

Jotamastic 87 Wintergrade Comp B

Section 1. Identification **Product identifier** : Jotamastic 87 Wintergrade Comp B

- **Product code** : 1549 **Product type** : Liquid. **Product description** Other means of identification
- - : Hardener.
 - : Not available.

Recommended use of the chemical and restrictions on use

Identified uses Use in coatings - Industrial use Use in coatings - Professional use

Supplier's details	:	Jotun Saudia Co Ltd. P.O. Box 34698 Jeddah 21478 Kingdom of Saudi Arabia Tel: +966 2 6350535 Fax: +966 2 6362483 SDSJotun@jotun.com
Emergency telephone number	:	Jotun AS, Norway +47 33 45 70 00

Section 2. Hazard identification

Classification of the	: FLAMMABLE LIQUIDS - Category 3
substance or mixture	ACUTE TOXICITY (oral) - Category 5
	ACUTE TOXICITY (dermal) - Category 5
	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	\wedge \wedge \wedge \wedge
Signal word	: Danger.

Section 2. Hazard identification

Hazard statements	 H226 - Flammable liquid and vapour. H303 + H313 - May be harmful if swallowed or in contact with skin. 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	
General	: Not applicable.
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.
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 + P312, P352 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. 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.
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	

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

Section 4. First aid measures

Description of necessary first aid measures		
Eye contact	: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.	
Inhalation	: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.	
Skin contact	: Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.	
Ingestion	: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.	

Most important symptoms/effects, acute and delayed Potential acute health effects Eye contact : Causes serious eye damage. Inhalation : May cause respiratory irritation.

Skin contact : May be harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Ingestion : May be harmful if swallowed. 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: 2 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

Section 4. First aid measures

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 containment and cleaning up

Section 6. Accidental release measures

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. 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.
Conditions for safe storage, including any incompatibilities	 Store in accordance with local regulations. Notes on joint storage Keep away from: oxidising agents, strong alkalis, strong acids. Additional information on storage conditions Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

See Technical Data Sheet / packaging for further information.

Section 8. Exposure controls/personal protection

Control parameters Occupational exposure limits	
None. <u>Biological exposure indices</u> No exposure indices known.	
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.

5/13

 Date of issue/Date of revision
 : 05.06.2023
 Date of previous issue
 : No previous validation
 Version
 : 1

Section 8. Exposure controls/personal protection

- -	
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 meas	<u>ures</u>
Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety eyewear complying to ISO 16321-1:2022 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
Skin protection	
Hand protection	 There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. The breakthrough time must be greater than the end use time of the product. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred. Wear suitable gloves tested to ISO 374-1:2016. Recommended, gloves(breakthrough time) > 8 hours: 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.
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	: If workers are exposed to concentrations above the exposure limit, they must use a respirator according to EN 140. Use respiratory mask with charcoal and dust filter when spraying this product, according to EN 14387(as filter combination A2-P2). In confined spaces, use compressed-air or fresh-air respiratory equipment. When use of roller or brush, consider use of charcoalfilter.

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.

