SAFETY DATA SHEET



SeaQuantum X200 - 3

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

1.1 Product identifier

Product name : SeaQuantum X200 - 3

Product code : 17300
Product description : Paint.

Product type : Liquid.

Other means of : Not available.

identification

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

Jotun A/S Jotun Paints (Europe) Ltd.

P.O.Box 2021 Stather Road

3202 Sandefjord Flixborough, Scunthorpe

Norway North Lincolnshire

Tel: + 47 33 45 70 00 DN15 8RR Fax: +47 33 45 72 42 England

E-mail: SDSJotun@jotun.no

Tel: +44 17 24 40 00 00 Fax: +44 17 24 40 01 00

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : Contact NHS Direct; phone 0845 4647 or 111. Open 24/7.

Supplier

Telephone number : +47 33 45 70 00 Jotun Norway (head office)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK 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 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 1/19

SECTION 2: Hazards identification

Hazard pictograms

.









Signal word

: Danger.

Hazard statements

: H226 - Flammable liquid and vapour.

H302 + H332 - Harmful if swallowed or if inhaled.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

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

H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

General

: Not applicable.

Prevention

: P280 - Wear protective gloves. Wear 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 vapour.

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

Response

: P391 - Collect spillage.

P314 - Get medical advice/attention if you feel unwell.

P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.

P362 + P364 - Take off contaminated clothing and wash it before reuse.

P302 + P352 - IF ON SKIN: Wash with plenty of water.

P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor.

Storage

: Not applicable.

Disposal

: P501 - Dispose of contents and container in accordance with all local, regional,

national and international regulations.

Supplemental label

elements

: Not applicable.

Additional information

: Antifouling. Active substances: dicopper oxide (CAS 1317-39-1) 49.8 % w/w, copper pyrithione (CAS 14915-37-8) 1.6 % w/w. Do not reuse empty containers. Read Technical Data Sheet and Safety Data Sheet before use. For professional use only.

Additional information

: HSE No. 9500 DO NOT BREATHE SPRAY MIST. WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS OF A CONTRASTING COLOUR TO THE PRODUCT BEING APPLIED, UNDERNEATH A DISPOSABLE COVERALL WITH HOOD), SUITABLE GLOVES AND IMPERVIOUS FOOTWEAR THAT PROTECTS THE LOWER LEG. WEAR SUITABLE RESPIRATORY EQUIPMENT (such as air-fed respiratory protective equipment with combined protective helmet and visor) when spraying. WEAR SUITABLE RESPIRATORY EQUIPMENT (such as FFP3 or an equivalent standard) when working in the vicinity of the spray plume. DISPOSE OF PROTECTIVE GLOVES after use.

In compliance

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

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

: Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant

fastenings

: Not applicable.

Tactile warning of danger

: Not applicable.

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 2/19

SECTION 2: Hazards identification

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification

: None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures	: Mixture
3.2 MIXIUIES	

Product/ingredient name	Identifiers	%	Classification	Type
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,	[1] [2]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥10 - ≤15	H410 (M=10) 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 Aquatic Chronic 3,	[1] [2]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≤5	H412 Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	[1] [2]
zinc oxide	REACH #: 01-2119463881-32 EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	≤5	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
colophony	REACH #: 01-2119480418-32 EC: 232-475-7 CAS: 8050-09-7 Index: 650-015-00-7	≤3	Skin Sens. 1, H317	[1] [2]
hydrocarbons, C9, aromatics	REACH #: 01-2119455851-35 EC: 918-688-5 CAS: 64742-95-6	≤2.9	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	[1]
copper pyrithione	EC: 238-984-0 CAS: 14915-37-8	≤1.7	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 2, H330 Eye Dam. 1, H318 Repr. 2, H361d STOT SE 3, H335 STOT RE 1, H372 (nervous system) Aquatic Acute 1, H400	[1] [2]

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 3/19

SeaQuantum X200 - 3				
SECTION 3: Composition/information on ingredients REACH #: 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7 Index: 022-006-00-2 See Section 16 for				
titanium dioxide	01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7	≤1	Aquatic Chronic 1, H410 (M=100) Carc. 2, H351	[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.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [*] The classification as a carcinogen by inhalation applies only to mixtures placed on the market in powder form containing 1% or more of titanium dioxide particles with aerodynamic diameter ≤ 10 μm not bound within a matrix.

