# SAFETY DATA SHEET



# Penguard EXA II Comp B

Section 1. Identification				
GHS product identifier	: Penguard EXA II Comp B			
Other means of identification	: Not available.			
Product code	: 33463			
Product description	: Hardener.			
Product type	: Liquid.			
Relevant identified uses of	f the substance or mixture and uses advised against			
	Identified uses			
s a	Use in coatings - Industrial use Use in coatings - Professional use			
Supplier's details	: Jotun (Singapore) Pte Ltd 37 Tuas View Crescent Singapore 637236 Phone: 6508 8288 Fax: 6265 7484 SDSJotun@jotun.com			
Emergency telephone number	: Jotun (Singapore) Pte Ltd, Tel: 6508 8288			

# 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 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
GHS label elements	
Hazard pictograms	
Signal word	: Danger.
Hazard statements	<ul> <li>H226 - Flammable liquid and vapour.</li> <li>H315 - Causes skin irritation.</li> <li>H318 - Causes serious eye damage.</li> <li>H335 - May cause respiratory irritation.</li> </ul>
Precautionary statements	
Prevention	<ul> <li>P280 - Wear protective gloves. Wear eye or face protection.</li> <li>P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</li> <li>P261 - Avoid breathing vapour.</li> </ul>
Response	<ul> <li>P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.</li> <li>P362 + P364 - Take off contaminated clothing and wash it before reuse.</li> <li>P302 + P352 - IF ON SKIN: Wash with plenty of water.</li> <li>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.</li> <li>Immediately call a POISON CENTER or doctor.</li> </ul>

# Section 2. Hazards identification

Storage	<ul> <li>P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.</li> <li>P403 + P235 - Keep cool.</li> </ul>
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not	1	None known.
and the second second		

result in classification

# Section 3. Composition/information on ingredients

Substance/mixture		Mixture
Other means of identification	:	Not available.
CAS number/other identifiers		
CAS number	1	Not applicable.
EC number	÷	Mixture.
Product code	1	33463
Ingredient name		

Ingredient name	%	CAS number
xylene	≥10 - ≤18	1330-20-7
butan-1-ol	≤10	71-36-3
ethylbenzene	≤6.2	100-41-4
ethylenediamine	<1	107-15-3

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.

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**Chemical formula** : Not applicable.

### Section 4. First aid measures

Description of necessary fire	st aid measures
Eye contact	: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
Inhalation	: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin contact	: Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of 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. 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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.

# Section 4. First aid measures

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/	s, acute and delayed	
Potential acute health effe		
Eye contact	Causes serious eye damage.	
Inhalation	May cause respiratory irritation.	
Skin contact	Causes skin irritation.	
Ingestion	No known significant effects or critical hazards.	
Over-exposure signs/sym	<u>s</u>	
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 me	attention and special treatment needed, if necessary	
Notes to physician	In case of inhalation of decomposition products in a fire, symptoms may be de The exposed person may need to be kept under medical surveillance for 48 ho	
Specific treatments	No specific treatment.	
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training is suspected that fumes are still present, the rescuer should wear an appropria mask or self-contained breathing apparatus. It may be dangerous to the perso providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothi thoroughly with water before removing it, or wear gloves.	ate on

See toxicological information (Section 11)

# Section 5. Firefighting measures

Extinguishing media	
Suitable extinguishing media	: Use dry chemical, CO <sub>2</sub> , 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.
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).	
Methods and material for con	ita	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 spilt 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). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. 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.
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**

