## **SAFETY DATA SHEET**



## Reveal Edge B (C101)

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

1.1 Product identifier

Product name : Reveal Edge B (C101)

Product code : 46392

Product type : Powder coating.

Other means of : Not available.

identification

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

Use in coatings - Industrial use

1.3 Details of the supplier of the safety data sheet

Jotun A/S JOTUN CZECH a.s.
P.O.Box 2021 NA ROVNEM 866
3202 Sandefjord 400 04 TRMICE
Norway CZECH REPUBLIC

Tel: +47 33 45 70 00

Fax: +47 33 45 72 42 Phone : + 420 477 828 969 E-mail: SDSJotun@jotun.no Fax.: + 420 477 828 962 sdsjotun@jotun.com

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

Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

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

Hazard pictograms





Signal word : Warning.

**Hazard statements**: H317 - May cause an allergic skin reaction.

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

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## **SECTION 2: Hazards identification**

**Precautionary statements** 

General : Not applicable.

**Prevention**: P280 - Wear protective gloves.

P273 - Avoid release to the environment.

P261 - Avoid breathing dust.

Response : P391 - Collect spillage.

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.

Storage : Not applicable.

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

national and international regulations.

Supplemental label

elements

: EUH212 - Warning! Hazardous respirable dust may be formed when used. Do not

breathe dust.Not applicable.

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

Special packaging requirements

Containers to be fitted

with child-resistant

fastenings

: Not applicable.

Tactile warning of danger : Not applicable.

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

Product/ingredient name	Identifiers	%	Classification	Type
parium sulfate	EC: 231-784-4 CAS: 7727-43-7	≥10 - ≤25	Not classified.	[2]
copper	REACH #: 01-2119480154-42 EC: 231-159-6 CAS: 7440-50-8	≤10	Acute Tox. 4, H302 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 2, H411	[1] [2]
1,2,4,5-benzenetetracarboxylic acid, compd. with 4,5-dihydro-2-phenyl-1h-imidazole (1:1)	REACH #: 01-2119453802-40 EC: 259-224-4 CAS: 54553-90-1	≤5	Aquatic Chronic 3, H412	[1]
zinc di(benzothiazol-2-yl) disulphide	REACH #: 01-2119493020-50 EC: 205-840-3 CAS: 155-04-4	≤3	Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
titanium dioxide	REACH #: 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7	≤3	Carc. 2, H351 (inhalation)	[1] [2] [*]

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Reveal Edge B (C101)				
SECTION 3: Comp	position/information on i	ngredients		
titanium dioxide	Index: 022-006-00-2 REACH #: 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7 Index: 022-006-00-2	≤0.3	Carc. 2, H351 (inhalation)	[1] [2] [*]
			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** 

: 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. Get medical attention if irritation occurs.

Inhalation

: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Get medical attention if adverse health effects persist or are severe. 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

: 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. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: 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. Get medical attention if adverse health effects persist or are severe. 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. 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

## **Over-exposure signs/symptoms**

**Eye contact** : No specific data. **Inhalation** : No specific data.

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## **SECTION 4: First aid measures**

Skin contact : Adverse symptoms may include the following:

> irritation redness

Ingestion No specific data.

#### 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, CO<sub>2</sub> blanket, water spray or mist.

**Unsuitable extinguishing** media

: Do not use water jet.

Do not use inert gas under high pressure (e.g. CO2).

## 5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : This material is very toxic to aquatic life. This material is 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

Fine dust clouds may form explosive mixtures with air.

#### 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

**Special protective** equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## SECTION 6: Accidental release measures

## 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. 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

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## SECTION 6: Accidental release measures

#### **Small spill**

: Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

## Large spill

: Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. 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 ingest. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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

Store in accordance with local regulations. 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. 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**

Category	Notification and MAPP threshold	Safety report threshold
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

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## **SECTION 8: Exposure controls/personal protection**

## 8.1 Control parameters

## **Occupational exposure limits**

Dust Limit: 10 mg/m³ (TWA of total inhalable dust) and 4 mg/m³ (TWA of respirable)

Product/ingredient name	Exposure limit values
barium sulfate	EH40/2005 WELs (United Kingdom (UK), 1/2020).
	TWA: 4 mg/m³ 8 hours. Form: respirable dust TWA: 10 mg/m³ 8 hours. Form: inhalable dust
copper	EH40/2005 WELs (United Kingdom (UK), 1/2020). Notes: as Cu
	TWA: 0.2 mg/m³, (as Cu) 8 hours. Form: Fume
titanium dioxide	EH40/2005 WELs (United Kingdom (UK), 1/2020).
	TWA: 4 mg/m³ 8 hours. Form: respirable
	TWA: 10 mg/m³ 8 hours. Form: total inhalable
titanium dioxide	EH40/2005 WELs (United Kingdom (UK), 1/2020).
	TWA: 4 mg/m <sup>3</sup> 8 hours. Form: respirable
	TWA: 10 mg/m³ 8 hours. Form: total inhalable

## **Biological exposure indices**

No exposure indices known.

