SAFETY DATA SHEET

Jotun Protects Property

Jotamastic 87 Aluminium Comp A

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Product name : Jotamastic 87 Aluminium Comp A

Product code : 523

Product description : Paint.

Product type : Liquid.

Other means of identification : Not available.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use in coatings - Industrial use

Use in coatings - Professional use

1.3 Details of the supplier of the safety data sheet

Jotun A/S
P.O.Box 2021
3202 Sandefjord
Norway
Tel: + 47 33 45 70 00
Fax: +47 33 45 72 42
E-mail: SDSJotun@jotun.no

Jotun Paints (Europe) Ltd.
Stather Road
Flixborough, Scunthorpe
North Lincolnshire
DN15 8RR
England

Tel: +44 17 24 40 00 00
Fax: +44 17 24 40 01 00

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : Contact NHS Direct; phone 0845 4647 or 111. Open 24/7.

Supplier

Telephone number : +47 33 45 70 00 Jotun Norway (head office)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK CLP/GHS

Flam. Liq. 3, H226
Skin Irrit. 2, H315
Eye Irrit. 2, H319
Skin Sens. 1, H317
Aquatic Chronic 3, H412

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

SECTION 2: Hazards identification

Hazard pictograms :

Signal word : Warning.

Hazard statements : H226 - Flammable liquid and vapour.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H412 - Harmful 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 : 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 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice or attention.

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : EUH205 - Contains epoxy constituents. May produce an allergic reaction.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification	Type
epoxy resin (MW ≤ 700)	REACH #: 01-2119456619-26 EC: 216-823-5 CAS: 1675-54-3 Index: 603-073-00-2	≥10 - ≤23	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 2, H411	[1]
hydrocarbons, c9-unsatd., polymd.	REACH #: 01-2119555292-40 EC: 701-299-7 CAS: 71302-83-5	≤10	Skin Sens. 1, H317 Aquatic Chronic 3, H412	[1]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≤10	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 3, H412	[1] [2]
epoxy resin (MW 700-1200)	CAS: 25036-25-3	≤5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317	[1]
benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≤3	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	[1]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≤3	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	[1] [2]
2-methylpropan-1-ol	REACH #: 01-2119484609-23 EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1	<3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	[1] [2]
hydrocarbons, C9, aromatics	REACH #: 01-2119455851-35 EC: 918-688-5 CAS: 64742-95-6	≤1.2	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066 **See Section 16 for the full text of the H statements declared above.**	[1]

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, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : 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. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : 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. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : 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. Get medical attention if adverse health effects persist or are severe. 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.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. 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.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.
Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.
If splashed in the eyes, the liquid may cause irritation and reversible damage.
Ingestion may cause nausea, diarrhea and vomiting.
This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitiser and an irritant. It contains low molecular weight epoxy constituents which are irritating to eyes, mucous membrane and skin. Repeated skin contact may lead to irritation and to sensitisation, possibly with cross-sensitisation to other epoxies. Skin contact with the mixture and exposure to spray mist and vapour should be avoided.

Contains 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane, hydrocarbons, C9-unsaturated, polymerized, epoxy resin (MW 700-1200). May produce an allergic reaction.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

SECTION 4: First aid measures

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO_2, powders, water spray.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : 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 harmful 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 combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

5.3 Advice for firefighters

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

6.1 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. Avoid breathing 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".

6.2 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.

SECTION 6: Accidental release measures

6.3 Methods and material for containment 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.

6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 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 ingest. Avoid breathing vapour or mist. 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.

7.2 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. 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.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonne	50000 tonne

See Technical Data Sheet / packaging for further information.

SECTION 7: Handling and storage

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
xylene	**EH40/2005 WELs (United Kingdom (UK), 1/2020). [xylene, o-,m-, p- or mixed isomers] Absorbed through skin.** STEL: 441 mg/m³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 220 mg/m³ 8 hours. TWA: 50 ppm 8 hours.
ethylbenzene	**EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.** STEL: 552 mg/m³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 100 ppm 8 hours. TWA: 441 mg/m³ 8 hours.
2-methylpropan-1-ol	**EH40/2005 WELs (United Kingdom (UK), 1/2020).** STEL: 231 mg/m³ 15 minutes. STEL: 75 ppm 15 minutes. TWA: 154 mg/m³ 8 hours. TWA: 50 ppm 8 hours.