	Exposure limits		
	Workplace Safety and Health Act (Singapore, 2/2006). PEL (short term): 651 mg/m <sup>3</sup> 15 minutes. PEL (short term): 150 ppm 15 minutes. PEL (long term): 434 mg/m <sup>3</sup> 8 hours. PEL (long term): 100 ppm 8 hours.		
	Workplace Safety and Health Act (Singapore, 2/2006). PEL (short term): 152 mg/m <sup>3</sup> 15 minutes.		
	PEL (short term): 50 ppm 15 minutes. Workplace Safety and Health Act (Singapore, 2/2006). Notes: PEL (long term): 100 ppm 8 hours. PEL (long term): 434 mg/m <sup>3</sup> 8 hours. Workplace Safety and Health Act (Singapore, 2/2006).		
	<ul> <li>PEL (short term): 543 mg/m<sup>3</sup> 15 minutes.</li> <li>PEL (short term): 125 ppm 15 minutes.</li> <li>Workplace Safety and Health Act (Singapore, 2/2006).</li> <li>PEL (long term): 25 mg/m<sup>3</sup> 8 hours.</li> <li>PEL (long term): 10 ppm 8 hours.</li> </ul>		
ventilation or other engineering cont contaminants below any recommen also need to keep gas, vapour or du	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.		
they comply with the requirements of cases, fume scrubbers, filters or en	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.		
res			
eating, smoking and using the lavate Appropriate techniques should be u	broughly after handling chemical products, before ory and at the end of the working period. sed to remove potentially contaminated clothing. reusing. Ensure that eyewash stations and kstation location.		
indicates this is necessary to avoid o dusts. If contact is possible, the foll assessment indicates a higher degr	6 should be used when a risk assessment exposure to liquid splashes, mists, gases or owing protection should be worn, unless the ee of protection: chemical splash goggles and/ exist, a full-face respirator may be required		
resistance to any individual or comb The breakthrough time must be grea The instructions and information pro- storage, maintenance and replacem Gloves should be replaced regularly material. Always ensure that gloves are free f correctly. The performance or effectiveness of chemical damage and poor mainter	ater than the end use time of the product. by ided by the glove manufacturer on use, ment must be followed. If and if there is any sign of damage to the glove from defects and that they are stored and used of the glove may be reduced by physical/ mance. The exposed areas of the skin but should not be		
	<ul> <li>ventilation or other engineering contaminants below any recommenalso need to keep gas, vapour or dulimits. Use explosion-proof ventilati</li> <li>Emissions from ventilation or work pathey comply with the requirements of cases, fume scrubbers, filters or enequipment will be necessary to reduces</li> <li>Wash hands, forearms and face the eating, smoking and using the lavate Appropriate techniques should be understand wash contaminated clothing before safety showers are close to the work of the state of the eating is necessary to avoid dusts. If contact is possible, the foll assessment indicates a higher degr or face shield. If inhalation hazards instead.</li> <li>There is no one glove material or compared to any individual or combo The breakthrough time must be greated and replacement. Always ensure that gloves are free from ance or effectiveness of chemical damage and poor mainter Barrier creams may help to protect in the state of t</li></ul>		

# Section 8. Exposure controls/personal protection

	Wear suitable gloves tested to EN374. May be used, gloves(breakthrough time) 4 - 8 hours: neoprene, butyl rubber, Viton®, Barricade, CPF 3, Responder, PVC Not recommended, gloves(breakthrough time) < 1 hour: PE Recommended, gloves(breakthrough time) > 8 hours: 4H, Teflon, nitrile rubber, polyvinyl alcohol (PVA)
	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 clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
Other skin protection	<ul> <li>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.</li> </ul>
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

Odour threshold:Not available.pH:Not applicable.Melting point:Not applicable.Boiling point:Lowest known value: 119°C (246.2°F) (butan-1-ol). Weighted average: 131.57°C (268.8°F)Flash point:Closed cup: 32°C (89.6°F)Burning time:Not applicable.Burning time:Not applicable.Burning rate:Not applicable.Evaporation rate:Highest known value: 0.84 (ethylbenzene) Weighted average: 0.69compared with butyl acetateFlammability (solid, gas):Not applicable.Lower and upper explosive:0.8 - 11.3%(flammable) limits: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)Vapour density:0.97 g/cm³Solubility:Insoluble in the following materials: cold water and hot water.Solubility in water:Not available.Partition coefficient: n- octanol/water:Not available.Decomposition temperature:Lowest known value: 355°C (671°F) (butan-1-ol).Decomposition temperature:Not available.	<u>Appearance</u>		
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average: 0.96 kPa (7.2 mm Hg) (at 20°C)Vapour density: Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.41 (Air = 1)Relative density: 0.97 g/cm³Solubility: Insoluble in the following materials: cold water and hot water.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.	Lower and upper explosive (flammable) limits	.8 - 11.3%	
Relative density       : 0.97 g/cm³         Solubility       : Insoluble in the following materials: cold water and hot water.         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.	Vapour pressure		. Weighted
Solubility       : Insoluble in the following materials: cold water and hot water.         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.	Vapour density	lighest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.4	11 (Air = 1)
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.	Relative density	.97 g/cm³	
Partition coefficient: n-       : Not available.         octanol/water       : Lowest known value: 355°C (671°F) (butan-1-ol).         Decomposition temperature       : Not available.	Solubility	nsoluble in the following materials: cold water and hot water.	
octanol/waterAuto-ignition temperature: Lowest known value: 355°C (671°F) (butan-1-ol).Decomposition temperature: Not available.	Solubility in water	lot available.	
Decomposition temperature : Not available.	Partition coefficient: n- octanol/water	lot available.	
	Auto-ignition temperature	owest known value: 355°C (671°F) (butan-1-ol).	
SADT : Not available.	Decomposition temperature	lot available.	
	SADT	lot available.	