Recommended monitoring procedures

: 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**

Product/ingredient name	Type	Exposure	Value	Population	Effects
barium sulfate	DNEL	Long term Inhalation	10 mg/m³	Workers	Local
	DNEL	Long term Inhalation	10 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	10 mg/m³	Workers	Systemic
	DNEL	Long term Oral	13000 mg/ kg bw/day	General population	Systemic
copper	DNEL	Long term Dermal	137 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	137 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic
1,2,4,5-benzenetetracarboxylic acid, compd. with 4,5-dihydro-2-phenyl-1h-imidazole (1:1)	DNEL	Long term Oral	0.272 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.272 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.473 mg/ m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	0.544 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.92 mg/m³	Workers	Systemic
zinc di(benzothiazol-2-yl) disulphide	DNEL	Long term Oral	0.6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	1 mg/m³	General population	Systemic
	DNEL	Long term Dermal	1.2 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	3.3 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	5.9 mg/m³	Workers	Systemic

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## **SECTION 8: Exposure controls/personal protection**

titanium dioxide	DNEL	Long term	28 µg/m³	General	Local
		Inhalation		population	
	DNEL	Long term	170 µg/m³	Workers	Local
		Inhalation			
titanium dioxide	DNEL	Long term	28 µg/m³	General	Local
		Inhalation		population	
	DNEL	Long term	170 µg/m³	Workers	Local
		Inhalation			

## **PNECs**

No PNECs available

#### 8.2 Exposure controls

Appropriate engineering controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### **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: safety glasses with side-shields.

#### **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**

₩ear suitable gloves tested to ISO 374-1:2016.

Recommended, gloves(breakthrough time) > 8 hours: butyl rubber (> 0.4 mm), nitrile rubber (> 0.75 mm), neoprene (> 0.35 mm), PVC (> 0.5 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**

: 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.

## 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. If dust is generated and ventilation is inadequate, use respirator that will protect against dust/mist. (FFP2 / N95).

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## **SECTION 8: Exposure controls/personal protection**

**Environmental exposure** : Do not allow to enter drains or watercourses.

controls

## **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 : Solid. Powder.
Colour : Various.
Odour : Odourless.
Odour threshold : Not applicable.
Melting point (dust) : 85 - 115 °C
Initial boiling point and : Not applicable.

boiling range

Flammability : Not applicable.

Lower explosion limit (dust) : 30 g/m³ (EN 14034-3)

Minimum ignition energy (mJ) : 10 - 30 (EN 13821)

Flash point : Not applicable.

**Auto-ignition temperature** : > 400°C **Decomposition temperature** : 230°C

pH : Not applicable.Viscosity : Not applicable.

Solubility(ies) :

Media	Result
cold water hot water	Not soluble Not soluble
not water	Tet soluble

Partition coefficient: n-octanol/ : Not applicable.

water

Vapour pressure: Not applicable.Evaporation rate: Not applicable.Density: 1.2 to 1.9 g/cm³Vapour density: Not applicable.

**Particle characteristics** 

Median particle size : Not available.

## 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

10.1 Reactivity

: Fine dust clouds may form explosive mixtures with air.

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

: Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame).

Take precautionary measures against electrostatic discharges.

To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material.

Prevent dust accumulation.

10.5 Incompatible materials

: Not applicable.

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## **SECTION 10: Stability and reactivity**

10.6 Hazardous decomposition products

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
1,2,4,5-benzenetetracarboxylic acid, compd. with 4,5-dihydro-2-phenyl-1h-imidazole (1:1)	LD50 Oral	Rat	7400 mg/kg	-
zinc di(benzothiazol-2-yl) disulphide	LD50 Oral	Rat	540 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)
Reveal Edge B (C101)	5384.5	N/A	N/A	N/A	N/A
copper	500	N/A	N/A	N/A	N/A
1,2,4,5-benzenetetracarboxylic acid, compd. with 4,5-dihydro-2-phenyl-1h-imidazole (1:1)	7400	N/A	N/A	N/A	N/A

## **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
titanium dioxide titanium dioxide	Skin - Mild irritant Skin - Mild irritant	Human Human		72 hours 72 hours	-

## **Sensitisation**

Product/ingredient name	Route of exposure	Species	Result
zinc di(benzothiazol-2-yl) disulphide	skin	Mammal - species unspecified	Sensitising

## **Mutagenicity**

No known significant effects or critical hazards.

## **Carcinogenicity**

It has been observed that the carcinogenic hazard of this product arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.

No known significant effects or critical hazards.

## **Reproductive toxicity**

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)

Not available.

## Specific target organ toxicity (repeated exposure)

Not available.

#### **Aspiration hazard**

Not available.

## Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

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## **SECTION 11: Toxicological information**

**Inhalation** : No known significant effects or critical hazards.

**Skin contact**: May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

**Skin contact**: Adverse symptoms may include the following:

irritation redness

Ingestion : No specific data.

