SAFETY DATA SHEET



Jotamastic 80 Wintergrade Comp B

Section 1. Identi	fication
GHS product identifier	: Jotamastic 80 Wintergrade Comp B
Other means of identification	: Not available.
Product code	: 6520
Product description	: Hardener.
Product type	: Liquid.
Relevant identified uses o	f the substance or mixture and uses advised against
Identified uses	
Use in coatings - Industrial Use in coatings - Professio	
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 SKIN SENSITISATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - 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. H335 - May cause respiratory irritation. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements	
Prevention	 P280 - Wear protective gloves. Wear 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.

Section 2. Hazards identification

Response	 P391 - Collect spillage. 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.

Other hazards which do not : None known. result in classification

Section 3. Composition/information on ingredients

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

CAS number/other identifiers

CAS number	: Not applicable.
EC number	: Mixture.
Product code	: 6520

Ingredient name	%	CAS number
Phenol, polymer with formaldehyde, glycidyl ether, polymers with [(methylphenoxy)methyl]oxirane and triethylenetetramine	≥50 - ≤75	99377-78-3
xylene butan-1-ol ethylbenzene 2,4,6-tris(dimethylaminomethyl)phenol	≥10 - ≤25 ≥10 - <20 <10 ≤2.4	1330-20-7 71-36-3 100-41-4 90-72-2

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.

Chemical formula

: Not applicable.

Description of necessary first aid measures

Section 4. 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. 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.