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

SECTION 4: First aid measures

4.1 Description of 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

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.

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 4/19

SECTION 4: First aid measures

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eve contact : Adverse symptoms may include the following:

> pain watering redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

: Adverse symptoms may include the following: Ingestion

stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

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.

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, CO2, 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 : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained

and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products

: Decomposition products may include the following materials: carbon dioxide

carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides

5.3 Advice for firefighters

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.

Date of issue/Date of revision : 05.04.2024 : 21.04.2023 Version : 1.03 5/19 Date of previous issue

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 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.

6.3 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 noncombustible, 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.

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

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. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03

SECTION 7: Handling and storage

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonne	50000 tonne
E1	100 tonne	200 tonne

See Technical Data Sheet / packaging for further information.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific : Not available.

solutions

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
dicopper oxide	EH40/2005 WELs (United Kingdom (UK), 1/2020). [Copper and
	compounds]
	STEL: 2 mg/m³, (as Cu) 15 minutes. Form: Dusts and Mists
	TWA: 1 mg/m³, (as Cu) 8 hours. Form: Dusts and Mists
xylene	EH40/2005 WELs (United Kingdom (UK), 1/2020). [xylene, o-,m-,
	p- or mixed isomers] Absorbed through skin.
	STEL: 441 mg/m³ 15 minutes.
	STEL: 100 ppm 15 minutes.
	TWA: 220 mg/m ³ 8 hours.
	TWA: 50 ppm 8 hours.
ethylbenzene	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed
	through skin.
	STEL: 552 mg/m³ 15 minutes.
	STEL: 125 ppm 15 minutes.
	TWA: 100 ppm 8 hours.
	TWA: 441 mg/m ³ 8 hours.
colophony	EH40/2005 WELs (United Kingdom (UK), 1/2020). Inhalation
,	sensitiser.
	STEL: 0.15 mg/m³ 15 minutes. Form: Fume
	TWA: 0.05 mg/m³ 8 hours. Form: Fume
copper pyrithione	EH40/2005 WELs (United Kingdom (UK), 1/2020). [Copper and
	compounds]
	STEL: 2 mg/m³, (as Cu) 15 minutes. Form: Dusts and Mists
	TWA: 1 mg/m³, (as Cu) 8 hours. Form: Dusts and Mists
	1 W. T. Highin, (as Sa) o hears. I offit. Busts and Wists

Biological exposure indices

Product/ingredient name	Exposure indices
	EH40/2005 BMGVs (United Kingdom (UK), 8/2018) [Xylene, o-, m-, p- or mixed isomers] BGV: 650 mmol/mol creatinine, methyl hippuric acid [in urine]. Sampling time: post shift.

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 7/19

SECTION 8: Exposure controls/personal protection

procedures

Recommended monitoring : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

	I	Exposure	Value	Population	Effects
zícopper oxide	DNEL	Long term Inhalation	1 mg/m³	Workers	Local
	DNEL	Long term Inhalation	1 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	137 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	0.041 mg/ kg bw/day	General population	Systemic
	DNEL	Short term Oral	0.082 mg/ kg bw/day	General population	Systemic
xylene	DNEL	Long term Oral	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Local
	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	125 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	221 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	221 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	260 mg/m ³	General population	Local
	DNEL	Short term Inhalation	260 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	442 mg/m³	Workers	Local
	DNEL	Short term Inhalation	442 mg/m³	Workers	Systemic
ethylbenzene	DMEL	Long term Inhalation	442 mg/m³	Workers	Local
	DMEL	Short term Inhalation	884 mg/m³	Workers	Systemic
	DNEL	Long term Oral	1.6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	15 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	77 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	293 mg/m³	Workers	Local
zinc oxide	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	5 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	2.5 mg/m ³	[Consumers] General population	Systemic
	DNEL	Long term Oral	0.83 mg/ kg bw/day	[Consumers] General population	Systemic