General : 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.

Coating powder residues should not be allowed to enter drains or watercourses or be deposited where they could affect ground or surface waters.

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
copper	Acute EC50 1100 μg/l Fresh water	Aquatic plants - Duckweed - Lemna minor	4 days
	Acute EC50 2.1 μg/l Fresh water	Daphnia - Water flea - Daphnia Iongispina - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute IC50 13 μg/l Fresh water	Algae - Green algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute IC50 5.4 mg/l Marine water	Aquatic plants - Plant Kingdom - Plantae - Exponential growth phase	72 hours
	Acute LC50 0.072 μg/l Marine water	Crustaceans - Scud Order - Amphipoda - Adult	48 hours
	Acute LC50 7.56 μg/l Marine water	Fish - Mudskipper - Periophthalmus waltoni - Adult	96 hours
	Chronic NOEC 2.5 μg/l Marine water	Algae - Diatom - Nitzschia closterium - Exponential growth phase	72 hours
	Chronic NOEC 7 mg/l Fresh water	Aquatic plants - Coontail - Ceratophyllum demersum	3 days
	Chronic NOEC 0.02 mg/l Fresh water	Crustaceans - Appalachian crayfish - Cambarus bartonii - Mature	21 days
	Chronic NOEC 2 µg/l Fresh water	Daphnia - Water flea - Daphnia magna	21 days
	Chronic NOEC 0.8 μg/l Fresh water	Fish - Nile tilapia - Oreochromis niloticus - Juvenile (Fledgling, Hatchling, Weanling)	6 weeks
1,2,4,5-benzenetetracarboxylic acid, compd. with 4,5-dihydro-2-phenyl-1h-imidazole (1:1)	Acute EC50 9 mg/l	Algae - Algae - Scenedesmus subspicatus	72 hours
	Acute EC50 125 mg/l	Crustaceans	48 hours
	Chronic NOEC 0.64 mg/l	Algae	-
zinc di(benzothiazol-2-yl) disulphide	Acute EC50 0.71 mg/l	Daphnia	48 hours

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## **SECTION 12: Ecological information**

	-	
Acute LC50 0.73 mg/l	Fish	96 hours
Chronic NOEC 0.041 mg/l	Fish	89 days
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	
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	
	Chronic NOEC 0.041 mg/l Acute LC50 3 mg/l Fresh water  Acute LC50 6.5 mg/l Fresh water  Acute LC50 >1000000 µg/l Marine water  Acute LC50 3 mg/l Fresh water  Acute LC50 6.5 mg/l Fresh water  Acute LC50 >1000000 µg/l Marine	Chronic NOEC 0.041 mg/l Acute LC50 3 mg/l Fresh water  Acute LC50 6.5 mg/l Fresh water  Acute LC50 >1000000 μg/l Marine water  Acute LC50 3 mg/l Fresh water  Acute LC50 6.5 mg/l Fresh water  Acute LC50 6.5 mg/l Fresh water  Acute LC50 >1000000 μg/l Marine  Acute LC50 >1000000 μg/l Marine  Acute LC50 >10000000 μg/l Marine

**Conclusion/Summary** 

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

## 12.2 Persistence and degradability

Conclusion/Summary : Not available.

## 12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
1,2,4,5-benzenetetracarboxylic acid, compd. with	1	-	low
4,5-dihydro-2-phenyl-1h- imidazole (1:1)			
zinc di(benzothiazol-2-yl) disulphide	5.02	<8	low

#### 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	

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## SECTION 13: Disposal considerations

## **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.

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. 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	UN3077	UN3077	UN3077	UN3077
14.2 UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (zinc di (benzothiazol-2-yl) disulphide)	Environmentally hazardous substance, solid, n.o.s. (zinc di (benzothiazol-2-yl) disulphide)	Environmentally hazardous substance, solid, n.o.s. (zinc di (benzothiazol-2-yl) disulphide). Marine pollutant (copper, zinc di(benzothiazol-2-yl) disulphide)	Environmentally hazardous substance, solid, n.o.s. (zinc di (benzothiazol-2-yl) disulphide)
14.3 Transport hazard class(es)	9	9	9	9
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes.

## **Additional information**

**ADR/RID** 

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Hazard identification number 90 Tunnel code (-)

**ADN** 

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

**IMDG** 

This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Emergency schedules F-A, S-F

**IATA** 

This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

## 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.

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## SECTION 14: Transport information

14.7 Transport in bulk according to IMO instruments

: Not available.

## **SECTION 15: Regulatory information**

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

## 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

E1

## **EU regulations**

Industrial emissions : Listed

(integrated pollution prevention and control) -

Air

Industrial emissions : 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**

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## **SECTION 15: Regulatory information**

Not listed.

15.2 Chemical safety assessment

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

## **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
Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	Calculation method Calculation method Calculation method

#### Full text of abbreviated H statements

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
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.

#### **Full text of classifications**

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
Carc. 2	CARCINOGENICITY - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1

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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.

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