### Section 9. Physical and chemical properties

V	ïs	co	s	itv
		~~	-	

: Dynamic: Highest known value: 2.95 cP (butan-1-ol) Weighted average: 1.35 cP Kinematic: Highest known value: 0.77 cSt (ethylbenzene) Kinematic (40C): >20.5 cSt

# Section 10. Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingrea	dients.
Chemical stability	The product is stable.	
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occ	cur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut braze, solder, drill, grind or expose containers to heat or sources of ignition.	t, weld,
Incompatible materials	Keep away from the following materials to prevent strong exothermic reactior oxidising agents, strong alkalis, strong acids.	าร:
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition produs should not be produced.	ucts
SADT	Not available.	

### Section 11. Toxicological information

#### Information on toxicological effects

#### Acute toxicity

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	-
ethylenediamine	LC50 Inhalation Vapour	Rat	7 mg/l	4 hours
-	LD50 Dermal	Rabbit	730 uL/kg	-
	LD50 Oral	Rat	1200 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
ethylenediamine	Eyes - Severe irritant	Rabbit	-	24 hours 750	-
				ug	
	Eyes - Severe irritant	Rabbit	-	750 ug	-
	Skin - Moderate irritant	Rabbit	-	450 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 10	-
				mg	

#### **Sensitisation**

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

#### **Mutagenicity**

Not available.

#### **Carcinogenicity**

Not available.

#### **Reproductive toxicity**

Not available.

### **Teratogenicity**

# Section 11. Toxicological information

Not available.

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

Name	Category	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)

Name		Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs

#### **Aspiration hazard**

Name	Result
	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

#### Information on likely routes : Not available.

#### of exposure

Potential acute health effects	-
Eye contact	: Causes serious eye damage.
Inhalation	: May cause respiratory irritation.
Skin contact	: Causes skin irritation.
Ingestion	: No known significant effects or critical hazards.
Symptoms related to the phy	vsical, 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 effect	ts as well as chronic effects from short and long-term exposure
<u>Short term exposure</u>	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
<u>Long term exposure</u>	
Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
Potential chronic health effe	<u>ects</u>
Not available.	
General	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.

# Section 11. Toxicological information

- 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

Route	ATE value	
Oral Dermal Inhalation (vapours)	6250 mg/kg 5464.48 mg/kg 88.18 mg/l	

### Section 12. Ecological information

#### **Toxicity**

Product/ingredient name	Result	Species	Exposure
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
ethylbenzene	Acute EC50 7700 µg/l Marine water	Algae - Skeletonema costatum	96 hours
5	Acute EC50 2.93 mg/l	Daphnia	48 hours
	Acute LC50 4.2 mg/l	Fish	96 hours
ethylenediamine	Acute EC50 100000 µg/l Fresh water	Algae - Chlorella pyrenoidosa	96 hours
5	Acute LC50 115.7 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 160 µg/l Fresh water	Daphnia - Daphnia magna	21 days

#### 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
ethylenediamine	-7.02	-	low

#### Mobility in soil

Soil/water partition	
coefficient (Koc)	
Other adverse effects	

: Not available.

cts : 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.
	Do not allow to enter drains or watercourses. Material and/or container must be disposed of as hazardous waste.

## Section 14. Transport information

	UN	IMDG	ΙΑΤΑ
UN number	UN1866	UN1866	UN1866
UN proper shipping name	Resin solution	Resin solution	Resin solution
Transport hazard class(es)	3	3	3
Packing group			
Environmental hazards	No.	No.	No.
Additional information	-	Emergency schedules F-E, S-E	-

#### **Additional information**

Transport in accordance with ADR/RID, IMDG/IMO and ICAO/IATA and national regulation.

ADR / RID		Tunnel restriction code: (D/E) Hazard identification number: 30
		ADR/RID: Viscous substance. Not restricted, ref. chapter 2.2.3.1.5 (applicable to receptacles < 450 litre capacity).
IMDG	:	IMDG: Viscous substance. Transport in accordance with paragraph 2.3.2.5 (applicable to receptacles < 450 litre capacity).
Special precautions for user	:	<b>Transport within user's premises:</b> 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 in bulk according to IMO instruments	1	Not available.

## Section 15. Regulatory information

Singapore - hazardous chemicals under government control None.

### Section 16. Other information

Key to abbreviations	<ul> <li>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) UN = United Nations</li> </ul>
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.

# Section 16. Other information

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