

## SeaForce 60 M

### Section 1. Identification

**GHS product identifier** : SeaForce 60 M

**Product code** : 31843

**Product description** : Paint.

**Other means of identification** : Not available.

**Product type** : Liquid.

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

Use in coatings - Professional use

**Supplier's details** : Jotun Paints Inc.  
842 W. Sam Houston Parkway North  
City Center Three, Suite 300  
Houston, TX 77024 USA  
Phone number: +1 (713) 860-8241  
SDSJotun@jotun.com

**Emergency telephone number (with hours of operation)** : 1-800-424-9300  
(Staffed 24/7)

### Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 3  
ACUTE TOXICITY (oral) - Category 4  
SKIN IRRITATION - Category 2  
SERIOUS EYE DAMAGE - Category 1  
SKIN SENSITIZATION - Category 1  
TOXIC TO REPRODUCTION - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
AQUATIC HAZARD (ACUTE) - Category 1  
AQUATIC HAZARD (LONG-TERM) - Category 1

#### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger.

**Hazard statements** : H226 - Flammable liquid and vapor.  
H302 - Harmful if swallowed.  
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.

**Date of issue** : 09.01.2024

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## Section 2. Hazards identification

H373 - May cause damage to organs through prolonged or repeated exposure. (hearing organs)

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 and eye or face 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 vapor.
- 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.
- P363 - Wash contaminated clothing 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.
- P403 + P235 - Keep cool.

#### Disposal

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

#### Hazards not otherwise classified

- : None known.

#### 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 identification

- : Not available.

#### CAS number/other identifiers

##### CAS number

- : Not applicable.

##### Product code

- : 31843

Ingredient name	%	CAS number
dicopper oxide	≥25 - ≤50	1317-39-1
xylene	≥10 - <22	1330-20-7
colophony	≥10 - ≤25	8050-09-7
zineb	≤10	12122-67-7
ethylbenzene	≤5	100-41-4
zinc oxide	≤5	1314-13-2
1-methoxy-2-propanol	≤3	107-98-2
Solvent naphtha (petroleum), light arom.	≤3	64742-95-6
fatty acids, C14-18 and C16-18-unsatd., maleated	≤0.3	85711-46-2
maleic anhydride	<0.1	108-31-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

## Section 3. Composition/information on ingredients

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** : 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 fetal weight  
increase in fetal deaths  
skeletal malformations

## Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 blistering may occur  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
 stomach pains  
 reduced fetal weight  
 increase in fetal 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. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Flammable liquid and vapor. 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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized 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 spilled 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 materials 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 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 spilled 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 vapor 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.

## Section 7. Handling and storage

**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 oxidizing 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 unlabeled 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	<p><b>NIOSH REL (United States, 10/2020). [COPPER FUME]</b> TWA: 0.1 mg/m<sup>3</sup>, (as Cu) 10 hours. Form: Fume</p> <p><b>OSHA PEL 1989 (United States, 3/1989). [Copper Fume (as Cu)]</b> TWA: 0.1 mg/m<sup>3</sup>, (as Cu) 8 hours. Form: Fume</p> <p><b>ACGIH TLV (United States, 1/2023). [copper fume]</b> TWA: 0.2 mg/m<sup>3</sup> 8 hours. Form: Fume</p> <p><b>CAL OSHA PEL (United States, 5/2018). [copper salts]</b> TWA: 1 mg/m<sup>3</sup>, (as Cu) 8 hours. Form: dust and mist</p>
xylene	<p><b>OSHA PEL (United States, 5/2018). [Xylenes]</b> TWA: 435 mg/m<sup>3</sup> 8 hours. TWA: 100 ppm 8 hours.</p> <p><b>OSHA PEL 1989 (United States, 3/1989). [Xylenes (o-, m-, p-isomers)]</b> STEL: 655 mg/m<sup>3</sup> 15 minutes. STEL: 150 ppm 15 minutes. TWA: 435 mg/m<sup>3</sup> 8 hours. TWA: 100 ppm 8 hours.</p> <p><b>CAL OSHA PEL (United States, 5/2018). [xylene]</b> STEL: 655 mg/m<sup>3</sup> 15 minutes. STEL: 150 ppm 15 minutes. C: 300 ppm TWA: 435 mg/m<sup>3</sup> 8 hours. TWA: 100 ppm 8 hours.</p> <p><b>ACGIH TLV (United States, 1/2023). [p-xylene and mixtures containing p-xylene] Ototoxicant.</b> TWA: 20 ppm 8 hours.</p>
colophony	<p><b>ACGIH TLV (United States, 1/2023). [resin acids] Skin sensitizer. Inhalation sensitizer.</b> TWA: 0.001 mg/m<sup>3</sup>, (as total Resin acids) 8 hours. Form: Inhalable fraction</p>
zineb	None
ethylbenzene	<p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 100 ppm 8 hours. TWA: 435 mg/m<sup>3</sup> 8 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m<sup>3</sup> 15 minutes.</p> <p><b>NIOSH REL (United States, 10/2020).</b></p>

