

SeaQuantum Pro

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

1.1 Product identifier	
Product name	: SeaQuantum Pro
Product code	: 19941
Product description	: Paint.
Product type	: Liquid.
Other means of identification	: Not available.

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

Use in coatings - Professional use

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

SHE Dept. Jotun AS, Norway +47 33 45 70 00

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 2, H361d (Unborn child) STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended. See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms



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SECTION 2: Hazards identification

SECTION 2. Hazards	IC.	
Signal word		Danger.
Hazard statements	:	 H226 - Flammable liquid and vapour. H302 + H332 - Harmful if swallowed or if inhaled. H318 - Causes serious eye damage. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H361d - Suspected of damaging the unborn child. H335 - May cause respiratory irritation. H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements		
General	4	Not applicable.
Prevention	:	 P201 - Obtain special instructions before use. P261 - Avoid breathing vapour. P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment.
Response	1	P391 - Collect spillage.
		 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P333 + P313 - If skin irritation or rash occurs: Get medical 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 physician.
Storage	1	P403 - Store in a well-ventilated place. P235 - Keep cool.
Disposal	1	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	:	dicopper oxide xylene colophony zineb bis(1-hydroxy-1h-pyridine-2-thionato-o,s)copper hydrocarbons, C9, aromatics, (<0.1% Benzene) fatty acids, C14-18 and C16-18-unsatd., maleated
Supplemental label elements	:	Not applicable.
Additional information	:	Antifouling. Active substances: dicopper oxide (CAS 1317-39-1) 31.3 % w/w, zineb (CAS 12122-67-7) 4.5 % w/w, copper pyrithione (CAS 14915-37-8) 2.5 % w/w. Read Technical Data Sheet and Safety Data Sheet before use. Do not reuse empty containers. For professional use only.
In compliance	1	IMO Antifouling System Convention compliant (AFS/CONF/26).
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles		Not applicable.
Special packaging requirem	en	<u>ts</u>
Containers to be fitted with child-resistant fastenings	:	Not applicable.
Tactile warning of danger	:	Not applicable.
2.3 Other hazards		

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SECTION 2: Hazards identification

Other hazards which do : None known.

not result in classification

SECTION 3: Composition/information on ingredients

3.2 Mixtures :	Mixture			
Product/ingredient name	Identifiers	Weight %	Regulation (EC) No. 1272/2008 [CLP]	Туре
dicopper oxide	REACH #: 01-2119513794-36 EC: 215-270-7 CAS: 1317-39-1 Index: 029-002-00-X	≥25 - ≤50	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)	[1]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥10 - ≤25	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304	[1] [2]
zinc oxide	REACH #: 01-2119463881-32 EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	≤10	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	<10	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304	[1] [2]
colophony	REACH #: 01-2119480418-32 EC: 232-475-7 CAS: 8050-09-7 Index: 650-015-00-7	≤5	Skin Sens. 1, H317	[1]
zineb	EC: 235-180-1 CAS: 12122-67-7 Index: 006-078-00-2	≤5	Flam. Sol. 1, H228 Skin Sens. 1, H317 Repr. 2, H361d (Unborn child) STOT SE 3, H335 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
bis(1-hydroxy-1h-pyridine- 2-thionato-o,s)copper	EC: 238-984-0 CAS: 14915-37-8	≤3	Acute Tox. 4, H302 Acute Tox. 2, H330 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)	[1] [2]
1-methoxy-2-propanol	REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2 Index: 603-064-00-3	≤3	Flam. Liq. 3, H226 STOT SE 3, H336	[1] [2]
hydrocarbons, C9, aromatics, (<0. 1% Benzene)		≤3	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1] [2]
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SECTION 3: Composition/information on ingredients					
fatty acids, C14-18 and C16-18-unsatd., maleated	REACH #: 01-2119976378-19	≤0.3	Skin Irrit. 2, H315 Skin Sens. 1, H317	[1]	
			See Section 16 for the full text of the H statements declared above.		

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

<u>Type</u>

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

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

SECTION 4: First aid measures

4.1 Description of first aid measures

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

4.2 Most important symptoms and effects, both acute and delayed

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

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

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

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

Ingestion may cause nausea, diarrhea and vomiting.

