

SAFETY DATA SHEET



SeaMate

(In accordance with Article 41, Paragraph 1, of Industrial Safety and Health Act)

Section 1. Chemical product and company identification

- A. Product name** : SeaMate
Label No. : 9140
Product description : Paint.
Product type : Liquid.

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

Identified uses

Use in coatings - Professional use

- C. Supplier/Manufacturer** : Chokwang Jotun Ltd.
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Section 2. Hazards identification

- A. Hazard classification** : 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 (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
ACUTE AQUATIC HAZARD - Category 1
LONG-TERM AQUATIC HAZARD - Category 1

B. GHS label elements, including precautionary statements

Symbol :



Signal word : Danger.

Hazard statements : Flammable liquid and vapour.
Harmful if swallowed or if inhaled.
Causes serious eye damage.
Causes skin irritation.
May cause an allergic skin reaction.
Suspected of damaging the unborn child.
May cause respiratory irritation.
Very toxic to aquatic life with long lasting effects.

Precautionary statements

Section 2. Hazards identification

- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapour. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
- Response** : Collect spillage. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical attention. 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 physician.
- Storage** : Store locked up. Store in a well-ventilated place. Keep cool.
- Disposal** : 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).
- C. 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** : 9140

Ingredient name	Synonyms	CAS number	%
dicopper oxide	dicopper oxide	1317-39-1	30-40
xylene	xylene	1330-20-7	10-20
iron(iii)oxide	C.I. Pigment Red 101 (iron (III) oxide)	1309-37-1	2.5-10
ethylbenzene	ethylbenzene	100-41-4	2.5-10
colophony	rosin	8050-09-7	2.5-10
zineb	zineb	12122-67-7	2.5-10
zinc oxide	zinc oxide	1314-13-2	1-2.5
Solvent naphtha (petroleum), light arom.	aromatic hydrocarbons C8-C10	64742-95-6	1-2.5
bis(1-hydroxy-1h-pyridine-2-thionato-o,s) copper	Copper pyrithione	14915-37-8	1-2.5
1-methoxy-2-propanol	1-methoxy-2-propanol	107-98-2	1-2.5

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

- A. 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.
- B. 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.
- C. 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.
- D. Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
- E. 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

- A. Extinguishing media**
- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.
- B. Specific hazards arising from the chemical** : Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. 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.

Section 5. Firefighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 nitrogen oxides
 sulfur oxides
 metal oxide/oxides
- C. 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.
- 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.

Section 6. Accidental release measures

- A. Personal precautions, protective equipment and emergency procedures** : 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.
- B. 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.
- C. 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

A. 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.

Section 7. Handling and storage

- 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.
- B. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

A. Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
dicopper oxide	고용노동부 (Republic of Korea, 7/2018). TWA: 0.1 mg/m ³ 8 hours. Form: Fume
xylene	고용노동부 (Republic of Korea, 7/2018). STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.
iron(iii)oxide	고용노동부 (Republic of Korea, 7/2018). Notes: as Fe TWA: 5 mg/m ³ , (as Fe) 8 hours. Form: 고용노동부 (Republic of Korea, 7/2018). TWA: 5 mg/m ³ , (as Fe) 8 hours. Form: Fume
ethylbenzene	고용노동부 (Republic of Korea, 7/2018). STEL: 125 ppm 15 minutes. TWA: 100 ppm 8 hours.
colophony	ACGIH TLV (United States, 3/2018). Skin sensitiser. Inhalation sensitiser.
zinc oxide	고용노동부 (Republic of Korea, 7/2018). STEL: 10 mg/m ³ 15 minutes. Form: Fume TWA: 5 mg/m ³ 8 hours. Form: Fume TWA: 2 mg/m ³ 8 hours. Form: Respirable dust
Solvent naphtha (petroleum), light arom.	Ministry of Labor (Republic of Korea, 5/2002). TWA: 125 mg/m ³ 8 hours. Form: All forms TWA: 25 ppm 8 hours. Form: All forms
1-methoxy-2-propanol	고용노동부 (Republic of Korea, 7/2018). STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.

- B. 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.

C. Personal protective equipment

Section 8. Exposure controls/personal protection

- 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.
- Eye protection** : Use safety eyewear designed to protect against splash of liquids.
- Hand protection** : There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. The breakthrough time must be greater than the end use time of the product. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred. Wear suitable gloves tested to EN374. 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)
- For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. 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.
- Skin protection** : Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.
- 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.

Section 9. Physical and chemical properties

A. Appearance

Physical state : Liquid.

Colour : Red.

B. Odour : Characteristic.

C. Odour threshold : Not available.

D. pH : Not applicable.

E. Melting/freezing point : Not applicable.

F. Boiling point/boiling range : Lowest known value: 120.17°C (248.3°F) (1-methoxy-2-propanol). Weighted average: 137.43°C (279.4°F)

G. Flash point : Closed cup: 27°C (80.6°F)

Burning time : Not applicable.

Burning rate : Not applicable.

Section 9. Physical and chemical properties

- H. Evaporation rate** : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.79 compared with butyl acetate
- I. Flammability (solid, gas)** : Not available.
- J. Lower and upper explosive (flammable) limits** : 0.8 - 13.74%
- K. Vapour pressure** : Highest known value: 1.2 kPa (9.3 mm Hg) (at 20°C) (ethylbenzene). Weighted average: 0.98 kPa (7.35 mm Hg) (at 20°C)
- L. Solubility** : Insoluble in the following materials: cold water and hot water.
Solubility in water : Not available.
- M. Vapour density** : Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.67 (Air = 1)
- N. Relative density** : 1.668 g/cm³
- O. Partition coefficient: n-octanol/water** : Not available.
- P. Auto-ignition temperature** : Lowest known value: 270°C (518°F) (1-methoxy-2-propanol).
- Q. Decomposition temperature** : Not available.
SADT : Not available.
- R. Viscosity** : Kinematic (40°C (104°F)): >0.205 cm²/s (>20.5 mm²/s)
- S. Molecular weight** : Not applicable.