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 8/19

SECTION 8: Exposure controls/personal protection

•	_	-			
colophony	DNEL	Long term Dermal	25 mg/kg	[Consumers] Workers	Systemic
colophichy	5.122	Long term Derma	bw/day		
	DNEL	Long term Inhalation	176 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	15 mg/kg	General	Systemic
			bw/day	population [Consumers]	
	DNEL	Long term	52 mg/m³	General	Systemic
		Inhalation		population	
	DNEL	Long term Oral	15 mg/kg	[Consumers] General	Systemic
		J	bw/day	population	,
hydrocarbons, C9, aromatics	DNEL	Long term Dermal	12.5 mg/	[Consumers] Workers	Systemic
,			kg bw/day		
	DNEL	Long term Inhalation	151 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	7.5 mg/kg	General	Systemic
			bw/day	population [Consumers]	
	DNEL	Long term	32 mg/m³	General	Systemic
		Inhalation		population [Consumers]	
	DNEL	Long term Oral	7.5 mg/kg	General	Systemic
			bw/day	population [Consumers]	
	DNEL	Long term	0.41 mg/m ³	General	Systemic
	DNEL	Inhalation Long term	1.9 mg/m³	population Workers	Systemic
	DINEL	Inhalation	1.9 mg/m	VVOIKEIS	Systernic
	DNEL	Long term Inhalation	178.57 mg/ m³	General	Local
	DNEL	Short term	640 mg/m ³	population General	Local
	DNEI	Inhalation	927 E mal	population Workers	Local
	DNEL	Long term Inhalation	837.5 mg/ m³	vvoikeis	Local
	DNEL	Short term	1066.67	Workers	Local
	DNEL	Inhalation Short term	mg/m³ 1152 mg/	General	Systemic
	חארו	Inhalation	m ³	population	Constantia
	DNEL	Short term Inhalation	1286.4 mg/ m³	Workers	Systemic
titanium dioxide	DNEL	Long term	28 μg/m³	General	Local
	DNEL	Inhalation Long term	170 μg/m³	population Workers	Local
		Inhalation	· - 1-3,		

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		
	Fresh water sediment	87 mg/kg dwt	-
	Marine water sediment	676 mg/kg dwt	-
	Soil	65 mg/kg dwt	-
kylene	Fresh water	0.327 mg/l	-
•	Marine	0.327 mg/l	-
	Sewage Treatment	6.58 mg/l	-
	Plant		
	Fresh water sediment	12.46 mg/kg dwt	-
	Marine water sediment	12.46 mg/kg dwt	-

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 9/19

SECTION 8: Exposure controls/personal protection

	I =	I =	1
	Soil	2.31 mg/kg dwt	-
ethylbenzene	Fresh water	0.1 mg/l	-
	Marine	0.01 mg/l	-
	Sewage Treatment	9.6 mg/l	-
	Plant	-	
	Fresh water sediment	13.7 mg/kg dwt	-
	Soil	2.68 mg/kg dwt	-
	Secondary Poisoning	20 mg/kg	-
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	-
colophony	Fresh water	0.0054 mg/l	-
		0.00054 mg/l	-
	Sewage Treatment	1000 mg/l	-
	Plant		
	Fresh water sediment	0.02 mg/kg dwt	-
		0.002 mg/kg dwt	-
		0.0015 mg/kg dwt	-
		1 3 3	

8.2 Exposure controls

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.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying to ISO 16321-1:2022 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 10/19

SECTION 8: Exposure controls/personal protection

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

Not recommended, gloves(breakthrough time) < 1 hour: neoprene (> 0.35 mm), butyl rubber (> 0.4 mm), PVC (> $0.5 \, \text{mm}$

Recommended, gloves(breakthrough time) > 8 hours: nitrile rubber (> 0.75 mm), 4H/Silver Shield® (> 0.07 mm), Teflon (> 0.35 mm), polyvinyl alcohol (PVA) (> 0.3 mm)

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

: Use chemical-resistant protective suit / disposable overall.

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: If workers are exposed to concentrations above the exposure limit, they must use a respirator according to EN 140. Use respiratory mask with charcoal and dust filter when spraying this product, according to EN 14387 (as filter combination A2-P2). In confined spaces, use compressed-air or fresh-air respiratory equipment. When use of roller or brush, consider use of charcoalfilter.