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

Contains colophony, zineb, fatty acids, C14-18 and C16-18-unsatd., maleated. May produce an allergic reaction.

4.3 Indication of any immediate medical attention and special treatment needed

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SECTION 4: First aid measures

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- 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.
 No specific treatment.
- Specific treatments

See toxicological information (Section 11)

SECTION 5: Firefighting measures			
5.1 Extinguishing media			
Suitable extinguishing media	: Recommended: alcohol-resistant foam, CO ₂ , powders, water spray.		
Unsuitable extinguishing media	: Do not use water jet.		

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	1	Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.
Hazardous combustion products	:	Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.
5.3 Advice for firefighters Special protective actions for fire-fighters	:	Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective : Appropriate breathing apparatus may be required. **equipment for fire-fighters**

SECTION 6: Accidental release measures

6.1 Personal precautions, pro	ote	ctive equipment and emergency procedures
For non-emergency personnel	:	Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.
For emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions	:	Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.
6.3 Methods and material for containment and cleaning up	:	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). Preferably clean with a detergent. Avoid using solvents.
6.4 Reference to other sections	:	See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits.

In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing and floors should be of the conducting type.

Keep away from heat, sparks and flame. No sparking tools should be used.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Put on appropriate personal protective equipment (see Section 8). Never use pressure to empty. Container is not a pressure vessel.

Always keep in containers made from the same material as the original one.

Comply with the health and safety at work laws.

Do not allow to enter drains or watercourses.

Information on fire and explosion protection

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage

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

Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific : Not available. solutions

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient	name		Exposure limit va	alues		
xylene		EU OEL (Europe, 2/2017). Absorbed through skin. Notes: of indicative occupational exposure limit values STEL: 442 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 221 mg/m ³ 8 hours.				list
ethylbenzene			2/2017). Absorbed th upational exposure line hours.	-	Notes:	list
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	STEL: 200 ppm 15 minutes.				
	STEL: 884 mg/m ³ 15 minutes.				
bis(1-hydroxy-1h-pyridine-2-thionato-o,s)coppe	r Arch Chemicals (Europe, 2002).				
	TWA: 0.35 mg/m ³ 8 hours.				
1-methoxy-2-propanol	EU OEL (Europe, 2/2017). Absorbed through skin. Notes: list				
	of indicative occupational exposure limit values				
	STEL: 568 mg/m ³ 15 minutes.				
	STEL: 150 ppm 15 minutes.				
	TWA: 375 mg/m ³ 8 hours.				
	TWA: 100 ppm 8 hours.				
hydrocarbons, C9, aromatics, (<0.1% Benzene) EU OEL (Europe, 6/2000).				
	TWA: 100 mg/m ³ 8 hours. Form: All forms				
	TWA: 20 ppm 8 hours. Form: All forms				
procedures atmosphere o	contains ingredients with exposure limits, personal, workplace r biological monitoring may be required to determine the effectivenes on or other control measures and/or the necessity to use respiratory				

atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

			Effects
Short term Inhalation	289 mg/m ³	Workers	Systemic
Short term Inhalation	289 mg/m³	Workers	Local
Long term De		Workers	Systemic
Long term Inhalation	77 mg/m³	Workers	Systemic
Long term De	ermal 108 mg/kg bw/day	Consumers	Systemic
Long term Inhalation	14.8 mg/m ³	Consumers	Systemic
Long term Or	ral 1.6 mg/kg bw/day	Consumers	Systemic
Long term De	ermal 83 mg/kg bw/day	Workers	Systemic
Long term Inhalation	5 mg/m³	Workers	Systemic
Long term De	ermal 83 mg/kg bw/day	Consumers	Systemic
Long term Inhalation	2.5 mg/m ³	Consumers	Systemic
Long term Or	ral 0.83 mg/ kg bw/day	Consumers	Systemic
Short term Inhalation		Workers	Local
	ermal 180 mg/kg bw/day	Workers	Systemic
Long term Inhalation	77 mg/m ³	Workers	Systemic
Long term Inhalation	15 mg/m³	Consumers	Systemic
	Inhalation Short term Inhalation Long term De Long term Inhalation Long term De Long term Of Long term De Long term De Long term Inhalation Long term De Long term Of Short term Inhalation Long term Of Short term Inhalation Long term De	Inhalation289 mg/m³Short term289 mg/m³Inhalation180 mg/kgLong term Dermal180 mg/kgbw/day108 mg/kgbw/day108 mg/kgbw/day108 mg/kgbw/day108 mg/kgbw/day14.8 mg/m³Inhalation1.6 mg/kgLong term Oral1.6 mg/kgbw/day1.6 mg/kgbw/day1.6 mg/kgbw/daybw/dayLong term Dermal83 mg/kgbw/day5 mg/m³Inhalation83 mg/kgLong term Dermal83 mg/kgbw/day2.5 mg/m³Inhalation0.83 mg/Long term Oral0.83 mg/Long term Oral0.83 mg/Long term Dermal180 mg/kgbw/day293 mg/m³Inhalation180 mg/kgbw/day1.6 mg/m³Inhalation15 mg/m³	Inhalation289 mg/m³WorkersShort term289 mg/m³WorkersInhalation180 mg/kgWorkersLong term Dermal180 mg/kgWorkersInhalation77 mg/m³WorkersInhalation108 mg/kgConsumersLong term Dermal108 mg/kgConsumersInhalation108 mg/kgConsumersLong term Dermal1.6 mg/kgConsumersInhalation1.6 mg/kgWorkersLong term Oral1.6 mg/kgWorkersLong term Dermal83 mg/kgWorkersInhalation5 mg/m³WorkersLong term Dermal83 mg/kgConsumersInhalation2.5 mg/m³ConsumersLong term Oral0.83 mg/ kg bw/dayConsumersInhalation0.83 mg/ kg bw/dayConsumersInhalation180 mg/kgWorkersInhalation180 mg/kgWorkersInhalation130 mg/m³WorkersLong term Dermal180 mg/kgWorkers

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ECTION 8: Exposure controls	personal prote	CUON		
	Long term Oral	1.6 mg/kg bw/day	Consumers	Systemic
colophony	Long term Dermal	25 mg/kg bw/day	Workers	Systemic
	Long term Inhalation	176 mg/m ³	Workers	Systemic
	Long term Dermal	15 mg/kg bw/day	Consumers	Systemic
	Long term Inhalation	52 mg/m³	Consumers	Systemic
	Long term Oral	15 mg/kg bw/day	Consumers	Systemic
1-methoxy-2-propanol	Short term Inhalation	553.5 mg/ m ³	Workers	Local
	Long term Dermal	50.6 mg/ kg bw/day	Workers	Systemic
	Long term Inhalation	369 mg/m³	Workers	Systemic
	Long term Dermal	18.1 mg/ kg bw/day	Consumers	Systemic
	Long term Inhalation	43.9 mg/m³	Consumers	Systemic
	Long term Oral	3.3 mg/kg bw/day	Consumers	Systemic
hydrocarbons, C9, aromatics, (<0.1% Benzene)	Long term Dermal	25 mg/kg bw/day	Workers	Systemic
	Long term Inhalation	150 mg/m ³	Workers	Systemic
	Long term Dermal	11 mg/kg bw/day	Consumers	Systemic
	Long term Inhalation	32 mg/m³	Consumers	Systemic
	Long term Oral	11 mg/kg bw/day	Consumers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
dicopper oxide	Fresh water	7.8 µg/l	-
	Marine	5.2 µg/l	-
	Sewage Treatment	230 µg/l	-
	Plant	10	
	Fresh water sediment	87 mg/kg dwt	-
	Marine water sediment	676 mg/kg dwt	-
	Soil	65 mg/kg dwt	-
xylene	Fresh water	0.327 mg/l	-
	Marine	0.327 mg/l	-
	Sewage Treatment	6.58 mg/l	-
	Plant	C C	
	Fresh water sediment	12.46 mg/kg dwt	-
	Marine water sediment	12.46 mg/kg dwt	-
	Soil	2.31 mg/kg dwt	-
zinc oxide	Fresh water	20.6 µg/l	-
	Marine	6.1 µg/l	-
	Sewage Treatment	52 µg/l	-
	Plant		
	Fresh water sediment	117.8 mg/kg dwt	-
	Marine water sediment	56.5 mg/kg dwt	-
	Soil	35.6 mg/kg dwt	-
ethylbenzene	Fresh water	0.1 mg/l	-
	Marine	0.01 mg/l	-
	Sewage Treatment	9.6 mg/l	-
	Plant		
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SECTION 8: Exposure controls/personal protection