Biological exposure indices

Product/ingredient name	Exposure indices
xylene	**EH40/2005 BMGVs (United Kingdom (UK), 8/2018) [Xylene, o-, m-, p- or mixed isomers]** BGV: 650 mmol/mol creatinine, methyl hippuric acid [in urine]. Sampling time: post shift.

Recommended monitoring procedures : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
epoxy resin (MW ≤ 700)	DNEL	Long term Dermal	89.3 µg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	0.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.75 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.87 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	4.93 mg/m³	Workers	Systemic
hydrocarbons, c9-unsatd., polymd.	DNEL	Long term Dermal	3.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.41 mg/m³	Workers	Systemic
xylene	DNEL	Long term Oral	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	65.3 mg/m³	General population	Local
	DNEL	Long term Inhalation	65.3 mg/m³	General population	Systemic

SECTION 8: Exposure controls/personal protection

	DNEL	Long term Dermal	125 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	221 mg/m³	Workers	Local
	DNEL	Long term Inhalation	221 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	260 mg/m³	General population	Local
	DNEL	Short term Inhalation	260 mg/m³	General population	Systemic
	DNEL	Short term Inhalation	442 mg/m³	Workers	Local
	DNEL	Short term Inhalation	442 mg/m³	Workers	Systemic
benzyl alcohol	DNEL	Long term Oral	4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	5.4 mg/m³	General population	Systemic
	DNEL	Long term Dermal	8 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Oral	20 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	20 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	22 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	27 mg/m³	General population	Systemic
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	110 mg/m³	Workers	Systemic
ethylbenzene	DMEL	Long term Inhalation	442 mg/m³	Workers	Local
	DMEL	Short term Inhalation	884 mg/m³	Workers	Systemic
	DNEL	Long term Oral	1.6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	15 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	77 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	293 mg/m³	Workers	Local
2-methylpropan-1-ol	DNEL	Long term Inhalation	55 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	310 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	55 mg/m³	General population	Local
	DNEL	Long term Inhalation	310 mg/m³	Workers	Local
hydrocarbons, C9, aromatics	DNEL	Long term Dermal	12.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	151 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	7.5 mg/kg bw/day	General population	Systemic

SECTION 8: Exposure controls/personal protection

				[Consumers]	
	DNEL	Long term Inhalation	32 mg/m³	General population [Consumers]	Systemic
	DNEL	Long term Oral	7.5 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	0.41 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	1.9 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	178.57 mg/m³	General population	Local
	DNEL	Short term Inhalation	640 mg/m³	General population	Local
	DNEL	Long term Inhalation	837.5 mg/m³	Workers	Local
	DNEL	Short term Inhalation	1066.67 mg/m³	Workers	Local
	DNEL	Short term Inhalation	1152 mg/m³	General population	Systemic
	DNEL	Short term Inhalation	1286.4 mg/m³	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
epoxy resin (MW ≤ 700)	Fresh water	0.006 mg/l	-
	Marine	0.0006 mg/l	-
	Sewage Treatment Plant	10 mg/l	-
	Fresh water sediment	0.996 mg/l	-
	Marine water sediment	0.0996 mg/l	-
	Soil	0.196 mg/l	-
hydrocarbons, c9-unsatd., polymd.	Fresh water	54 µg/l	-
	Marine	5.4 µg/l	-
	Sewage Treatment Plant	2.2 mg/l	-
	Fresh water sediment	1584 mg/kg dwt	-
	Marine water sediment	158 mg/kg dwt	-
	Soil	316.7 mg/kg dwt	-
	Secondary Poisoning	200 mg/kg	-
xylene	Fresh water	0.327 mg/l	-
	Marine	0.327 mg/l	-
	Sewage Treatment Plant	6.58 mg/l	-
	Fresh water sediment	12.46 mg/kg dwt	-
	Marine water sediment	12.46 mg/kg dwt	-
	Soil	2.31 mg/kg dwt	-
benzyl alcohol	Fresh water	1 mg/l	-
	Marine	0.1 mg/l	-
	Sewage Treatment Plant	39 mg/l	-
	Fresh water sediment	5.27 mg/kg dwt	-
	Marine water sediment	0.527 mg/kg dwt	-
	Soil	0.456 mg/kg dwt	-
ethylbenzene	Fresh water	0.1 mg/l	-
	Marine	0.01 mg/l	-
	Sewage Treatment Plant	9.6 mg/l	-
	Fresh water sediment	13.7 mg/kg dwt	-
	Soil	2.68 mg/kg dwt	-
	Secondary Poisoning	20 mg/kg	-
2-methylpropan-1-ol	Fresh water	0.4 mg/l	-

