SAFETY DATA SHEET



Penguard HSP ZP Comp A

Section 1. Chemical product and company identification		
Product name	: Penguard HSP ZP Comp A	
Product code	: 20920	
Product type	: Liquid.	
Product description	: Paint.	
Relevant identified uses	of the substance or mixture and uses advised against	
Use in coatings - Industria Use in coatings - Professi		
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: +86-532-66726750 SDSJotun@jotun.com 	
Emergency telephone number (with hours of operation)	: Emergency Services for Chemical Incident of China. Tel: +86 532 83889090	

Section 2. Hazards identification

Classification of the substance or mixture according to GB 13690-2009 and GB 30000-2013

Section 2. Hazards identification

Classification of the substance or mixture	: FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SKIN SENSITISATION - Category 1 CARCINOGENICITY - Category 2 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
GHS label elements	
Hazard pictograms	
Signal word	: Danger.
Hazard statements	 H226 - Flammable liquid and vapour. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H351 - Suspected of causing cancer. H402 - Harmful to aquatic life. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements	
General	: Not applicable.
Prevention	 P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing and 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. P261 - Avoid breathing vapour.
Response	 P391 - Collect spillage. 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	: P403 + P235 - Store in a well-ventilated place. Keep cool.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Physical and chemical hazards	: Flammable liquid and vapour.
Health hazards	: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Suspected of causing cancer.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.

Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
epoxy resin (MW ≤ 700)	≤25	1675-54-3
xylene	≤10	1330-20-7
2-methylpropan-1-ol	≤5	78-83-1
hydrocarbons, c9-unsatd., polymd.	≤5	71302-83-5
trizinc bis(orthophosphate)	≤2.2	7779-90-0
ethylbenzene	≤2	100-41-4
1-methoxy-2-propanol	≤3	107-98-2

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.
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.
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 an	<u>id delayed</u>				
Potential acute health effe	<u>ects</u>						
Eye contact	: Ca	uses ser	ious eye damage.				
Inhalation	: No	known s	ignificant effects or criti	cal hazards.			
Skin contact	: Ca	uses skir	n irritation. May cause a	an allergic skin reaction.			
Ingestion	: No	known s	ignificant effects or criti	cal hazards.			
Over-exposure signs/sym	ptoms						
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Section 4. First aid measures

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 me	dical attention and special treatment needed, if necessary
Notes to physician	 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media	
Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.
Specific hazards arising from the chemical	: 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 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 thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide phosphorus oxides metal oxide/oxides
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.

Section 6. Accidental release measures

Personal precautions, protect	ctiv	e 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".
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.
Methods and material for cor	ntai	inment and cleaning up
Small spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spill product. 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 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.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well- ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from 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.
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Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits		
xylene	GBZ 2.1 (China, 11/2022). [Xylene]		
	PC-STEL: 100 mg/m ³ 15 minutes.		
	PC-TWA: 50 mg/m ³ 8 hours.		
2-methylpropan-1-ol	ACGIH TLV (United States, 7/2023).		
	TWA: 152 mg/m ³ 8 hours.		
	TWA: 50 ppm 8 hours.		
ethylbenzene	GBZ 2.1 (China, 11/2022).		
	PC-TWA: 100 mg/m ³ 8 hours.		
	PC-STEL: 150 mg/m ³ 15 minutes.		
1-methoxy-2-propanol	ACGIH TLV (United States, 7/2023).		
	STEL: 369 mg/m ³ 15 minutes.		
	STEL: 100 ppm 15 minutes.		
	TWA: 184 mg/m ³ 8 hours.		
	TWA: 50 ppm 8 hours.		

Biological exposure indices

Ingredient name	Exposure indices
xylene	GBZ 2.1 (China, 11/2022) BEI: 0.4 g/L, methylhippuric acids [in urine]. Sampling time: end of work shift. BEI: 0.3 g/g Cr, methylhippuric acids [in urine]. Sampling time: end of work shift.
ethylbenzene	GBZ 2.1 (China, 11/2022) BEI: 0.8 g/g Cr, mandelic acid and phenylglyoxylic acid (MA and PGA) [in urine]. Sampling time: end of work shift.