Appearance

Odour threshold : Not applicable. pH : Not applicable. Melting point/freezing 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) Evaporation rate : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.7compared with butyl acetate Flammability : Not applicable. Lower and upper explosion timit/flammability limit : 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) Density : 1.02 g/cm³ Solubility(ies) : Media Result cold water Not soluble Not soluble Not soluble Partition coefficient: n-octanol/water : Not available. octanol/water : Lowest known value: 355°C (671°F) (butan-1-ol). Decomposition 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 (>2	<u>rippourunoo</u>				
Odour : Characteristic. Odour threshold : Not applicable. PH : Not applicable. Melting point/freezing 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) Evaporation rate : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.7compared with butly acetate Flammability : Not applicable. Lower and upper explosion : 0.8 - 11.3% Umper explosion : 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) Density : 1.02 g/cm ³ Solubility(ies) : Media Result cold water Not soluble Not available. . octanol/water : Not available. Octanol/water : Lowest known value: 355°C (671°F) (butan-1-ol). Decomposition temperature : Lowest known value: 355°C (671°F) (butan-1-ol). Decomposition temperature : Lowest known value:	Physical state	:	Liquid.		
Odour threshold : Not applicable. PH : Not applicable. Melting point/freezing 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) Evaporation rate : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.7compared with butyl acetate Flammability : Not applicable. Lower and upper explosion : 0.8 - 11.3% Iimit/flammability limit : Not applicable. 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) Density : 1.02 g/cm³ Solubility(ies) : Media Result cold water Not soluble Not soluble Not soluble Partition coefficient: n-octanol/water : Not available. octanol/water : Lowest known value: 355°C (671°F) (butan-1-ol). Decomposition temperature : Lowest known value: 355°C (571°F) (butan-1-ol). Decomposition temperature : Not available. V	Colour	:	Clear.		
pH : Not applicable. Melting point/freezing 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) Evaporation rate : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.7compared with butyl acetate Flammability : Not applicable. Lower and upper explosion limit/flammability limit : 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) Density : 1.02 g/cm³ Solubility(ies) : Media Result cold water Not soluble Not soluble Not soluble Partition coefficient: n-octanol/water : Not available. octanol/water : Lowest known value: 355°C (671°F) (butan-1-ol). Decomposition 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	Odour	:	Characteristic.		
Melting point/freezing 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) Evaporation rate : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.7compared with butyl acetate Flammability : Not applicable. Lower and upper explosion : 0.8 - 11.3% limit/flammability limit : 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) Density : 1.02 g/cm³ Solubility(ies) : Media Result cold water Not soluble hot soluble Not soluble Partition coefficient: n- : Not available. octanol/water : Lowest known value: 355°C (671°F) (butan-1-ol). Decomposition temperature : Lowest known value: 355°C (671°F) (butan-1-ol). Decomposition temperature : Lowest known value: 355°C (671°F) (butan-1-ol). Decomposition temperature : Lowest known value: 355°C (671°F) (butan-1-ol). Decomposition	Odour threshold	:	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) Evaporation rate : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.7compared with butyl acetate Flammability : Not applicable. Lower and upper explosion : 0.8 - 11.3% Imit/flammability limit : 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 pressure : Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.42 (Air = 1) Density : 1.02 g/cm³ Solubility(ies) : Media Result cold water Not soluble Not available. : 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 :	рН	:	Not applicable.		
(269.3°F) Flash point : Closed cup: 30°C (86°F) Evaporation rate : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.7compared with butyl acetate Flammability : Not applicable. Lower and upper explosion : 0.8 - 11.3% limit/flammability limit : U.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) Density : 1.02 g/cm³ Solubility(ies) : Media Result cold water Not soluble Not available. Not soluble Partition coefficient: n- : Not available. octanol/water : 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 :	Melting point/freezing point	:	Not applicable.		
Evaporation rate : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.7compared with butyl acetate Flammability : Not applicable. Lower and upper explosion limit/flammability limit : 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) Density : 1.02 g/cm³ Solubility(ies) : Media Result cold water Not soluble Not soluble Not soluble Partition coefficient: n-octanol/water : Not available. octanol/water : Lowest known value: 355°C (671°F) (butan-1-ol). Decomposition temperature : Lowest known value: 355°C (671°F) (butan-1-ol). Decomposition temperature : Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt) Particle characteristics : Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt)	Boiling point	:			
butyl acetate Flammability : Not applicable. Lower and upper explosion : 0.8 - 11.3% limit/flammability limit : Wighted average: 0.93 kPa (6.98 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) Density : 1.02 g/cm³ Solubility(ies) : Media Result cold water Not soluble hot water Not soluble Not soluble Not soluble Partition coefficient: n- : Not available. octanol/water : Lowest known value: 355°C (671°F) (butan-1-ol). Decomposition 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 :	Flash point	:	Closed cup: 30°C (86°F)		
Lower and upper explosion : 0.8 - 11.3% limit/flammability limit 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) Density : 1.02 g/cm³ Solubility(ies) : Media Result cold water Not soluble Not soluble Not soluble 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 : Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt)	Evaporation rate	1			
Ilimit/flammability limit 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) Density : 1.02 g/cm³ Solubility(ies) : Media Result cold water Not soluble Not soluble Not soluble 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 : Soluble	Flammability	:	Not applicable.		
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) Density : 1.02 g/cm³ Solubility(ies) : Media Result cold water Not soluble Not soluble Not soluble Partition coefficient: n- : Not available. octanol/water : 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 : Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt)	Lower and upper explosion limit/flammability limit	1	0.8 - 11.3%		
Density : 1.02 g/cm³ Solubility(ies) : Media Result cold water Not soluble hot water Not soluble 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 : State in the s	Vapour pressure	:			
Solubility(ies) : Media Result cold water Not soluble hot water Not soluble Partition coefficient: n- : Not available. octanol/water : 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	Vapour density	:	Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.42 (Air = 1)		
Media Result cold water Not soluble hot water Not soluble Partition coefficient: n- : Not available. octanol/water Auto-ignition temperature 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	Density	:	1.02 g/cm ³		
cold water hot water Not soluble Not soluble Partition coefficient: n- octanol/water : Not available. Auto-ignition temperature Decomposition temperature : Not available. : Lowest known value: 355°C (671°F) (butan-1-ol). Decomposition temperature : Not available. : Not available. Viscosity Particle characteristics : Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt)	Solubility(ies)	:			
hot water Not soluble 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	Media		Result		
octanol/waterAuto-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					
Decomposition temperature: Not available.Viscosity: Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt)Particle characteristics	Partition coefficient: n- octanol/water	:	Not available.		
Viscosity: Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt)Particle characteristics	Auto-ignition temperature	:	Lowest known value: 355°C (671°F) (butan-1-ol).		
Particle characteristics	Decomposition temperature	:	: Not available.		
	Viscosity	:	⊱ Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt)		
Median particle size : Not applicable.	Particle characteristics				
	Median particle size	:	Not applicable.		