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	Fresh water sediment	13.7 mg/kg dwt	-
	Soil	2.68 mg/kg dwt	-
	Secondary Poisoning	20 mg/kg	-
colophony	Fresh water	0.0054 mg/l	-
	Marine	0.00054 mg/l	-
	Sewage Treatment	1000 mg/l	-
	Plant		
		0.02 mg/kg dwt	-
		0.002 mg/kg dwt	-
	Soil	0.0015 mg/kg dwt	-
1-methoxy-2-propanol	Fresh water	10 mg/l	-
	Marine	1 mg/l	-
	Sewage Treatment	100 mg/l	-
	Plant		
		52.3 mg/kg dwt	-
		5.2 mg/kg dwt	-
	Soil	5.49 mg/kg dwt	-

8.2 Exposure controls	
Appropriate engineering controls	: Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.
Individual protection meas	<u>sures</u>
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	: Use safety eyewear designed to protect against splash of liquids.
Skin protection	
Gloves	 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	: Personnel should wear antistatic clothing made of natural fibres or of high- temperature-resistant synthetic fibres.
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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.
Environmental exposure controls	: Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical	and chemical properties
Appearance	
Physical state	: Liquid.
Colour	: Various
Odour	: Characteristic.
Odour threshold	: Not applicable.
рН	: Not applicable.
Melting point/freezing point	: Not applicable.
Initial boiling point and boiling range	: Lowest known value: 120.17°C (248.3°F) (1-methoxy-2-propanol). Weighted average: 137.2°C (279°F)
Flash point	: Closed cup: 27°C
Evaporation rate	: Highest known value: 0.84 (ethylbenzene) Weighted average: 0.79compared with butyl acetate
Flammability (solid, gas)	: Not applicable.
Upper/lower flammability or explosive limits	: 0.8 - 13.74%
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)
Vapour density	: Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.66 (Air = 1)
Density	: 1.722 to 1.743 g/cm ³
Solubility(ies)	: 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): >0.205 cm ² /s (>20.5 mm ² /s)
Explosive properties	: Not available.
Oxidising properties	: Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: Stable under recommended storage and handling conditions (see Section 7).
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: When exposed to high temperatures may produce hazardous decomposition products.
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SECTION 10: Stability and reactivity

10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

10.6 Hazardous

Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

decomposition products

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

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

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

Ingestion may cause nausea, diarrhea and vomiting.

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

Contains colophony, zineb, fatty acids, C14-18 and C16-18-unsatd., maleated. May produce an allergic reaction. Acute toxicity

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

Conclusion/Summary : Not available.

Acute toxicity estimates

Route	ATE value
Oral	1464.8 mg/kg
Dermal	7122 mg/kg
Inhalation (vapours)	53.41 mg/l
Inhalation (dusts and mists)	2.189 mg/l

Irritation/Corrosion

SECTION 11: Toxicological information

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	-
Conclusion/Summary	: Not available.				
Sensitisation					
Conclusion/Summary	: Not available.				

Conclusion/Summary	i not avaliable.
Mutagenicity	
Conclusion/Summary	: Not available.
Carcinogenicity	
Conclusion/Summary	: Not available.
Reproductive toxicity	
Conclusion/Summary	: Not available.
Teratogenicity	
Conclusion/Summary	: Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3	Not applicable.	Respiratory tract irritation
zineb	Category 3	Not applicable.	Respiratory tract irritation
1-methoxy-2-propanol	Category 3	Not applicable.	Narcotic effects
hydrocarbons, C9, aromatics, (<0.1% Benzene)	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	Not determined	hearing organs

Aspiration hazard

Product/ingredient name	Result	
xylene	ASPIRATION HAZARD - Category 1	
ethylbenzene	ASPIRATION HAZARD - Category 1	
hydrocarbons, C9, aromatics, (<0.1% Benzene)	ASPIRATION HAZARD - Category 1	

Other information

: Not available.