SECTION 8: Exposure controls/personal protection

	Marine	0.04 mg/l	-
	Sewage Treatment Plant	10 mg/l	-
	Fresh water sediment	1.52 mg/kg dwt	-
	Marine water sediment	0.152 mg/kg dwt	-
	Soil	0.0699 mg/kg dwt	-

8.2 Exposure controls

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.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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.

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.

Gloves

Wear suitable gloves tested to ISO 374-1:2016.
Recommended, gloves(breakthrough time) > 8 hours: Viton® (> 0.7 mm), nitrile rubber (> 0.75 mm), 4H/Silver Shield® (> 0.07 mm), Teflon (> 0.35 mm)
Not recommended, gloves(breakthrough time) < 1 hour: PVC (> 0.5 mm)
May be used, gloves(breakthrough time) 4 - 8 hours: neoprene (> 0.35 mm), butyl rubber (> 0.4 mm), polyvinyl alcohol (PVA) (> 0.3 mm)

For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective 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.

SECTION 8: Exposure controls/personal protection

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.

Environmental exposure controls : Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Colour : Aluminium, ,Aluminium red toned

Odour : Characteristic.

Odour threshold : Not applicable.

Melting point/freezing point : Not applicable.

Initial boiling point and boiling range : Lowest known value: 108°C (226.4°F) (2-methylpropan-1-ol). Weighted average: 247.54°C (477.6°F)

Flammability : Not applicable.

Upper/lower flammability or explosive limits : 0.8 - 13%

Flash point : Closed cup: 40°C (104°F)

Auto-ignition temperature : Lowest known value: >375°C (>707°F) (hydrocarbons, c9-unsatd., polymd.).

Decomposition temperature : Not available.

pH : Not applicable.

Viscosity : Kinematic (40°C): >20.5 mm^2/s

Solubility(ies) :

Media	Result
cold water	Not soluble
hot water	Not soluble

Partition coefficient: n-octanol/water : Not available.

Vapour pressure : Highest known value: <1.6 kPa (<12 mm Hg) (at 20°C) (2-methylpropan-1-ol). Weighted average: 0.23 kPa (1.73 mm Hg) (at 20°C)

Evaporation rate : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.6compared with butyl acetate

Density : 1.5 to 1.526 g/cm^3

Vapour density : Highest known value: 11.7 (Air = 1) (epoxy resin (MW ≤ 700)). Weighted average: 8.96 (Air = 1)

Explosive properties : Not available.

Oxidising properties : Not available.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.

10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.
Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.
If splashed in the eyes, the liquid may cause irritation and reversible damage.
Ingestion may cause nausea, diarrhea and vomiting.
This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Based on the properties of the epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitiser and an irritant. It contains low molecular weight epoxy constituents which are irritating to eyes, mucous membrane and skin. Repeated skin contact may lead to irritation and to sensitisation, possibly with cross-sensitisation to other epoxies. Skin contact with the mixture and exposure to spray mist and vapour should be avoided.

Contains 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane, hydrocarbons, C9-unsaturated, polymerized, epoxy resin (MW 700-1200). May produce an allergic reaction.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
epoxy resin (MW ≤ 700)	LD50 Dermal	Rabbit	20 g/kg	-
	LD50 Oral	Mouse	15600 mg/kg	-
hydrocarbons, C9-unsaturated, polymerized	LD50 Dermal	Rat	2000 mg/kg	-
	LD50 Oral	Rat	2000 mg/kg	-
xylene	LC50 Inhalation Vapour	Rat	11 mg/l	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
	TDLo Dermal	Rabbit	4300 mg/kg	-
benzyl alcohol	LD50 Oral	Rat	1230 mg/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat - Male	11 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
2-methylpropan-1-ol	LC50 Inhalation Vapour	Rat	19200 mg/m³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-