Section 10. Stability and reactivity

- A. Chemical stability** : The product is stable.
Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
- B. 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.
- C. Incompatible materials** : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
- D. Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

- A. Information on likely routes of exposure** : Not available.
- Potential acute health effects**
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Ingestion** : Harmful if swallowed.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Eye contact** : Causes serious eye damage.
- Over-exposure signs/symptoms**
- Inhalation** : Adverse symptoms may include the following:
 respiratory tract irritation
 coughing
 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

Section 11. Toxicological information

Skin contact : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

Eye contact : Adverse symptoms may include the following:
 pain
 watering
 redness

B. Health hazards

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
dicopper oxide	LC50 Inhalation Dusts and mists	Rat	3.34 mg/l	4 hours
xylene	LD50 Oral	Rat	470 mg/kg	-
	LC50 Inhalation Vapour	Rat	20 mg/l	4 hours
ethylbenzene	LD50 Oral	Rat	4300 mg/kg	-
	TDLo Dermal	Rabbit	4300 mg/kg	-
	LC50 Inhalation Gas.	Rabbit	4000 ppm	4 hours
zineb	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
bis(1-hydroxy-1h-pyridine-2-thionato-o,s)copper	LD50 Oral	Rat	1850 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	70 mg/m ³	4 hours
1-methoxy-2-propanol	LD50 Oral	Rat	1075 mg/kg	-
	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	6600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
1-methoxy-2-propanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
xylene	Category 3	Not applicable.	Respiratory tract irritation
zineb	Category 3	Not applicable.	Respiratory tract irritation
Solvent naphtha (petroleum), light arom.	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
1-methoxy-2-propanol	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	Not determined	hearing organs

Aspiration hazard

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

Potential chronic health effects

Chronic toxicity

Not available.

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- 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.

ATE value

Route	Result
Oral	1409.2 mg/kg
Dermal	6777.8 mg/kg
Inhalation (vapours)	50.83 mg/l
Inhalation (dusts and mists)	3.389 mg/l

Section 12. Ecological information

A. Aquatic and terrestrial toxicity

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.

Product/ingredient name	Result	Species	Exposure
dicopper oxide	Acute LC50 0.075 mg/l Fresh water	Fish - Danio rerio	96 hours
	ethylbenzene	Algae	48 hours
zineb	Acute EC50 2.93 mg/l	Daphnia	48 hours
	Acute LC50 4.2 mg/l	Fish	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
	Chronic NOEC 0.05 mg/l Fresh water	Algae - Chlorella vulgaris	96 hours

Section 12. Ecological information

zinc oxide	Acute LC50 1.1 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Solvent naphtha (petroleum), light arom.	Acute EC50 <10 mg/l	Daphnia	48 hours
bis(1-hydroxy-1h-pyridine- 2-thionato-o,s)copper	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
	Acute LC50 0.0043 mg/l	Fish	96 hours

B. 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

C. Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
xylene	3.12	8.1 to 25.9	low
ethylbenzene	3.6	-	low
colophony	1.9 to 7.7	-	high
zineb	1.3	-	-
zinc oxide	-	60960	high
Solvent naphtha (petroleum), light arom.	-	10 to 2500	high
1-methoxy-2-propanol	<1	-	low

D. Mobility in soil





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

E. Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

- A. 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.
- B. Disposal precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. 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

	UN	IMDG	IATA
A. UN number	1263	1263	1263
B. UN proper shipping name	Paint	Paint. Marine pollutant (dicopper oxide, bis(1-hydroxy-1h-pyridine-2-thionato-o,s) copper)	Paint
C. Transport hazard class(es)	3 	3  	3 
D. Packing group	III	III	III
E. Environmental hazards	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.
F. Additional information	Tunnel restriction code: (D/E) Hazard identification number: 30	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules (EmS) F-E, S-E	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 accordance with ADR/RID, IMDG/IMO and ICAO/IATA and national regulation.

Section 15. Regulatory information

A. Regulation according to ISHA

ISHA article 37 (Harmful substances prohibited from manufacture) : None of the components are listed.

ISHA article 38 (Harmful substances requiring permission) : None of the components are listed.

B. Regulation according to AREC & CCA

AREC Toxic chemicals : Not applicable

AREC Article 32 (Banned) : None of the components are listed.

AREC Article 32 (Restricted) : None of the components are listed.

AREC Article 17 (TRI) : The following components are listed: Xylene; Ethylbenzene; Copper and its compounds; Zinc and its compounds; Zinc and its compounds; Copper and its compounds

Korea inventory : Not determined.

C. Dangerous Materials Safety Management Act : Class: Class 4 - Flammable Liquid
Item: 4. Class 2 petroleums - Water-insoluble liquid
Threshold: 1000 L
Danger category: III
Signal word: Contact with sources of ignition prohibited

D. Wastes regulation : Dispose of contents and container in accordance with all local, regional, national and international regulations.

E. Regulation according to other foreign laws

Section 15. Regulatory information

- Europe inventory** : At least one component is not listed.
- United States inventory (TSCA 8b)** : Not determined.
- Japan inventory** : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.
- Safety, health and environmental regulations specific for the product** : No known specific national and/or regional regulations applicable to this product (including its ingredients).

Section 16. Other information

- A. References** : Not available.
- B. Date of issue/Date of revision** : 29.03.2019
- C. Version** : 1
- Date of printing** : **29.03.2019**
- D. Other**
- ✔ **Indicates information that has changed from previously issued version.**
- 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

Notice to reader

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