Section 4. First aid measures

Wash ciothing 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 feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Most important symptoms/effects, acute and delayed Potential acute health effects Eye contact : Causes serious eye damage. Inhalation : May cause respiratory irritation. Skin contact : Causes skin irritation. May cause an allergic skin reaction. Ingestion : 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: respiratory tract irritation redness bilistering may occur Ingestion : Adverse symptoms may include the following: pain or irritation redness bilistering may occur Ingestion : Adverse symptoms may include the following: pain or irritation redness bilistering may occur	Section 4. First ald		neasures
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 vorniling may be dangerous. Do not induce vorniling unless directed to do so by medical personnel. If vorniting occurs, the head should be kept low so that vornit 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. Losen tight clothing such as a collar, tie, belt or waistband.Most important symptoms/effects, acute and delayedPotential acute health effectsEye contact: Causes serious eye damage. InhalationInhalation: May cause respiratory irritation. Skin contactSkin contact: Adverse symptoms may include the following: reginessEye contact: Adverse symptoms may include the following: reginatory irritation watering rednessSkin contact: Adverse symptoms may include the following: respiratory irrat irritation coughingSkin contact: Adverse symptoms may include the following: respiratory irrat irritation rednessInhalation: Adverse symptoms may include the following: respiratory irrat irritation rednessIngestion: Adverse symptoms may include the following: respiratory irrat irritation redness bilistering may occurIngestion: Adverse symptoms may include the following: respiratory irrat irritation redness bilistering may occurIndication of immediate medical attention and special treatment needed. If necessaryNotes to p	Skin contact	:	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.
Potential acute health effects 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. 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: respiratory tract irritation coughing Skin contact : Adverse symptoms may include the following: pain or irritation redness Ingestion : Adverse symptoms may include the following: pain or irritation redness bilstering may occur Ingestion Indication of immediate medical attention and special treatment needed. if necessary Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Specific treatments : No 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 con	Ingestion	:	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
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.Over-exposure signs/symptomsEye contact: Adverse symptoms may include the following: pain watering rednessInhalation: Adverse symptoms may include the following: respiratory tract irritation coughingSkin contact: Adverse symptoms may include the following: respiratory tract irritation coughingSkin contact: Adverse symptoms may include the following: respiratory tract irritation rednessIngestion: Adverse symptoms may include the following: respiratory tract irritation redness blistering may occurIngestion: Adverse symptoms may include the following: stomach painsIndication of immediate medical attention and special treatment needed, if necessaryNotes 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 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.	Most important symptoms/ef	fec	ets, acute and delayed
Inhalation: May cause respiratory irritation.Skin contact: Causes skin irritation. May cause an allergic skin reaction.Ingestion: No known significant effects or critical hazards.Over-exposure signs/symptomsEye contact: Adverse symptoms may include the following: pain watering rednessInhalation: Adverse symptoms may include the following: respiratory tract irritation coughingSkin contact: Adverse symptoms may include the following: respiratory tract irritation coughingSkin contact: Adverse symptoms may include the following: pain or irritation redness blistering may occurIngestion: Adverse symptoms may include the following: stomach painsIndication of immediate medical attention and special treatment needed, if necessary Notes to physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.Specific treatments: No specific treatment.Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing	Potential acute health effect	ts	
Skin contact : Causes skin irritation. May cause an allergic skin reaction. Ingestion : No known significant effects or critical hazards. 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: 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 medical attention and special treatment needed, if necessary Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Specific treatments : No specific treatment. Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that furmes 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	Eye contact	4	Causes serious eye damage.
Ingestion: No known significant effects or critical hazards.Over-exposure signs/symptomsEye contact: Adverse symptoms may include the following: pain watering rednessInhalation: Adverse symptoms may include the following: respiratory tract irritation coughingSkin contact: Adverse symptoms may include the following: pain or irritation rednessIngestion: Adverse symptoms may include the following: pain or irritation rednessIngestion: Adverse symptoms may include the following: pain or irritation redness blistering may occurIngestion: Adverse symptoms may include the following: stomach painsIndication of immediate medical attention and special treatment needed, if necessaryNotes 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 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 mak or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing	Inhalation	4	May cause respiratory irritation.
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 medical attention and special treatment needed, if necessary Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Specific treatments : No specific treatment. Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing	Skin contact	4	Causes skin irritation. May cause an allergic skin reaction.
Eye contact: Adverse symptoms may include the following: pain watering rednessInhalation: Adverse symptoms may include the following: respiratory tract irritation coughingSkin contact: Adverse symptoms may include the following: pain or irritation redness blistering may occurIngestion: Adverse symptoms may include the following: pain or irritation redness blistering may occurIngestion: Adverse symptoms may include the following: stomach painsIndication of immediate medical attention and special treatment needed, if necessaryNotes 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	Ingestion	4	No known significant effects or critical hazards.
pain watering rednessInhalation: Adverse symptoms may include the following: respiratory tract irritation coughingSkin contact: Adverse symptoms may include the following: pain or irritation redness blistering may occurIngestion: Adverse symptoms may include the following: pain or irritation redness blistering may occurIngestion: Adverse symptoms may include the following: stomach painsIndication of immediate medical attention and special treatment needed, if necessaryNotes 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	Over-exposure signs/sympt	on	<u>15</u>
Skin contact: Adverse symptoms may include the following: pain or irritation redness blistering may occurIngestion: Adverse symptoms may include the following: stomach painsIndication of immediate medical attention and special treatment needed, if necessaryNotes 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	Eye contact	:	pain watering
pain or irritation redness blistering may occurIngestion: Adverse symptoms may include the following: stomach painsIndication of immediate medical attention and special treatment needed, if necessaryNotes to physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. 	Inhalation	:	respiratory tract irritation
Indication of immediate medical attention and special treatment needed, if necessaryNotes 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	Skin contact	:	pain or irritation redness
 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. 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 	Ingestion	:	
 Specific treatments Protection of first-aiders The exposed person may need to be kept under medical surveillance for 48 hours. No specific treatment. 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 	Indication of immediate medi	ica	l attention and special treatment needed, if necessary
 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 	Notes to physician	:	
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	Specific treatments	4	No specific treatment.
	Protection of first-aiders	:	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

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.