Environmental exposure controls

: Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid. Colour Red

Odour : Characteristic. **Odour threshold** : Not applicable. Melting point/freezing point : Not applicable.

Initial boiling point and

boiling range

: Lowest known value: 136.1°C (277°F) (ethylbenzene). Weighted average:

140.81°C (285.5°F)

Flammability Upper/lower flammability or

explosive limits

: 0.8 - 7.6%

: Not applicable.

Flash point : Closed cup: 25°C (77°F)

Lowest known value: 280 to 470°C (536 to 878°F) (hydrocarbons, C9, **Auto-ignition temperature**

aromatics).

Decomposition temperature

: Not available.

pН : Not applicable.

Viscosity Kinematic (40°C): >20.5 mm²/s

Solubility(ies)

Media	Result
cold water	Not soluble
hot water	Not soluble

Partition coefficient: n-octanol/: Not available.

water

Date of issue/Date of revision : 05.04.2024 : 21.04.2023 Version : 1.03 11/19 Date of previous issue

SECTION 9: Physical and chemical properties

Vapour pressure : Highest known value: 1.2 kPa (9.3 mm Hg) (at 20°C) (ethylbenzene). Weighted

average: 0.89 kPa (6.68 mm Hg) (at 20°C)

Evaporation rate : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.79compared

with butyl acetate

Density : 1.935 g/cm³

Vapour density : Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.7 (Air = 1)

Explosive properties : Not available.

Oxidising properties : Not available.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

10.3 Possibility of

hazardous reactions

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).

: 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.

Yoon away from the following materi

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.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
dícopper oxide	LC50 Inhalation Dusts and	Rat	3.34 mg/l	4 hours
	mists			
	LD50 Oral	Rat	1340 mg/kg	-
xylene	LC50 Inhalation Vapour	Rat	11 mg/l	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
	TDLo Dermal	Rabbit	4300 mg/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat - Male	11 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
copper pyrithione	LC50 Inhalation Dusts and	Rat	70 mg/m³	4 hours
	mists			
	LD50 Dermal	Rabbit	300 mg/kg	-
	LD50 Oral	Rat	200 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
SeaQuantum X200 - 3	929.7	5542.0	N/A	58.8	2.7
dicopper oxide	500	N/A	N/A	N/A	3.34
xylene	4300	1100	N/A	11	N/A
ethylbenzene	3500	N/A	N/A	11	N/A
copper pyrithione	200	300	N/A	N/A	0.07

Irritation/Corrosion

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 12/19

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
dicopper oxide	Eyes - Cornea opacity	Rabbit	-	72 hours	-
	Eyes - Redness of the	Rabbit	-	48 hours	-
	conjunctivae				
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	
copper pyrithione	Eyes - Severe irritant	Mammal -	-	-	-
		species			
	Olain Innitana	unspecified			
	Skin - Irritant	Mammal -	-	-	-
		species			
titanium dioxide	Skin - Mild irritant	unspecified Human		72 hours	
illanium dioxide	Skiii - iviiiu ii iidalit	пинан	_	12 Hours	-

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
∞olophony	skin	Mammal - species unspecified	Sensitising

Mutagenicity

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
popper pyrithione	-	-		unspecified	Route of exposure unreported	-

Developmental effects : No known significant effects or critical hazards.Fertility effects : No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
hydrocarbons, C9, aromatics	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
copper pyrithione	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
	Category 2 Category 1		hearing organs nervous system

Aspiration hazard

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 13/19

SECTION 11: Toxicological information

Product/ingredient name	Result
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
hydrocarbons, C9, aromatics	ASPIRATION HAZARD - Category 1

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation: Harmful if inhaled.

Skin contact: Causes skin irritation. May cause an allergic skin reaction.

Ingestion: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : No specific data.

Skin contact: Adverse symptoms may include the following:

pain or irritation redness

blistering may occur

Ingestion : Adverse symptoms may include the following:

stomach pains

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.

Other information : None identified.

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.

