SAFETY DATA SHEET



Penguard Pro Comp B

Section 1. Cher	nical product and company identification
Product name	: 通用耐磨环氧厚浆漆 组份B
Product code	: 18360
Product type	: Liquid.
Product description	: Hardener.
Relevant identified uses	of the substance or mixture and uses advised against
Use in coatings - Industria Use in coatings - Profess	
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 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 2 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. H335 - May cause respiratory irritation. H351 - Suspected of causing cancer. 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. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
Storage	 P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - 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. May cause respiratory irritation. Suspected of causing cancer.

Section 3. Composition/information on ingredients

Substance/mixture

Other means of identification

- : Mixture
- : Not available.

Ingredient name	%	CAS number
xylene	<22	1330-20-7
butan-1-ol	≤7.5	71-36-3
ethylbenzene	<10	100-41-4
benzenedimethanamine, n-(2-phenylethyl) derivs.	≤4.9	404362-22-7

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

escription of necessary first aid measures		
Eye contact	f (Get medical attention immediately. Call a poison center or physician. Immediately ilush 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	v c r l r i t s	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. t may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention mmediately. 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	Р С С Ц	Get medical attention immediately. Call a poison center or physician. Wash with blenty 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	r e t t f f	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. f 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/e	ffects, acute and delayed		
Potential acute health effe	<u>ts</u>		
Eye contact	: Causes serious eye damage.		
Inhalation	: May cause respiratory irritation.		
Skin contact	: Causes skin irritation. May cause an allergic skin reaction.		
Ingestion	: No known significant effects or critical hazards.		
Date of issue/Date of revision	: 17.01.2024 Date of previous issue : 15.01.2024	Version	:1.04

3/14

Section 4. First aid measures

Over-exposure signs/symptoms		
Eye contact	: Adverse symptoms may include the following: pain watering redness	
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing	
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 med	lical 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)

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 nitrogen 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, protective equipment and emergency procedures		
For non-emergency personnel	 No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. 	
For emergency responders	: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".	
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	ntainment 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.
--	---

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.
butan-1-ol	GBZ 2.1 (China, 11/2022).
	PC-TWA: 100 mg/m ³ 8 hours.
ethylbenzene	GBZ 2.1 (China, 11/2022).
5	PC-TWA: 100 mg/m ³ 8 hours.
	PC-STEL: 150 mg/m ³ 15 minutes.

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

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.

