

SAFETY DATA SHEET



Jotamastic Smart Pack Alu Comp A

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

1.1 Product identifier

Product name : Jotamastic Smart Pack Alu Comp A
Product code : 23680
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

Identified uses

Uses in Coatings - Industrial use
 Uses in Coatings - Professional use

See Annex to the Safety data sheet for additional information in the Exposure Scenario(s).

1.3 Details of the supplier of the safety data sheet

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
 SDSJotun@jotun.com

1.4 Emergency telephone number

Contact NHS; phone 111.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226
 Skin Irrit. 2, H315
 Eye Irrit. 2, H319
 Skin Sens. 1, H317
 STOT RE 2, H373
 Aquatic Chronic 2, H411

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : R10
 Xi; R36/38
 R43
 N; R51/53

Physical/chemical hazards : Flammable.

Human health hazards : Irritating to eyes and skin. May cause sensitisation by skin contact.

Date of issue : 23.03.2015.

1/18

SECTION 2: Hazards identification

Environmental hazards : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

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

2.2 Label elements

Hazard pictograms :



Signal word : **Warning.**

Hazard statements : **F**lammable liquid and vapour.
Causes serious eye irritation.
Causes skin irritation.
May cause an allergic skin reaction.
May cause damage to organs through prolonged or repeated exposure.
Toxic to aquatic life with long lasting effects.

Precautionary statements

General : **N**ot applicable.

Prevention : **P**rotective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment. Do not breathe vapour or spray.

Response : **E**Get medical attention if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes.

Storage : Keep cool.

Disposal : **N**ot applicable.

Hazardous ingredients : **E**poxy resin (MW ≤ 700)
Phenol, methylstyrenated
epoxy resin (MW 700-1200)
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)

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

Additional information : Not applicable.

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	<u>Classification</u>		Type	Notes
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]		
E poxy resin (MW ≤ 700)	REACH #: 01-2119456619-26 EC: 500-033-5 CAS: 25068-38-6 Index: 603-074-00-8	≥25 - <50	Xi; R36/38 R43 N; R51/53	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]	-
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7	≥5 - <10	R10 Xn; R20/21 Xi; R38	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332	[1] [2]	C

Date of issue : 23.03.2015.

Jotamastic Smart Pack Alu Comp A

SECTION 3: Composition/information on ingredients

Phenol, methylstyrenated	Index: 601-022-00-9 REACH #: 01-2119555274-38 EC: 270-966-8 CAS: 68512-30-1	≥5 - <10	Xi; R38 R43 R52/53	Skin Irrit. 2, H315 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412	[1]	-
epoxy resin (MW 700-1200)	CAS: 25036-25-3	≥3 - <5	Xi; R36/38 R43	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Flam. Liq. 3, H226	[1]	-
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	REACH #: 01-2119458049-33 EC: 265-185-4 CAS: 64742-82-1 Index: 649-330-00-2	≥2 - <3	R10 Xn; R48/20, R65 R66, R67 N; R51/53	STOT SE 3, H336 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1] [2]	H-P
Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	REACH #: 01-2119455851-35 EC: 265-199-0 CAS: 64742-95-6	≥2 - <3	R10 Xn; R65 Xi; R37 R66, R67 N; R51/53	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1] [2]	H-P
benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≥1 - <3	Xn; R20/22	Acute Tox. 4, H302 Acute Tox. 4, H332	[1]	-
butan-1-ol	REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6	≥1 - <3	R10 Xn; R22 Xi; R41, R37/38 R67	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336 Flam. Liq. 2, H225	[1] [2]	-
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥1 - <3	F; R11 Xn; R20, R48/20, R65 See Section 16 for the full text of the R-phrases declared above.	Acute Tox. 4, H332 STOT RE 2, H373 (ears) Asp. Tox. 1, H304 See Section 16 for the full text of the H statements declared above.	[1] [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, are PBTs or vPvBs 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

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

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

SECTION 4: First aid measures

4.1 Description of first aid measures

- | | |
|-----------------------------------|---|
| General | : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice. |
| Inhalation | : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. |
| Skin contact | : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners. |
| Eye contact | : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention. |
| Ingestion | : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting. |
| 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

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. |

Over-exposure signs/symptoms

- | | |
|---------------------|--|
| 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. |

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. |

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. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. 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
halogenated compounds
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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

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. Collect spillage.

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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

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

Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits.

In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

Mixture may charge electrostatically: always use earthing leads when transferring from one container to another.

Operators should wear antistatic footwear and clothing and floors should be of the conducting type.

Keep away from heat, sparks and flame. No sparking tools should be used.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Put on appropriate personal protective equipment (see Section 8).

Never use pressure to empty. Container is not a pressure vessel.

Always keep in containers made from the same material as the original one.

Comply with the health and safety at work laws.

Do not allow to enter drains or watercourses.

Information on fire and explosion protection

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

7.2 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.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

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).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Xylene	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 441 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 220 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	EH40-WEL (United Kingdom (UK), 1/2005). STEL: 850 mg/m ³ 15 minutes. Form: All forms STEL: 150 ppm 15 minutes. Form: All forms TWA: 566 mg/m ³ 8 hours. Form: All forms TWA: 100 ppm 8 hours. Form: All forms
Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	EH40-WEL (United Kingdom (UK), 12/2011). Absorbed through skin.

