# SAFETY DATA SHEET



#### Reveal Era U

### **Section 1. Identification**

Product name : Reveal Era U

Standard Name ID : 50423

Product type : Powder coating.

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

**Identified uses** 

Use in coatings - Industrial use

Supplier's details : 佐敦涂料(张家港)有限公司

中国江苏扬子江国际化学工业园南海路39号 215634

电话: +86 512 58937988 传真: +86 512 58937986

Jotun Coatings (Zhangjiagang) Co. Ltd

NO.39 Nanhai Road Jiangsu Yangtze River International Chemical Industry Park,

Jiangsu Province 215634 China

Tel: +86 512 58937988 Fax: +86 512 58937986

中远佐敦船舶涂料(青岛)有限公司中国山东省青岛市高新区春阳路800号

总机电话: +86-532-68689888 总机传真: +86-532-66726750

Jotun COSCO Marine Coatings (Qingdao) Co. Ltd.

No. 800, Chunyang Road, High-tech Zone, Qingdao, P. R. China

Tel: +86-532-68689888 Fax: +86-532-66726750

SDSJotun@jotun.com

Emergency telephone number

number

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

### Section 2. Hazards identification

Classification of the substance or mixture

ACUTE TOXICITY (oral) - Category 4

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1

SKIN SENSITISATION - Category 1

GERM CELL MUTAGENICITY - Category 1B

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

**GHS label elements** 

Hazard pictograms :







Signal word : Danger.

Reveal Era U Page: 2/11

### Section 2. Hazards identification

**Hazard statements**: H302 - Harmful if swallowed.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage. H340 - May cause genetic defects.

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

H412 - Harmful to aquatic life with long lasting effects.

**Precautionary statements** 

**Prevention**: P201 - Obtain special instructions before use.

P280 - Wear protective gloves, protective clothing and eye or face protection.

P273 - Avoid release to the environment.

P260 - Do not breathe dust.

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

Response : P308 + P313 - IF exposed or concerned: Get medical advice or attention.

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.

### Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of : Not available. identification

**CAS** number/other identifiers

**CAS number** : Not applicable.

**EC number** : Mixture. **Product code** : 50423

Ingredient name	%	<b>CAS</b> number
1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1h,3h,5h)-trione	≤10	2451-62-9
Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-,	≤5	127184-53-6
homopolymer, caprolactam-blocked		
2-(4,6-bis(2,4-dimethylphenyl)-1,3,5-triazin-2-yl)-5-(3-((2-ethylhexyl)oxy)	≤5	137658-79-8
-2-hydroxypropoxy)phenol		
2,4,8,10-tetraoxa-3,9-diphosphaspiro[5.5]undecane, 3,9-bis[2,4-bis	≤1	26741-53-7
(1,1-dimethylethyl)phenoxy]-		

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

### Section 4. First aid measures

#### **Description of necessary first aid measures**

Eye contact

: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Reveal Era U Page: 3/11

### Section 4. First aid measures

Inhalation

Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact

: Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

#### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

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

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

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

**Ingestion**: Harmful if swallowed.

#### Over-exposure signs/symptoms

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

pain watering redness

Inhalation : 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

#### Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** 

: No specific treatment.

**Protection of first-aiders** 

: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

### See toxicological information (Section 11)

Reveal Era U Page: 4/11

### Section 5. Firefighting measures

#### **Extinguishing media**

Suitable extinguishing

media

media

Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing** 

Specific hazards arising from the chemical

: This material is harmful to aquatic life with long lasting effects. Fire water

**Hazardous thermal** decomposition products

contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. : Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides

: None known.

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.

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

Fire/explosion hazards

Fine dust clouds may form explosive mixtures with air.

### Section 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through 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".

**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.

#### Methods and material for containment and cleaning up

**Small spill** 

: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. 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.

### Section 7. Handling and storage

#### Precautions for safe handling

**Protective measures** 

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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

Reveal Era U Page: 5/11

### Section 7. Handling and storage

Advice on general occupational hygiene reuse container.

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.

including any incompatibilities

Conditions for safe storage, : 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. Store locked up. 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.

See Technical Data Sheet / packaging for further information.

# Section 8. Exposure controls/personal protection

#### **Control parameters**

Occupational exposure limits

Ingredient name	Exposure limits

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

**Recommended monitoring** procedures

: If this product contains ingredients with exposure limits, personal, workplace 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 appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**Appropriate engineering** controls

: If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure** controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### **Individual protection measures**

**Hygiene measures** 

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

**Eye protection** 

Safety eyewear complying to EN 166 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

**Skin protection Hand protection** 

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

Reveal Era U Page: 6/11

### Section 8. Exposure controls/personal protection

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

The breakthrough time must be greater than the end use time of the product. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

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

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

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

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

Wear suitable gloves tested to EN374.

May be used, gloves(breakthrough time) 4 - 8 hours: nitrile rubber, neoprene,

polyvinyl alcohol (PVA)

**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**: Based on the hazard and potential for exposure, select a respirator that meets the

appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important

aspects of use.

# Section 9. Physical and chemical properties

**Appearance** 

**Boiling point** 

Physical state : Solid. Powder.

Colour: VariousOdour: Odourless.Odour threshold: Not available.pH: Not applicable.Melting point: Not applicable.

Flash point : Closed cup: Not applicable.