## Section 8. Exposure controls/personal protection

zinc oxide  
1-methoxy-2-propanol

Solvent naphtha (petroleum), light arom.  
fatty acids, C14-18 and C16-18-unsatd., maleated  
maleic anhydride

TWA: 100 ppm 10 hours.  
TWA: 435 mg/m<sup>3</sup> 10 hours.  
STEL: 125 ppm 15 minutes.  
STEL: 545 mg/m<sup>3</sup> 15 minutes.  
**OSHA PEL (United States, 5/2018).**  
TWA: 100 ppm 8 hours.  
TWA: 435 mg/m<sup>3</sup> 8 hours.  
**CAL OSHA PEL (United States, 5/2018).**  
STEL: 130 mg/m<sup>3</sup> 15 minutes.  
STEL: 30 ppm 15 minutes.  
TWA: 22 mg/m<sup>3</sup> 8 hours.  
TWA: 5 ppm 8 hours.  
**ACGIH TLV (United States, 1/2023).**  
**Ototoxicant. Notes: K**  
TWA: 20 ppm 8 hours. Form:

None  
**ACGIH TLV (United States, 1/2023).**  
STEL: 369 mg/m<sup>3</sup> 15 minutes.  
STEL: 100 ppm 15 minutes.  
TWA: 184 mg/m<sup>3</sup> 8 hours.  
TWA: 50 ppm 8 hours.  
**NIOSH REL (United States, 10/2020).**  
STEL: 540 mg/m<sup>3</sup> 15 minutes.  
STEL: 150 ppm 15 minutes.  
TWA: 360 mg/m<sup>3</sup> 10 hours.  
TWA: 100 ppm 10 hours.  
**OSHA PEL 1989 (United States, 3/1989).**  
STEL: 540 mg/m<sup>3</sup> 15 minutes.  
STEL: 150 ppm 15 minutes.  
TWA: 360 mg/m<sup>3</sup> 8 hours.  
TWA: 100 ppm 8 hours.  
**CAL OSHA PEL (United States, 5/2018).**  
**Absorbed through skin.**  
STEL: 540 mg/m<sup>3</sup> 15 minutes.  
STEL: 150 ppm 15 minutes.  
TWA: 360 mg/m<sup>3</sup> 8 hours.  
TWA: 100 ppm 8 hours.

None  
None  
**OSHA PEL 1989 (United States, 3/1989).**  
TWA: 0.25 ppm 8 hours.  
TWA: 1 mg/m<sup>3</sup> 8 hours.  
**NIOSH REL (United States, 10/2020).**  
TWA: 1 mg/m<sup>3</sup> 10 hours.  
TWA: 0.25 ppm 10 hours.  
**ACGIH TLV (United States, 1/2023). Skin sensitizer. Inhalation sensitizer.**  
TWA: 0.01 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction and vapor  
**OSHA PEL (United States, 5/2018).**  
TWA: 0.25 ppm 8 hours.  
TWA: 1 mg/m<sup>3</sup> 8 hours.  
**CAL OSHA PEL (United States, 5/2018).**  
TWA: 0.4 mg/m<sup>3</sup> 8 hours.  
TWA: 0.1 ppm 8 hours.

[Biological exposure indices](#)

## Section 8. Exposure controls/personal protection

Ingredient name	Exposure indices
xylene	<b>ACGIH BEI (United States, 1/2023) [xylenes (technical or commercial grade)]</b> BEI: 1.5 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift.
ethylbenzene	<b>ACGIH BEI (United States, 1/2023)</b> BEI: 0.15 g/g creatinine, sum of mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: end of shift.

**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, vapor 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 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.

### Skin protection

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

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.