Section 10. Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredie	ents.
Chemical stability	Stable under recommended storage and handling conditions (see Section 7).	
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occu	ır.
Conditions to avoid	When exposed to high temperatures may produce hazardous decomposition products.	
Incompatible materials	Keep away from the following materials to prevent strong exothermic reactions oxidising agents, strong alkalis, strong acids.	5:
Hazardous decomposition products	Decomposition products may include the following materials: carbon monoxide carbon dioxide, smoke, oxides of nitrogen.	Э,

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	-
	Skin - Severe irritant	Rat	-	0.25 ml	-

Sensitisation

Product/ingredient name	Route of 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)

Section 11. Toxicological information

Product/ingredient 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)

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

Aspiration hazard

Product/ingredient name	Result	
xylene	ASPIRATION HAZARD - Category 1	
ethylbenzene	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	: May be harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction.
Ingestion	: May be harmful if swallowed.

Symptoms related to the physical, 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 effects 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	<u>ects</u>
Not available.	

Section 11. Toxicological information

General	: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Reproductive toxicity	: 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)
N/A	4854.9	4888.9	N/A	64.7	N/A
xylene	N/A	1100	N/A	20	N/A
butan-1-ol	500	N/A	N/A	N/A	N/A
ethylbenzene	N/A	N/A	N/A	17.8	N/A
2,4,6-tris(dimethylaminomethyl)phenol	1673	N/A	N/A	N/A	N/A

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 and 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
2,4,6-tris	0.219	-	low
(dimethylaminomethyl)phenol			

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Section 12. Ecological information

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	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	III	Ш	Ш
Environmental hazards	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Additional informat	tion		
IMDG	: The marine pollutar Emergency sched	nt mark is not required when trans <u>ules</u> F-E, <u>S-E</u>	sported in sizes of ≤5 L or ≤5 kg.
ΙΑΤΑ	: The environmentally hazardous substance mark may appear if required by other transportation regulations.		
ADR/RID	:		
Special precautions	for user : Transport within u	user's premises: always transpo	t 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 : Not available. to IMO instruments

Section 15. Regulatory information

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	: 05.06.2023
Date of issue/Date of revision	: 05.06.2023
Date of previous issue	: No previous validation
Version	: 1
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 = Internediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) 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
ACUTE TOXICITY (oral) - Category 5	Calculation method
ACUTE TOXICITY (dermal) - Category 5	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	Calculation method
SKIN SENSITISATION - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3	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

Section 16. Other information

needs and specific application practices.

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