Section 5. Firefighting measures

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, protect	tiv	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	nment 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 history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not bre- 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, spa open flame or any other ignition source. Use explosion-proof electrical (ventilatin lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers reta product residue and can be hazardous. Do not reuse container.	athe e. e arks, ng,
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.	3
Date of issue	: 05.06.2023	4/11

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.
	g

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name		Exposure limits
xylene		Workplace Safety and Health Act (Singapore, 2/2006). PEL (short term): 651 mg/m ³ 15 minutes. PEL (short term): 150 ppm 15 minutes. PEL (long term): 434 mg/m ³ 8 hours. PEL (long term): 100 ppm 8 hours.
butan-1-ol		Workplace Safety and Health Act (Singapore, 2/2006). PEL (short term): 152 mg/m ³ 15 minutes.
ethylbenzene		 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/m³ 8 hours. Workplace Safety and Health Act (Singapore, 2/2006). PEL (short term): 543 mg/m³ 15 minutes. PEL (short term): 125 ppm 15 minutes.
Appropriate engineering controls	ventilation or other engineering con contaminants below any recommer	Use process enclosures, local exhaust trols to keep worker exposure to airborne aded or statutory limits. The engineering controls ust concentrations below any lower explosive ion equipment.
Environmental exposure controls	they comply with the requirements	process equipment should be checked to ensure of environmental protection legislation. In some gineering modifications to the process uce emissions to acceptable levels.
ndividual protection measur	es	
Hygiene measures	eating, smoking and using the lava Appropriate techniques should be u Contaminated work clothing should	broughly after handling chemical products, before tory and at the end of the working period. Ised to remove potentially contaminated clothing. not be allowed out of the workplace. Wash ng. Ensure that eyewash stations and safety n location.
Eye/face protection	assessment indicates this is necessing gases or dusts. If contact is possibulity unless the assessment indicates a goggles and/or face shield. If inhal	6321-1:2022 should be used when a risk sary to avoid exposure to liquid splashes, mists, le, the following protection should be worn, higher degree of protection: chemical splash ation hazards exist, a full-face respirator may be
	required instead.	

Section 8. Exposure controls/personal protection

: There is no one glove material or combination of materials that will give unlimited
 There is no one glove indecide 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: 4H/Silver Shield® (> 0.07 mm), Teflon (> 0.35 mm), polyvinyl alcohol (PVA) (> 0.3 mm), nitrile rubber (> 0.4 mm) May be used, gloves(breakthrough time) 4 - 8 hours: Viton® (> 0.7 mm), PVC (> 0.5 mm), neoprene (> 0.35 mm), butyl rubber (> 0.4 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.
 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 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.
: 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

<u>Appearance</u>	
Physical state	: Liquid.
Colour	: Clear.
Odour	: Characteristic.
Odour threshold	: Not available.
рН	: Not applicable.
Melting point	: Not applicable.
Boiling point	: Lowest known value: 119°C (246.2°F) (butan-1-ol). Weighted average: 131.86°C (269.3°F)
Flash point	: Closed cup: 30°C (86°F)
Burning time	: Not applicable.
Burning rate	: Not applicable.
Evaporation rate	: Highest known value: 0.84 (ethylbenzene) Weighted average: 0.7compared with butyl acetate
Flammability (solid, gas)	: Not applicable.
Lower and upper explosive (flammable) limits	: 0.8 - 11.3%
Vapour pressure	 Highest known value: 1.2 kPa (9.3 mm Hg) (at 20°C) (ethylbenzene). Weighted average: 0.93 kPa (6.98 mm Hg) (at 20°C)
Vapour density	: Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.42 (Air = 1)
Date of issue	: 05.06.2023 6/1

Section 9. Physical and chemical properties

Relative density	:	1.01 g/cm ³
Solubility	:	Insoluble in the following materials: cold water and hot water.
Solubility in water	:	Not available.
Partition coefficient: n- octanol/water	1	Not available.
Auto-ignition temperature	1	Lowest known value: 355°C (671°F) (butan-1-ol).
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	Dynamic: Highest known value: 200 cP (2,4,6-tris(dimethylaminomethyl)phenol) Weighted average: 7.24 cP Kinematic: Highest known value: 0.77 cSt (ethylbenzene) (OECD 114) Kinematic (40C): >20.5 cSt