SECTION 12: Ecological information

12.1 Toxicity

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

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

SECTION 12: Ecological information

Product/ingredient name	Result	Species	Exposure
dicopper oxide	Acute LC50 0.075 mg/l Fresh water	Fish - Danio rerio	96 hours
zinc oxide	Acute LC50 1.1 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
ethylbenzene	Acute EC50 7.2 mg/l	Algae	48 hours
-	Acute EC50 2.93 mg/l	Daphnia	48 hours
	Acute LC50 4.2 mg/l	Fish	96 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 0.225 mg/l	Fish	96 hours
	Chronic NOEC 0.05 mg/l Fresh water	Algae - Chlorella vulgaris	96 hours
bis(1-hydroxy-1h-pyridine- 2-thionato-o,s)copper	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
hydrocarbons, C9, aromatics, (<0.1% Benzene)	Acute EC50 <10 mg/l	Daphnia	48 hours
	Acute IC50 <10 mg/l	Algae	72 hours
	Acute LC50 <10 mg/l	Fish	96 hours

quantities. This material is very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Conclusion/Summary	: Not available.			
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
dicopper oxide xylene zinc oxide ethylbenzene hydrocarbons, C9, aromatics, (<0.1% Benzene)		-	Not readily Readily Not readily Readily Not readily	

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
xylene	3.12	8.1 to 25.9	low
zinc oxide	-	60960	high
ethylbenzene	3.6	-	low
colophony	1.9 to 7.7	-	high
zineb	1.3	-	-
1-methoxy-2-propanol	<1	-	low
hydrocarbons, C9, aromatics, (<0.1% Benzene)	-	10 to 2500	high

12.4 Mobility in soil	
Soil/water partition coefficient (K _{oc})	: Not available.
Mobility	: Not available.

12.5 Results of PBT and vPvB assessment			
PBT	: Not applicable.		
vPvB	: Not applicable.		

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

Date of issue/Date of revision

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Deschart	
<u>Product</u>	
Methods of disposal	: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non- recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
Hazardous waste	: The classification of the product may meet the criteria for a hazardous waste.
Disposal considerations	: Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.
European waste catalogue (EWC)	: 08 01 11* Waste paint and varnish containing organic solvents or other dangerous substances
Packaging	
Methods of disposal	: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
Disposal considerations	 Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.
Type of packaging	European waste catalogue (EWC)
CEPE Paint Guidelines	15 01 10* packaging containing residues of or contaminated by hazardous substances
Special precautions	: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. 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

	ADR/RID	ADN	IMDG	ΙΑΤΑ
14.1 UN number	1263	1263	1263	1263
14.2 UN proper shipping name	Paint	Paint	Paint. Marine pollutant (dicopper oxide, bis (1-hydroxy-1h- pyridine-2-thionato-o,s) copper)	
14.3 Transport hazard class(es)	3		3	3
Date of issue/Date of re	vision : 29.03.20	19 Date of previous issue	: 29.03.2019	Version : 1.01 14/18

SECTION 14: Transport information				
14.4 Packing group				
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Additional information	Tunnel restriction code: (D/E) Hazard identification number: 30	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Emergency</u> <u>schedules (EmS)</u> F-E, <u>S-E</u>	The environmentally hazardous substance mark may appear if required by other transportation regulations.

14.6 Special precautions for	: Transport within user's premises: always transport in closed containers that are
user	upright and secure. Ensure that persons transporting the product know what to do in
	the event of an accident or spillage.