## Section 8. Exposure controls/personal protection

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

May be used, gloves(breakthrough time) 4 - 8 hours: neoprene (> 0.35 mm)

Not recommended, gloves(breakthrough time) < 1 hour: butyl rubber (> 0.4 mm), PVC (> 0.5 mm)

Recommended, gloves(breakthrough time) > 8 hours: fluor rubber (> 0.35 mm), nitrile rubber (> 0.75 mm), 4H/Silver Shield® (> 0.07 mm), Teflon (> 0.35 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** : 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.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Red, Grey
- Odor** : Characteristic.
- Odor 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: 136.8°C (278.2°F)
- Flash point** : Closed cup: 27°C (80.6°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%
- Vapor 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)
- Vapor density** : Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.65 (Air = 1)
- Relative density** : 1.64 g/cm<sup>3</sup> 13.68 pounds/gallon
- Solubility(ies)** :

Media	Result
cold water	Not soluble
hot water	Not soluble

- 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 (104°F)): >20.5 mm<sup>2</sup>/s (>20.5 cSt)

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidizing materials
<b>Hazardous decomposition products</b>	: 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 Vapor	Rat	20 mg/l	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
	TDL <sub>0</sub> Dermal	Rabbit	4300 mg/kg	-
zineb	LD50 Oral	Rat	1850 mg/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat - Male	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
1-methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	6600 mg/kg	-
maleic anhydride	LD50 Oral	Rat	400 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	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
fatty acids, C14-18 and C16-18-unsatd., maleated	Skin - Mild irritant	Mammal - species unspecified	-	-	-
maleic anhydride	Eyes - Severe irritant	Rabbit	-	1 Percent	-

#### Sensitization

Product/ingredient name	Route of exposure	Species	Result
colophony	skin	Mammal - species unspecified	Sensitizing
zineb	skin	Mammal - species unspecified	Sensitizing
fatty acids, C14-18 and C16-18-unsatd., maleated	skin	Mammal - species unspecified	Sensitizing
maleic anhydride	skin	Mammal - species unspecified	Sensitizing

#### Mutagenicity

## Section 11. Toxicological information

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
zineb	-	3	-
ethylbenzene	-	2B	-

### Reproductive toxicity

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

### Teratogenicity

Not available.

### 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
Solvent naphtha (petroleum), light arom.	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs
maleic anhydride	Category 1	inhalation	respiratory system
	Category 2		

### Aspiration hazard

Name	Result
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), light arom.	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : 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

## Section 11. Toxicological information

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

### Delayed and immediate effects and also 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

Route	ATE value
Oral	1602.56 mg/kg
Dermal	7618 mg/kg
Inhalation (vapors)	100.72 mg/l
Inhalation (dusts and mists)	10.71 mg/l

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
dicopper oxide	Acute LC50 0.075 mg/l Fresh water Chronic NOEC 0.001 mg/l Chronic NOEC 0.0052 mg/l	Fish - Danio rerio Algae Algae	96 hours - -
xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
zineb	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	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 0.225 mg/l	Fish	96 hours
	Acute LC50 20.8 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 0.05 mg/l Fresh water Chronic NOEC 0.05 mg/l Fresh water	Algae - Chlorella vulgaris Algae - Scenedesmus quadricauda	96 hours 96 hours
ethylbenzene	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
zinc oxide	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
Solvent naphtha (petroleum), light arom.	Acute EC50 <10 mg/l	Daphnia	48 hours
	Acute IC50 <10 mg/l Acute LC50 <10 mg/l	Algae Fish	72 hours 96 hours
maleic anhydride	Acute LC50 230 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
dicopper oxide	-	-	Not readily
xylene	-	-	Readily
ethylbenzene	-	-	Readily
zinc oxide	-	-	Not readily
Solvent naphtha (petroleum), light arom.	-	-	Not readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
xylene	3.12	8.1 to 25.9	low
colophony	1.9 to 7.7	-	high
zineb	1.3	-	low
ethylbenzene	3.6	-	low
zinc oxide	-	28960	high
1-methoxy-2-propanol	<1	-	low
Solvent naphtha (petroleum), light arom.	-	10 to 2500	high
maleic anhydride	-2.78	-	low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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 minimized 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. Vapor 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.

### United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Xylene	1330-20-7	Listed	U239
Ethylenebisdithiocarbamic acid, salts & esters	12122-67-7	Listed	U114

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	UN1263	UN1263	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	Paint	Paint	Paint	Paint	Paint	Paint
Transport hazard class(es)	3  	3  	3 	3  	3  	3 
Packing group	III	III	III	III	III	III
Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

### Additional information

#### DOT Classification

: This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and 173.24a. **Reportable quantity** 692.55 lbs / 314.42 kg [50.646 gal / 191.72 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

#### TDG Classification

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.