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	 Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
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	-
2,4,6-tris	LD50 Oral	Rat	1673 mg/kg	-
(dimethylaminomethyl) phenol				

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Phenol, polymer with formaldehyde, glycidyl ether, polymers with [(methylphenoxy)methyl] oxirane and triethylenetetramine	Eyes - Mild irritant	Mammal - species unspecified	-	-	-
	Skin - Mild irritant	Mammal - species unspecified	-	-	-
xylene	Eyes - Mild irritant Skin - Mild irritant	Rabbit Rat	-	87 milligrams 8 hours 60 microliters	-
2,4,6-tris (dimethylaminomethyl) phenol	Eyes - Severe irritant	Rabbit	-	24 hours 50 µg	-
ate of issue	: 05.06.2023				. 7

Section 11. Toxicological information

	Skin - Severe irrita	ant	Rat	-	0.25 ml	-
Sensitisation						
Product/ingredient name	Route of	Species		Resu	lt	

Product/ingredient name	exposure	Species	Result
Phenol, polymer with formaldehyde, glycidyl ether, polymers with [(methylphenoxy)methyl] oxirane and triethylenetetramine	skin	Mammal - species unspecified	Sensitising

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

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. May cause an allergic skin reaction.
Ingestion	: No known significant effects or critical hazards.
Symptoms related to the physical sector of th	sical, 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

Section 11. Toxicological information

Skin contact		Adverse symptoms may include the following:
Skill Contact		pain or irritation
		redness
		blistering may occur
Ingestion	:	Adverse symptoms may include the following: stomach pains
Delayed and immediate effect	cts	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.
Long term exposure		
Potential immediate effects	:	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	1	No known significant effects or critical hazards.
Mutagenicity	:	No known significant effects or critical hazards.
Teratogenicity	:	No known significant effects or critical hazards.
Developmental effects	1	No known significant effects or critical hazards.
Fertility effects	:	No known significant effects or critical hazards.
Numerical measures of toxic	<u>city</u>	
Acute toxicity estimates		
-		

Route	ATE value
Oral	4854.9 mg/kg
Dermal	4888.89 mg/kg
Inhalation (vapours)	64.67 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Phenol, polymer with formaldehyde, glycidyl ether, polymers with [(methylphenoxy)methyl] oxirane and triethylenetetramine	Acute LC50 9 mg/l	Fish	96 hours
xylene	Acute LC50 8500 μg/l Marine water	Crustaceans - Palaemonetes	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

Section 12. Ecological information

	0		
Product/ingredient name	LogPow	BCF	Potential
xylene	3.12	8.1 to 25.9	low
butan-1-ol	1	-	low
ethylbenzene	3.6	-	low
2,4,6-tris	0.219	-	low
(dimethylaminomethyl)phenol			

Mobility in soil

Soil/water partition coefficient (Koc)	: Not available.
Other adverse effects	: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. 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.

	UN	IMDG	IATA
UN number	UN1866	UN1866	UN1866
UN proper shipping name	Resin solution	Resin solution. Marine pollutant (Phenol, polymer with formaldehyde, glycidyl ether, polymers with [(methylphenoxy)methyl] oxirane and triethylenetetramine)	Resin solution
Transport hazard class(es)	3		3
Packing group	Ш	Ш	Ш
Environmental hazards	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Additional information	-	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Emergency schedules</u> F-E, <u>S-E</u>	The environmentally hazardous substance mark may appear if required by other transportation regulations.

Section 14. Transport information

Additional information

Date of issue

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

Section 14. Transport information

ADR / RID	1	Tunnel restriction code: (D/E) Hazard identification number: 30
Special precautions for user	:	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Transport in bulk according to IMO instruments	:	Not available.

Section 15. Regulatory information

Singapore - hazardous chemicals under government control

None.

Section 16. Other information

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 IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations
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.