6/14

Section 8. Exposure controls/personal protection

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. Not recommended, gloves(breakthrough time) < 1 hour: PVC (> 0.5 mm) May be used, gloves(breakthrough time) 4 - 8 hours: neoprene (> 0.35 mm), butyl rubber (> 0.4 mm), Viton® (> 0.7 mm) Recommended, gloves(breakthrough time) > 8 hours: 4H/Silver Shield® (> 0.07 mm), Teflon (> 0.35 mm), nitrile rubber (> 0.75 mm), polyvinyl alcohol (PVA) (> 0.3 mm)For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistance and time of penetration, seek advice by the supplier of chemical resistance and time 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. 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 task able performed and the risks involved and should be approved by a specialist before handling this product.Body protection: Based on the task being performed and the risks involved and should be approved by a specialist before handling this product.		
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. Not recommended, gloves(breakthrough time) < 1 hour: PVC (> 0.5 mm) May be used, gloves(breakthrough time) < 1 hour: PVC (> 0.5 mm) May be used, gloves(breakthrough time) < 8 hours: neoprene (> 0.35 mm), butyl rubber (> 0.4 mm), Vitome (> 0.75 mm), polyvinyl alcohol (PVA) (> 0.3 mm)Body protectionFor right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistance and time 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 approvate and used inchases involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static discharges, clothing should include anti-static overalls, boots and gloves.Body protection: Personal protective and any additional skin protection measures should be appropriate shandiar or certificati		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
 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. Not recommended, gloves(breakthrough time) < 1 hour: PVC (> 0.5 mm) May be used, gloves(breakthrough time) < 1 hour: PVC (> 0.5 mm) May be used, gloves(breakthrough time) > 8 hours: neoprene (> 0.35 mm), butyl rubber (> 0.4 mm), Viton® (> 0.7 mm) Recommended, gloves(breakthrough time) > 8 hours: the Shield® (> 0.07 mm), Teflon (> 0.35 mm), nitrile rubber (> 0.75 mm), polyvinyl alcohol (PVA) (> 0.3 mm) For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistance and time 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. 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. Appropriate fortwear and any additional skin protection measures should be approved by a specialist before handling this product. Based on the task being performed and the risks involved and	Skin protection	
rubber (> 0.4 mm), Viton® (> 0.7 mm) Recommended, gloves(breakthrough time) > 8 hours: 4H/Silver Shield® (> 0.07 mm), Teflon (> 0.35 mm), nitrile rubber (> 0.75 mm), polyvinyl alcohol (PVA) (> 0.3 mm)For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.Body protection: 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 colhing. 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	Hand protection	 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. Not recommended, gloves(breakthrough time) < 1 hour: PVC (> 0.5 mm)
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. 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		rubber (> 0.4 mm), Viton® (> 0.7 mm) Recommended, gloves(breakthrough time) > 8 hours: 4H/Silver Shield® (> 0.07 mm), Teflon (> 0.35 mm), nitrile rubber (> 0.75 mm), polyvinyl alcohol (PVA) (> 0.3
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. 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 		
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		product is the most appropriate and takes into account the particular conditions of
 selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. 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 	Body protection	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
appropriate standard or certification. Respirators must be used according to a	Other skin protection	selected based on the task being performed and the risks involved and should be
respiratory protection program to ensure proper fitting, training, and other important aspects of use.	Respiratory protection	appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important

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.

Ap	pe	ar	ar	<u>1C</u>	<u>e</u>	
D	h				c 1	2

1	Liquid.
:	Colourless.
:	Characteristic.
:	Not applicable.
:	Not applicable.
;	Not applicable.

Date of issue/Date of revision

Section 9. Physical and chemical properties and safety characteristics

Boiling point, initial boiling point, and boiling range	:	Lowest known value: 119°C (246.2°F) (butan-1-ol). Weighted average: 132.48°C (270.5°F)			
Flash point	:	Closed cup: 28°C (82.4°F)			
Evaporation rate	:	Highest known value: 0.84 (ethylbenzene) Weighted average: 0.71compared with butyl acetate			
Flammability	:	Not applicable.			
Lower and upper explosion limit/flammability limit	:	3 - 11.3%			
Vapour pressure	:	Highest known value: 1.2 kPa (9.3 mm Hg) (at 20°C) (ethylbenzene). Weighted average: 0.96 kPa (7.2 mm Hg) (at 20°C)			
Relative vapour density	:	Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.46 (Air = 1)			
Density	:	0.97 g/cm ³			
Solubility(ies)	:				
Media		Result			
cold water hot water		Not soluble Not soluble			
Solubility in water	:	Not available.			
Partition coefficient: n- octanol/water	:	Not available.			
Auto-ignition temperature	:	Lowest known value: 355°C (671°F) (butan-1-ol).			
Decomposition temperature	:	Not available.			
Viscosity	:	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
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

Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
xylene	LC50 Inhalation Vapour	Rat	20 mg/l	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
	TDLo Dermal	Rabbit	4300 mg/kg	-
butan-1-ol	LD50 Oral	Rat	790 mg/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat - Male	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene	Eyes - Mild irritant Skin - Mild irritant	Rabbit Rat	-	87 milligrams 8 hours 60 microliters	-

Sensitisation

• • • • • • • • • • • • • • • • • • • •	Route of exposure	Species	Result
benzenedimethanamine, n- (2-phenylethyl) derivs.	skin	Mammal - species unspecified	Sensitising

