidising materials |
| Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|---------------------------------|------------|----------------------|----------|
| dicopper 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 | - |
| zineb | TDLo Dermal | Rabbit | 4300 mg/kg | - |
| | LD50 Oral | Rat | 1850 mg/kg | - |
| ethylbenzene | LC50 Inhalation Vapour | Rat - Male | 17.8 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| 1-methoxy-2-propanol | LD50 Oral | Rat | 3500 mg/kg | - |
| | LD50 Dermal | Rabbit | 13 g/kg | - |
| copper pyriithione | LD50 Oral | Rat | 6600 mg/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | 70 mg/m ³ | 4 hours |
| | LD50 Dermal | Rabbit | 300 mg/kg | - |
| | LD50 Oral | Rat | 200 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 | - |
| xylene | Eyes - Mild irritant | Rabbit | - | 87 milligrams | - |
| | Skin - Mild irritant | Rat | - | 8 hours 60 microliters | - |
| zinc oxide | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| 1-methoxy-2-propanol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| copper pyriithione | Skin - Mild irritant | Rabbit | - | 500 mg | - |
| | Eyes - Severe irritant | Mammal - species unspecified | - | - | - |
| | Skin - Irritant | Mammal - species unspecified | - | - | - |

Sensitisation

Section 11. Toxicological information

| Product/ingredient name | Route of exposure | Species | Result |
|-------------------------|-------------------|------------------------------|-------------|
| colophony | skin | Mammal - species unspecified | Sensitising |
| zineb | skin | Mammal - species unspecified | Sensitising |

Mutagenicity

Not available.

Conclusion/Summary : Not classified.

Carcinogenicity

Not available.

Conclusion/Summary : Not classified.

Reproductive toxicity

| Product/ingredient name | Maternal toxicity | Fertility | Developmental toxin | Species | Dose | Exposure |
|-------------------------|-------------------|-----------|---------------------|------------------------------|------------------------------|----------|
| zineb | - | - | Positive | Mammal - species unspecified | Route of exposure unreported | - |
| copper pyrithione | - | - | Positive | Mammal - species unspecified | Route of exposure unreported | - |

Conclusion/Summary : Suspected of damaging the unborn child.

Teratogenicity

Not available.

Conclusion/Summary : Suspected of damaging the unborn child.

Specific target organ toxicity (single exposure)

| Name | Category | Route of exposure | Target organs |
|-----------------------------|------------|-------------------|------------------------------|
| xylene | Category 3 | - | Respiratory tract irritation |
| zineb | Category 3 | - | Respiratory tract irritation |
| 1-methoxy-2-propanol | Category 3 | - | Narcotic effects |
| hydrocarbons, C9, aromatics | Category 3 | - | Respiratory tract irritation |
| copper pyrithione | Category 3 | - | Narcotic effects |
| | Category 3 | - | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

| Name | Category | Route of exposure | Target organs |
|-------------------|------------|-------------------|----------------|
| ethylbenzene | Category 2 | - | hearing organs |
| copper pyrithione | Category 1 | - | nervous system |

Aspiration hazard

| Name | Result |
|-----------------------------|--------------------------------|
| xylene | ASPIRATION HAZARD - Category 1 |
| ethylbenzene | ASPIRATION HAZARD - Category 1 |
| hydrocarbons, C9, aromatics | ASPIRATION HAZARD - Category 1 |

Information on likely routes of exposure : Not available.

Section 11. Toxicological information

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced foetal weight
increase in foetal deaths
skeletal malformations

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

Not available.

- 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.
- Carcinogenicity** : No known significant effects or critical hazards.
- 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** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

| Route | ATE value |
|------------------------------|---------------|
| Oral | 1364.82 mg/kg |
| Dermal | 5676.46 mg/kg |
| Inhalation (vapours) | 102.09 mg/l |
| Inhalation (dusts and mists) | 3.35 mg/l |

Section 12. Ecological information

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 | - |
| xylene | Acute LC50 8500 µg/l Marine water | Crustaceans - Palaemonetes pugio | 48 hours |
| zinc oxide | Acute LC50 13400 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute LC50 1.1 ppm Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| | Chronic NOEC 0.02 mg/l Fresh water | Algae - Pseudokirchneriella subcapitata - Exponential growth phase | 72 hours |
| zineb | Acute EC50 0.38 mg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 96 hours |
| | Acute LC50 970 to 1800 µg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 20.8 ppm Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| | Acute LC50 0.225 mg/l | Fish | 96 hours |
| | Chronic NOEC 0.05 mg/l Fresh water | Algae - Chlorella vulgaris | 96 hours |
| ethylbenzene | Chronic NOEC 0.05 mg/l Fresh water | Algae - Scenedesmus quadricauda | 96 hours |
| | 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 |
| | Acute EC50 <10 mg/l | Daphnia | 48 hours |
| hydrocarbons, C9, aromatics | Acute IC50 <10 mg/l | Algae | 72 hours |
| | Acute LC50 <10 mg/l | Fish | 96 hours |
| | Acute EC50 0.022 mg/l | Daphnia | 48 hours |
| | Acute IC50 0.035 mg/l | Algae | 120 hours |
| copper pyrithione | Acute LC50 0.0043 mg/l | Fish | 96 hours |
| | Chronic NOEC 0.00046 mg/l | Algae - Skeletonema costatum | 120 hours |

Persistence and degradability

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

Bioaccumulative potential

Section 12. Ecological information

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|-----------------------------|--------------------|-------------|-----------|
| xylene | 3.12 | 8.1 to 25.9 | low |
| colophony | 1.9 to 7.7 | - | high |
| zinc oxide | - | 28960 | high |
| zineb | 1.3 | - | low |
| ethylbenzene | 3.6 | - | low |
| 1-methoxy-2-propanol | <1 | - | low |
| hydrocarbons, C9, aromatics | - | 10 to 2500 | high |

Mobility in soil




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

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 spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | ADR/RID | IMDG | IATA |
|-----------------------------------|--|--|--|
| UN number | UN1263 | UN1263 | UN1263 |
| UN proper shipping name | Paint | Paint. Marine pollutant (dicopper oxide) | Paint |
| Transport hazard class(es) | 3  | 3  | 3  |
| Packing group | III | III | III |
| Environmental hazards | Yes. | Yes. | Yes. The environmentally hazardous substance mark is not required. |
| Additional information | - | The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules F-E, S-E | The environmentally hazardous substance mark may appear if required by other transportation regulations. |

Additional information

Section 14. Transport information

- ADR/RID** : The environmentally hazardous substance mark is not required when transported in sizes of ≤ 5 L or ≤ 5 kg.
Hazard identification number 30
Tunnel code (D/E)
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤ 5 L or ≤ 5 kg.
Emergency schedules F-E, S-E
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.
- 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 to IMO instruments** : Not available.

Section 15. Regulatory information

- Safety, health and environmental regulations specific for the product** : No known specific national and/or regional regulations applicable to this product (including its ingredients).

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.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

History

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Version : 2.01

- Key to abbreviations** : ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate 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)
 UN = United Nations

- References** : Not available.

✔ Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

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.