Appropriate engineering controls	: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

	are controls/personal protection
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. Wear suitable gloves tested to ISO 374-1:2016. Recommended, gloves(breakthrough time) > 8 hours: Teflon (> 0.35 mm), Viton® (> 0.7 mm), nitrile rubber (> 0.75 mm), neoprene (> 0.35 mm), butyl rubber (> 0.4 mm), fluor rubber (> 0.35 mm) May be used, gloves(breakthrough time) 4 - 8 hours: PVC (> 0.5 mm), polyvinyl alcohol (PVA) (> 0.3 mm), 4H/Silver Shield® (> 0.07 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	: 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 and safety characteristics

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

<u>Appearance</u>				
Physical state	:	Liquid.		
Colour	1	Black., Grey, Red, Off-white.,Red,Yellowish-brown.		
Odour	1	Characteristic.		
Odour threshold	1	Not applicable.		
рН	1	Not applicable.		
Melting point/freezing point	1	Not applicable.		
Boiling point, initial boiling point, and boiling range	:	Lowest known value: 108°C (226.4°F) (2-methylpropan-1-ol). Weighted average: 224.24°C (435.6°F)		
Flash point	1	Closed cup: 29°C (84.2°F)		
Evaporation rate	1	Highest known value: 0.84 (ethylbenzene) Weighted average: 0.75compared with butyl acetate		
Flammability	1	Not applicable.		
Lower and upper explosion limit/flammability limit	:	Greatest known range: Lower: 1.48% Upper: 13.74% (1-methoxy-2-propanol)		
Vapour pressure	1	Highest known value: <1.6 kPa (<12 mm Hg) (at 20°C) (2-methylpropan-1-ol). Weighted average: 0.44 kPa (3.3 mm Hg) (at 20°C)		
Relative vapour density	:	Highest known value: 11.7 (Air = 1) (epoxy resin (MW \leq 700)). Weighted average: 8.09 (Air = 1)		
Density	1	1.72 to 1.786 g/cm ³		
Solubility(ies)	1			
Media		Result		
cold water hot water		Not soluble Not soluble		
Solubility in water	1	Not available.		
Partition coefficient: n- octanol/water	:	Not available.		
Auto-ignition temperature	1	Lowest known value: 270°C (518°F) (1-methoxy-2-propanol).		
Decomposition temperature	4	Not available.		
Viscosity	1	Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt)		
Particle characteristics				
Median particle size	÷	Not applicable.		
No additional information.				

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	: Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Reactive or incompatible with the following materials: oxidising materials

8/15

Section 10. Stability and reactivity

Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
epoxy resin (MW ≤ 700)	LD50 Dermal	Rabbit	20 g/kg	-
	LD50 Oral	Mouse	15600 mg/kg	-
xylene	LC50 Inhalation Vapour	Rat	11 mg/l	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
	TDLo Dermal	Rabbit	4300 mg/kg	-
2-methylpropan-1-ol	LC50 Inhalation Vapour	Rat	19200 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
hydrocarbons, c9-unsatd., polymd.	LD50 Dermal	Rat	2000 mg/kg	-
	LD50 Oral	Rat	2000 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	-
1-methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	6600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
epoxy resin (MW ≤ 700)	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
2-methylpropan-1-ol	Eyes - Irritant	Mammal - species unspecified	-	-	-
	Skin - Mild irritant	Mammal - species unspecified	-	-	-
1-methoxy-2-propanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
epoxy resin (MW ≤ 700)	skin	Mammal - species unspecified	Sensitising
hydrocarbons, c9-unsatd., polymd.	skin	Mouse	Sensitising

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Section 11. Toxicological information

Product/ingredient name	IARC
epoxy resin (MW ≤ 700)	3
ethylbenzene	2B

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
2-methylpropan-1-ol	Category 3	-	Respiratory tract irritation
1-methoxy-2-propanol	Category 3 Category 3	-	Narcotic effects Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name		Route of exposure	Target organs
ethylbenzene	Category 2	-	-

Aspiration hazard

Product/ingredient name	Result	
	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1	

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	Causes skin irritation. May cause an allergic skin reaction.	
Ingestion	No known significant effects or critical hazards.	
Symptoms related to the phy	al, 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 effec	as well as chronic effects from short and long-term exposure	
<u>Short term exposure</u>		
Potential immediate effects	Not available.	