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	IARC
ethylbenzene	2B

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

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

Specific target organ toxicity (repeated exposure)

Product/ingredient name		Route of exposure	Target organs
ethylbenzene	Category 2	-	-
benzenedimethanamine, n-(2-phenylethyl) derivs.	Category 2		heart

Aspiration hazard

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

Section 11. Toxicological information

Information on likely routes of exposure	:	Not available.
Potential acute health effects	2	
Eye contact	:	Causes serious eye damage.
Inhalation	:	May cause respiratory irritation.
Skin contact	1	Causes skin irritation. May cause an allergic skin reaction.
Ingestion	:	No known significant effects or critical hazards.
Symptoms related to the phy	<u>sic</u>	cal, chemical and toxicological characteristics
Eye contact	:	Adverse symptoms may include the following: pain watering redness
Inhalation	:	Adverse symptoms may include the following: respiratory tract irritation coughing
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	ts	as well as chronic effects from short and long-term exposure
Short term exposure		<u></u>
Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.

Potential delayed effects	:	Not available.
Long term exposure		
Potential immediate effects	1	Not available.
Potential delayed effects	:	Not available.
Potential chronic health eff	ect	<u>'S</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	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Penguard Pro Comp B	5299.9	5616.7	N/A	102.1	N/A
xylene	N/A	1100	N/A	20	N/A
butan-1-ol	500	N/A	N/A	N/A	N/A
benzenedimethanamine, n-(2-phenylethyl) derivs.	1000	N/A	N/A	N/A	N/A

Section 11. Toxicological information

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
ethylbenzene	Acute LC50 13400 μg/l Fresh water Acute EC50 7700 μg/l Marine water Acute EC50 2.93 mg/l Acute LC50 4.2 mg/l	Fish - Pimephales promelas Algae - Skeletonema costatum Daphnia Fish	96 hours 96 hours 48 hours 96 hours

Persistence/degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene ethylbenzene	-		Readily Readily

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
xylene	3.12	8.1 to 25.9	low
butan-1-ol	1	-	low
ethylbenzene	3.6	-	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**

Section 13. Dis	posal 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

Section 14. Transport information

	China	UN	IMDG	IATA
UN number	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	Paint	Paint	Paint. Marine pollutant (benzenedimethanamine, n-(2-phenylethyl) derivs.)	Paint
Transport hazard class(es)	3	3		3
Packing group	Ш	Ш	Ш	111
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	tion			
IMDG		e pollutant mark is not ree <u>y schedules</u> F-E, <u>S-E</u>	quired when transported	in sizes of ≤5 L or ≤5 kg
ΙΑΤΑ	: The environmentally hazardous substance mark may appear if required by oth 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.

Suitable extinguishing	: Use dry chemical, CO ₂ , water spray (fog) or foam.
media	

- Unsuitable extinguishing : Do not use water jet. media
- Incompatible materials : Reactive or incompatible with the following materials: oxidising materials

Transport in bulk according : Not available.

to IMO instruments

Extinguishing media

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.

Section 15. Regulatory information

Drug Precursors Requiring an Import/Export License

None of the components are listed.

Inventory of Hazardous Chemicals

Ingredient name	CAS number		Reference number
xylene	1330-20-7	Listed	358
butan-1-ol	71-36-3	Listed	2761
ethylbenzene	100-41-4	Listed	2566

List of Explosive Precursors

Ingredient name	CAS number	Status	Reference number
ethylenediamine	107-15-3	Listed	7.12

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

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

None of the components are listed.

Catalogue of Occupational Disease Hazard Factors - Chemical Factors

Ingredient name	Status
xylene	Listed
butan-1-ol	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	: 17.01.2024
Date of issue/Date of revision	: 17.01.2024
Date of previous issue	: 15.01.2024
Version	: 1.04
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

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
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract	Calculation method
irritation) - Category 3	
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 2	Calculation method
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2	Calculation method

References

: Not available.

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.