Burning time : Not available.
Burning rate : Not available.
Evaporation rate : Not available.
Flammability (solid, gas) : Not applicable.

Minimum ignition energy

(mJ)

: 10 - 30

: Not available.

Lower explosion limit: 30 g/m³Vapour pressure: Not available.Vapour density: Not available.Relative density: 1.2 to 1.9 g/cm³

**Solubility** : Insoluble in the following materials: cold water and hot water.

Partition coefficient: n-

octanol/water

: Not available.

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

Decomposition temperature : >230°C (>446°F)
SADT : Not available.
Viscosity : Not applicable.

Reveal Era U Page: 7/11

### Section 9. Physical and chemical properties

### Section 10. Stability and reactivity

Reactivity

: No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** 

: The product is stable.

**Possibility of hazardous** 

reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Not applicable.

Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

Fine dust clouds may form explosive mixtures with air.

# **Section 11. Toxicological information**

#### Information on toxicological effects

#### **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
1,3,5-tris(oxiranylmethyl) -1,3,5-triazine-2,4,6(1h,3h, 5h)-trione	LD50 Oral	Rat	138 mg/kg	-

#### **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
1,3,5-tris(oxiranylmethyl) -1,3,5-triazine-2,4,6(1h,3h, 5h)-trione	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Eyes - Irritant	Mammal - species unspecified	-	-	-
2,4,8,10-tetraoxa- 3,9-diphosphaspiro[5.5] undecane, 3,9-bis[2,4-bis (1,1-dimethylethyl)phenoxy]-	Skin - Severe irritant	Rabbit	-	0.5 Grams	-

#### **Sensitisation**

3	Route of exposure	Species	Result
1,3,5-tris(oxiranylmethyl) -1,3,5-triazine-2,4,6(1h,3h, 5h)-trione	skin	Mammal - species unspecified	Sensitising

#### **Mutagenicity**

Not available.

#### **Carcinogenicity**

Not available.

#### **Reproductive toxicity**

Not available.

#### **Teratogenicity**

Not available.

#### Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Reveal Era U Page: 8/11

### **Section 11. Toxicological information**

Name	3.3	Route of exposure	Target organs
1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1h,3h,5h)-trione	Category 2	-	-
Cyclohexane, 5-isocyanato-1-(isocyanatomethyl) -1,3,3-trimethyl-, homopolymer, caprolactam-blocked	Category 1	inhalation	-

#### **Aspiration hazard**

Not available.

Information on likely routes

of exposure

: Not available.

Potential acute health effects

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

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

**Skin contact**: 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

Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Short term exposure** 

**Potential immediate** 

effects

: Not available.

Potential delayed effects

: Not available.

**Long term exposure** 

**Potential immediate** 

: Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once

sensitized, a severe allergic reaction may occur when subsequently exposed to very

low levels.

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

**Mutagenicity**: May cause genetic defects.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

**Acute toxicity estimates** 

Reveal Era U Page: 9/11

### **Section 11. Toxicological information**

Route	ATE value
Oral	1360.18 mg/kg
Inhalation (vapours)	40.81 mg/l

# Section 12. Ecological information

#### **Toxicity**

Product/ingredient name	Result	Species	Exposure
2,4,8,10-tetraoxa- 3,9-diphosphaspiro[5.5] undecane, 3,9-bis[2,4-bis (1,1-dimethylethyl)phenoxy]-	Acute EC10 15.4 mg/l	Algae	72 hours
	Acute EC50 97 mg/l Acute LC50 70.7 mg/l Chronic NOEC 0.1 mg/l	Algae Fish Daphnia	72 hours 96 hours 21 days

#### Persistence/degradability

Not available.

#### **Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
1,3,5-tris(oxiranylmethyl) -1,3,5-triazine-2,4,6(1h,3h,	-0.8	-	low
5h)-trione	0.62		la i a la
2-(4,6-bis (2,4-dimethylphenyl)	9.63	-	high
-1,3,5-triazin-2-yl)-5-(3-( (2-ethylhexyl)oxy)			
-2-hydroxypropoxy)phenol			

#### **Mobility in soil**

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

### Section 13. Disposal considerations

#### **Disposal methods**

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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.

Reveal Era U Page: 10/11

# **Section 14. Transport information**

**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.

	UN	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Special precautions for user	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.	Transport 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.
Additional information	-	-	-

### **Section 15. Regulatory information**

Safety, health and environmental regulations specific for the product:

#### Law of the People's Republic of China on the Prevention and Control of Occupational Diseases

Regulations on the Control over Safety of Dangerous Chemicals

Measures for Environmental Management of New Chemical Substances

Law of the People's Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes Safety regulations for the use of chemicals in the workplace

General Rule for Classification and Hazard Communication of Chemicals

Classification and code of dangerous goods

### List of Goods banned for Importing

None of the components are listed.

#### **List of Goods banned for Exporting**

None of the components are listed.

#### <u>List of Toxic Chemicals Severely Restricted for Importing & Exporting by China</u>

None of the components are listed.

# Section 16. Other information

**History** 

Date of printing : 19.08.2022

Reveal Era U Page: 11/11

### Section 16. Other information

#### Key to abbreviations

: ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of

Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships,

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

RID = The Regulations concerning the International Carriage of Dangerous Goods

by Rail

**UN = United Nations** 

#### **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.

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