Date of issue/Date of revision

Section 11. Toxicological information

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Potential delayed effects	1	Not available.
<u>Long term exposure</u>		
Potential immediate effects	: 1	Not available.
Potential delayed effects	: 1	Not available.
Potential chronic health eff	<u>ects</u>	
Not available.		
General		Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity		Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	: 1	No known significant effects or critical hazards.
Reproductive toxicity	: 1	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name		Dermal (mg/kg)	Inhalation (gases) (ppm)		Inhalation (dusts and mists) (mg/l)
Penguard HSP ZP Comp A	N/A	19247.6	N/A	192.5	N/A
xylene	N/A	1100	N/A	11	N/A
1-methoxy-2-propanol	6600	13000	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure	
epoxy resin (MW ≤ 700)	Acute EC50 1.4 mg/l	Daphnia	48 hours	
	Acute LC50 3.1 mg/l	Fish - pimephales promelas	96 hours	
	Chronic NOEC 0.3 mg/l	Fish	21 days	
xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours	
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours	
2-methylpropan-1-ol	Chronic NOEC 4000 µg/l Fresh water	Daphnia - Daphnia magna	21 days	
trizinc bis(orthophosphate)	Acute LC50 0.14 mg/l	Fish - Oncorhynchus mykiss	96 hours	
(I I ,	Chronic NOEC 0.1 mg/l	Micro-organism	4 hours	
ethylbenzene	Acute EC50 7700 µg/l Marine water	Algae - Škeletonema costatum	96 hours	
	Acute EC50 2.93 mg/l	Daphnia	48 hours	
	Acute LC50 4.2 mg/l	Fish	96 hours	

Persistence/degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
epoxy resin (MW ≤ 700) xylene trizinc bis(orthophosphate) ethylbenzene	- - -	-	Not readily Readily Not readily Readily

Bioaccumulative potential

Section 12. Ecological information

Broduct/ingradiant name	LogD	BCF	Potential	
Product/ingredient name	LogPow	DCF	Fotential	
epoxy resin (MW ≤ 700)	2.64 to 3.78	31	low	
xylene	3.12	8.1 to 25.9	low	
2-methylpropan-1-ol	1	-	low	
hydrocarbons, c9-unsatd.,	3.627	-	low	
polymd.				
trizinc bis(orthophosphate)	-	60960	high	
ethylbenzene	3.6	_	low	
1-methoxy-2-propanol	<1	_	low	

Mobility in soil

Soil/water partition	: Not available.
coefficient (Koc)	

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. 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

	China	UN	IMDG	ΙΑΤΑ
UN number	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	Paint	Paint	Paint. Marine pollutant (trizinc bis (orthophosphate), epoxy resin (MW ≤ 700))	Paint
Transport hazard class(es)	3	3	3	3
Packing group	111	ш	Ш	Ш
Environmental hazards	Yes. The environmentally hazardous substance mark is not required.	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

IMDG

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

Section 14. Transport information

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ΙΑΤΑ	1	The environmentally hazardous substance mark may appear if required by other transportation regulations.
ADR / RID	:	Tunnel restriction code: (D/E) Hazard identification number: 30
Marking	-	The environmental hazardous / marine pollutant mark is only applicable for packages containing more than 5 litres for liquids and 5 kg for solids.
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.
Extinguishing media		
Suitable extinguishing media	1	Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	1	Do not use water jet.
Incompatible materials	:	Reactive or incompatible with the following materials: oxidising materials
Transport in bulk according to IMO instruments	:	Not available.

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.

Drug Precursors Requiring an Import/Export License

None of the components are listed.

Inventory of Hazardous Chemicals

Ingredient name	CAS number	Status	Reference number
xylene 2-methylpropan-1-ol	1330-20-7 78-83-1	Listed Listed	358 1033
ethylbenzene	100-41-4	Listed	2566

List of Explosive Precursors

None of the components are listed.

List of Goods banned for Exporting

None of the components are listed.

List of Toxic Chemicals Severely Restricted for Importing & Exporting by China

None of the components are listed.

Catalogue and classification of drug precursor chemicals

None of the components are listed.

Inventory of highly toxic articles

Date of issue/Date of revision

Section 15. Regulatory information

None of the components are listed.

Catalogue of Hazardous Chemicals of Priority Management

None of the components are listed.

Catalogue of Occupational Disease Hazard Factors - Dust

Ingredient name	Status
limestone	Listed
titanium dioxide	Listed

Catalogue of Occupational Disease Hazard Factors - Chemical Factors

Ingredient name	Status
xylene	Listed
ethylbenzene	Listed

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.

Section 16. Other information

<u>History</u>	
Date of printing	: 25.11.2024
Date of issue/Date of revision	: 25.11.2024
Date of previous issue	: 05.07.2024
Version	: 1.06
Key to abbreviations	 ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = International Air Transport Association IBC = 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) N/A = Not available SGG = Segregation Group UN = United Nations

Procedure used to derive the classification

Section 16. Other information

Classification	Justification
FLAMMABLE LIQUIDS - Category 3	On basis of test data
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	Calculation method
SKIN SENSITISATION - Category 1	Calculation method
CARCINOGENICITY - Category 2	Calculation method
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3	Calculation method
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2	Calculation method

References

: Not available.

V Indicates information that has changed from previously issued version.

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.