14.7 Transport in bulk	: Not applicable.
according to Annex II of	
Marpol and the IBC Code	

SECTION 15: Regulatory information

15.1 Safety, health and envir	onmental regulations/legislation specified	c for the substance or mi	xture
EU Regulation (EC) No. 1907/2006 (REACH)			
Annex XIV - List of substa	nces subject to authorisation		
Annex XIV			
None of the components a	re listed.		
Substances of very high	<u>concern</u>		
None of the components a	re listed.		
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Not applicable.		
Other EU regulations			
VOC	: The provisions of Directive 2004/42/EC product label and/or technical data she		uct. Refer to the
VOC for Ready-for-Use Mixture	: Not applicable.		
Europe inventory	: At least one component is not listed.		
Industrial emissions (integrated pollution prevention and control) - Air	: Listed		
Ozone depleting substand	<u>es (1005/2009/EU)</u>		
Not listed.			
Prior Informed Consent (P	<u>IC) (649/2012/EU)</u>		
Ingredient name		Annex	Status
Zineb		Annex I - Part 1	Listed
Date of issue/Date of revision	: 29.03.2019 Date of previous issue	: 29.03.2019 Ve	ersion : 1.01 15/18

SECTION 15: Regulatory information

Seveso Directive

This product may add to the calculation for determining whether a site is within the scope of the Seveso Directive on major accident hazards.

National regulations

Industrial use

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

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

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.

15.2 Chemical safety	: Not applicable.
assessment	

assessment

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and	: ATE = Acute Toxicity Estimate
acronyms	CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.
	1272/2008]
	DMEL = Derived Minimal Effect Level
	DNEL = Derived No Effect Level
	EUH statement = CLP-specific Hazard statement
	PBT = Persistent, Bioaccumulative and Toxic
	PNEC = Predicted No Effect Concentration
	RRN = REACH Registration Number
	vPvB = Very Persistent and Very Bioaccumulative

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

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Acute Tox. 4, H302	Calculation method
Acute Tox. 4, H332	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
Repr. 2, H361d (Unborn child)	Calculation method
STOT SE 3, H335	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method

Full text of abbreviated H statements

SeaQuantum Pro		
SECTION 16: Other inform	nation	
H225	Highly flammable liquid and vapour.	
H226	Flammable liquid and vapour.	
H228	Flammable solid.	
H302	Harmful if swallowed.	
H304	May be fatal if swallowed and enters airways.	
H312	Harmful in contact with skin.	
H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H318	Causes serious eye damage.	
H319	Causes serious eye irritation.	
H330	Fatal if inhaled.	
H332	Harmful if inhaled.	
H335	May cause respiratory irritation.	
H336	May cause drowsiness or dizziness.	
H361d	Suspected of damaging the unborn child.	
H373	May cause damage to organs through prolonged or repeated	
	exposure.	
H400	Very toxic to aquatic life.	
H410	Very toxic to aquatic life with long lasting effects.	
H411	Toxic to aquatic life with long lasting effects.	
Full text of classifications [CLP/GHS	<u>ର</u> ା	
Acute Tox. 2, H330	ACUTE TOXICITY (inhalation) - Category 2	
Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4	
Acute Tox. 4, H312	ACUTE TOXICITY (dermal) - Category 4	
Acute Tox. 4, H332	ACUTE TOXICITY (inhalation) - Category 4	
Aquatic Acute 1, H400	ACUTE AQUATIC HAZARD - Category 1	
Aquatic Chronic 1, H410	LONG-TERM AQUATIC HAZARD - Category 1	
Aquatic Chronic 2, H411	LONG-TERM AQUATIC HAZARD - Category 2	
Asp. Tox. 1, H304	ASPIRATION HAZARD - Category 1	
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	
	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	
Eye Irrit. 2, H319	FLAMMABLE LIQUIDS - Category 2	
Flam. Liq. 2, H225 Flam. Liq. 2, H226	0,	
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3	
Flam. Sol. 1, H228	FLAMMABLE SOLIDS - Category 1	
Repr. 2, H361d	REPRODUCTIVE TOXICITY (Unborn child) - Category 2	
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2	
Skin Sens. 1, H317	SKIN SENSITISATION - Category 1	
STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED	
	EXPOSURE - Category 2	
STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	
	(Respiratory tract irritation) - Category 3	
STOT SE 3, H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	
	(Narcotic effects) - Category 3	
Date of printing : 29.0	03.2019	
	03.2010	

Date of issue/ Date of	: 29.03.2019
revision	
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Notice to reader

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

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

SECTION 16: Other information

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