Acute toxicity estimates

SECTION 11: Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Jotamastic 87 Aluminium Comp A	49200.0	19426.0	N/A	109.5	N/A
xylene	4300	1100	N/A	11	N/A
benzyl alcohol	1230	N/A	N/A	11	N/A
ethylbenzene	3500	N/A	N/A	11	N/A
2-methylpropan-1-ol	2460	3400	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
epoxy resin (MW ≤ 700)	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
epoxy resin (MW 700-1200)	Eyes - Mild irritant	Mammal - species unspecified	-	-	-
	Skin - Mild irritant	Mammal - species unspecified	-	-	-
benzyl alcohol	Eyes - Mild irritant	Mammal - species unspecified	-	-	-
2-methylpropan-1-ol	Eyes - Irritant	Mammal - species unspecified	-	-	-
	Skin - Mild irritant	Mammal - species unspecified	-	-	-

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
epoxy resin (MW ≤ 700)	skin	Mammal - species unspecified	Sensitising
hydrocarbons, C9-unsaturated, polymerized	skin	Mouse	Sensitising
epoxy resin (MW 700-1200)	skin	Mammal - species unspecified	Sensitising

Mutagenicity

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

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
2-methylpropan-1-ol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
hydrocarbons, C9, aromatics	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	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
hydrocarbons, C9, aromatics	ASPIRATION HAZARD - Category 1

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Other information : None identified.

SECTION 12: Ecological information

12.1 Toxicity

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Product/ingredient name	Result	Species	Exposure
epoxy resin (MW ≤ 700)	Acute EC50 1.4 mg/l	Daphnia	48 hours
	Acute LC50 3.1 mg/l	Fish - pimephales promelas	96 hours
	Chronic NOEC 0.3 mg/l	Fish	21 days
xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours

SECTION 12: Ecological information

ethylbenzene	Acute EC50 7700 µg/l Marine water	Algae - Diatom - Skeletonema costatum	96 hours
	Acute EC50 2.93 mg/l	Daphnia	48 hours
	Acute LC50 4.2 mg/l	Fish	96 hours
2-methylpropan-1-ol	Chronic NOEC 4000 µg/l Fresh water	Daphnia - Water flea - Daphnia magna	21 days
hydrocarbons, C9, aromatics	Acute EC50 <10 mg/l	Daphnia	48 hours
	Acute IC50 <10 mg/l	Algae	72 hours
	Acute LC50 <10 mg/l	Fish	96 hours

Conclusion/Summary : This material is harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
epoxy resin (MW ≤ 700)	-	-	Not readily
xylene	-	-	Readily
benzyl alcohol	-	-	Readily
ethylbenzene	-	-	Readily
hydrocarbons, C9, aromatics	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
epoxy resin (MW ≤ 700)	2.64 to 3.78	31	low
hydrocarbons, C9-unsaturated, polymerized	3.627	-	low
xylene	3.12	8.1 to 25.9	low
benzyl alcohol	0.87	<100	low
ethylbenzene	3.6	-	low
2-methylpropan-1-ol	1	-	low
hydrocarbons, C9, aromatics	-	10 to 2500	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : 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.

Hazardous waste : Yes.

Waste catalogue

SECTION 13: Disposal considerations

Waste code	Waste designation
08 01 11*	Waste paint and varnish containing organic solvents or other dangerous substances

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Type of packaging	Waste catalogue	
CEPE Guidelines	15 01 10*	packaging containing residues of or contaminated by hazardous substances

Special precautions : 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

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	Paint	Paint	Paint	Paint
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	No.	Yes.	No.	No.

Additional information

ADR/RID : **Hazard identification number** 30
Tunnel code (D/E)
ADR/RID: Viscous substance. Not goods of class 3, ref. 2.2.3.1.5 (only applicable to receptacles < 450 litre capacity).

ADN : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.

IMDG : **Emergency schedules** F-E, S-E
IMDG: Viscous substance. Transport in accordance with 2.3.2.5 of the IMDG Code (only applicable to receptacles < 450 litre capacity).

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.

14.6 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.

14.7 Transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P5c

EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Listed

Industrial emissions (integrated pollution prevention and control) - Water : Listed

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = GB CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Notice to reader

SECTION 16: Other information

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.