#### Mexico Classification

: -

## Section 14. Transport information

- ADR/RID** : Tunnel restriction code: (D/E)  
Hazard identification number: 30
- IMDG** : Emergency schedules (EmS): F-E, S-E  
Marine pollutant: Yes.
- 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

- U.S. Federal regulations** : **Clean Water Act (CWA) 307:** dicopper oxide; zineb; ethylbenzene; zinc oxide; cadmium; lead  
**Clean Water Act (CWA) 311:** xylene; ethylbenzene; maleic anhydride

### Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)

Ingredient name	CAS number	%
xylene	1330-20-7	14.439
ethylbenzene	100-41-4	4.8213
maleic anhydride	108-31-6	0.001323
cadmium	7440-43-9	0.00111
lead	7439-92-1	0.001073

- Clean Air Act Section 602 Class I Substances** : Not listed

- Clean Air Act Section 602 Class II Substances** : Not listed

- DEA List I Chemicals (Precursor Chemicals)** : Not listed

- DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

- SARA 304 RQ** : Not applicable.

### SARA 311/312

- Classification** : FLAMMABLE LIQUIDS - Category 3  
ACUTE TOXICITY (oral) - Category 4  
SKIN IRRITATION - Category 2  
SERIOUS EYE DAMAGE - Category 1  
SKIN SENSITIZATION - Category 1  
TOXIC TO REPRODUCTION - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

#### Composition/information on ingredients

## Section 15. Regulatory information

Name	%	Classification
dicopper oxide	≥25 - ≤50	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4
xylene	≥10 - <22	SERIOUS EYE DAMAGE - Category 1 FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 ASPIRATION HAZARD - Category 1
colophony	≥10 - ≤25	SKIN SENSITIZATION - Category 1
zineb	≤10	FLAMMABLE SOLIDS - Category 1 SKIN SENSITIZATION - Category 1 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
ethylbenzene	≤5	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1
1-methoxy-2-propanol	≤3	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Solvent naphtha (petroleum), light arom.	≤3	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
fatty acids, C14-18 and C16-18-unsatd., maleated	≤0.3	ASPIRATION HAZARD - Category 1 SKIN IRRITATION - Category 2 SKIN SENSITIZATION - Category 1
maleic anhydride	<0.1	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 RESPIRATORY SENSITIZATION - Category 1 SKIN SENSITIZATION - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

## SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	dicopper oxide	1317-39-1	≥25 - ≤50
	xylene	1330-20-7	≥10 - <22
	zineb	12122-67-7	≤10
	ethylbenzene	100-41-4	≤5
	zinc oxide	1314-13-2	≤5
	lead	7439-92-1	<0.01
<b>Supplier notification</b>	dicopper oxide	1317-39-1	≥25 - ≤50
	xylene	1330-20-7	≥10 - <22
	zineb	12122-67-7	≤10
	ethylbenzene	100-41-4	≤5
	zinc oxide	1314-13-2	≤5
	lead	7439-92-1	<0.01

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

## State regulations



## Section 15. Regulatory information

- Massachusetts** : The following components are listed: XYLENE; ZINEB; ETHYL BENZENE; ZINC OXIDE FUME; PROPYLENE GLYCOL METHYL ETHER; titanium dioxide
- New York** : The following components are listed: Xylene mixed; Ethylbenzene
- New Jersey** : The following components are listed: dicopper oxide; XYLENES; ZINEB; ETHYL BENZENE; ZINC OXIDE; PROPYLENE GLYCOL MONOMETHYL ETHER; titanium dioxide; ETHYL ALCOHOL
- Pennsylvania** : The following components are listed: dicopper oxide; BENZENE, DIMETHYL-; ROSIN CORE SOLDER PYROLYSIS PRODUCTS; ZINEB; BENZENE, ETHYL-; ZINC OXIDE FUME; 2-PROPANOL, 1-METHOXY-; titanium dioxide

### California Prop. 65

**WARNING:** This product can expose you to chemicals including cadmium and Lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Ethylbenzene, Titanium dioxide and Silica, crystalline, which are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
ethylbenzene	Yes.	No.	Yes.	-
titanium dioxide	Yes.	No.	-	-
quartz, alveolar (<10 µm)	Yes.	No.	-	-
cadmium	Yes.	Yes.	Yes.	Yes.
lead	Yes.	Yes.	Yes.	Yes.

### 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.

### International lists

#### National inventory

- Australia** : Not determined.
- Canada** : Not determined.
- China** : Not determined.
- Europe** : Not determined.
- Japan** : Not determined.
- Malaysia** : Not determined.
- New Zealand** : Not determined.
- Philippines** : Not determined.
- Republic of Korea** : Not determined.
- Taiwan** : Not determined.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	*	3
Flammability		3
Physical hazards		0

**Caution:** HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### National Fire Protection Association (U.S.A.)



### Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 3	On basis of test data
ACUTE TOXICITY (oral) - Category 4	Calculation method
SKIN IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method

### History

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**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.