Product/ingredient name	Result	Species	Exposure
dicopper oxide	Acute LC50 0.075 mg/l Fresh water	Fish - Zebra danio - Danio rerio	96 hours
	Chronic NOEC 0.001 mg/l	Algae	-
	Chronic NOEC 0.0052 mg/l	Algae	-
xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Daggerblade	48 hours
	. •	grass shrimp - Palaemonetes	
		pugio	
	Acute LC50 13400 µg/l Fresh water	Fish - Fathead minnow -	96 hours
	1 0	Pimephales promelas	
ethylbenzene	Acute EC50 7700 µg/l Marine water	Algae - Diatom - Skeletonema	96 hours
•		costatum	
	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 - Rainbow trout,donaldson	96 hours
		trout - Oncorhynchus mykiss	
	Chronic NOEC 0.02 mg/l Fresh water	Algae - Green algae -	72 hours
	_	Pseudokirchneriella subcapitata	
		- Exponential growth phase	
hydrocarbons, C9, aromatics	Acute EC50 <10 mg/l	Daphnia	48 hours
	Acute IC50 <10 mg/l	Algae	72 hours
	Acute LC50 <10 mg/l	Fish	96 hours
copper pyrithione	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
	Chronic NOEC 0.00046 mg/l	Algae - Skeletonema costatum	120 hours

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 14/19

SECTION 12: Ecological information

<u> </u>			
titanium dioxide	Acute LC50 3 mg/l Fresh water	Crustaceans - Water flea -	48 hours
		Ceriodaphnia dubia - Neonate	
	Acute LC50 6.5 mg/l Fresh water	Daphnia - Water flea - Daphnia	48 hours
		pulex - Neonate	
	Acute LC50 >1000000 μg/l Marine	Fish - Mummichog - Fundulus	96 hours
	water	heteroclitus	

Conclusion/Summary

: 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
copper oxide xylene	-	-	Not readily Readily
ethylbenzene zinc oxide	-	-	Readily Not readily
hydrocarbons, C9, aromatics	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
x ylene	3.12	8.1 to 25.9	low
ethylbenzene	3.6	-	low
zinc oxide	-	28960	high
colophony	1.9 to 7.7	-	high
hydrocarbons, C9, aromatics	-	10 to 2500	high

12.4 Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

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

Product

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

: Yes.

Waste catalogue

Waste code	Waste designation
08 01 11*	Waste paint and varnish containing organic solvents or other dangerous substances

Packaging

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 15/19

SECTION 13: Disposal considerations

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.

Type of packaging	Waste catalogue	
CEPE 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	IATA
14.1 UN number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	Paint	Paint	Paint. Marine pollutant (dicopper oxide)	Paint
14.3 Transport hazard class(es)	3	3	3	3
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

ADR/RID

The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Hazard identification number 30

Tunnel code (D/E)

ADN

: The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

IMDG

: The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules F-E, S-E

IATA

The environmentally hazardous substance mark may appear if required by other transportation regulations.

user

14.6 Special precautions for : 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.

14.7 Transport in bulk according to IMO instruments

: Not available.

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 16/19

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions: Not applicable.

on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category

P5c

E1

EU regulations

Industrial emissions : Not listed

(integrated pollution prevention and control) -

Air

Industrial emissions : Not listed

(integrated pollution prevention and control) -

Water

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.

15.2 Chemical safety assessment

: This product contains substances for which Chemical Safety Assessments are still required.

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 17/19

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate

GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and

Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019

No. 720 and amendments

DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level

EUH statement = GB CLP-specific Hazard statement

N/A = Not available

PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number

SGG = Segregation Group

vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

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
STOT RE 2, H373	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	Calculation method

Full text of abbreviated H statements

_	
⊬ 225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
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.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
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.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 18/19

SECTION 16: Other information

Acute Tox. 2	ACUTE TOXICITY - Category 2
Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Carc. 2	CARCINOGENICITY - Category 2
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

Date of printing : 05.04.2024 Date of issue/ Date of : 05.04.2024

revision

Date of previous issue : 21.04.2023

Version : 1.03

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.

Date of issue/Date of revision : 05.04.2024 Date of previous issue : 21.04.2023 Version : 1.03 19/19