SECTION 8: Exposure controls/personal protection

butan-1-ol	TWA: 200 mg/m ³ 8 hours. Form: All forms TWA: 40 ppm 8 hours. Form: All forms EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 154 mg/m ³ 15 minutes. STEL: 50 ppm 15 minutes.
ethylbenzene	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 552 mg/m ³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 100 ppm 8 hours. TWA: 441 mg/m ³ 8 hours.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived no effect levels

Product/ingredient name	Type	Exposure	Value	Population	Effects
epoxy resin (MW ≤ 700)	DNEL	Short term Dermal	8,33 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	12,25 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	8,33 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	12,25 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	3,571 mg/kg bw/day	Consumers	Systemic
	DNEL	Short term Oral	0,75 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Dermal	3,571 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Oral	0,75 mg/kg bw/day	Consumers	Systemic
xylene	DNEL	Short term Inhalation	289 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	289 mg/m ³	Workers	Local
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	77 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	108 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	14,8 mg/m ³	Consumers	Systemic
	DNEL	Long term Oral	1,6 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Dermal	16,4 mg/kg bw/day	Workers	Systemic
Phenol, methylstyrenated	DNEL	Long term Inhalation	57 mg/m ³	Consumers	Systemic
	DNEL	Long term Dermal	8 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	28 mg/m ³	Consumers	Systemic
	DNEL	Long term Inhalation			

SECTION 8: Exposure controls/personal protection

Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	DNEL	Long term Oral	4 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	330 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	44 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	71 mg/m ³	Consumers	Systemic
	DNEL	Long term Dermal	26 mg/kg bw/day	Consumers	Systemic
Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	DNEL	Long term Oral	26 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Dermal	25 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	150 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	11 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	32 mg/m ³	Consumers	Systemic
benzyl alcohol	DNEL	Long term Oral	11 mg/kg bw/day	Consumers	Systemic
	DNEL	Short term Inhalation	450 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	90 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	47 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	9,5 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	28,5 mg/kg bw/day	Consumers	Systemic
	DNEL	Short term Oral	25 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Dermal	5,7 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Oral	5 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	8,11 mg/m ³	Consumers	Systemic
butan-1-ol	DNEL	Short term Inhalation	40,55 mg/m ³	Consumers	Systemic
	DNEL	Long term Inhalation	310 mg/m ³	Workers	Local
	DNEL	Long term Oral	3,125 mg/kg bw/day	Consumers	Systemic
ethylbenzene	DNEL	Long term Inhalation	55 mg/m ³	Consumers	Local
	DNEL	Short term Inhalation	293 mg/m ³	Workers	Local
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	77 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	15 mg/m ³	Consumers	Systemic
	DNEL	Long term Oral	1,6 mg/kg bw/day	Consumers	Systemic

Predicted no effect concentrations

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
epoxy resin (MW ≤ 700)	PNEC	Fresh water	0,006 mg/l	-
	PNEC	Marine	0,0006 mg/l	-
	PNEC	Sewage Treatment Plant	10 mg/l	-
xylene	PNEC	Fresh water sediment	0,996 mg/l	-
	PNEC	Marine water sediment	0,0996 mg/l	-
	PNEC	Soil	0,196 mg/l	-
Phenol, methylstyrenated	PNEC	Fresh water	0,327 mg/l	-
	PNEC	Marine	0,327 mg/l	-
	PNEC	Sewage Treatment Plant	6,58 mg/l	-
benzyl alcohol	PNEC	Fresh water sediment	12,46 mg/kg dwt	-
	PNEC	Marine water sediment	12,46 mg/kg dwt	-
	PNEC	Soil	2,31 mg/kg dwt	-
butan-1-ol	PNEC	Fresh water	14 µg/l	-
	PNEC	Marine	1,4 µg/l	-
	PNEC	Sewage Treatment Plant	2,4 mg/l	-
ethylbenzene	PNEC	Fresh water sediment	52,9 mg/kg dwt	-
	PNEC	Marine water sediment	5,3 mg/kg dwt	-
	PNEC	Soil	10,5 mg/kg dwt	-
	PNEC	Fresh water	1 mg/l	-
	PNEC	Marine	0,1 mg/l	-
	PNEC	Sewage Treatment Plant	39 mg/l	-
	PNEC	Fresh water sediment	5,27 mg/kg dwt	-
	PNEC	Marine water sediment	0,527 mg/kg dwt	-
	PNEC	Soil	0,456 mg/kg dwt	-
	PNEC	Fresh water	0,082 mg/l	-
	PNEC	Marine	0,0082 mg/l	-
	PNEC	Sewage Treatment Plant	2476 mg/l	-
	PNEC	Fresh water sediment	0,178 mg/kg dwt	-
	PNEC	Marine water sediment	0,0178 mg/kg dwt	-
	PNEC	Soil	0,015 mg/kg dwt	-
	PNEC	Fresh water	0,1 mg/l	-
	PNEC	Marine	0,01 mg/l	-
	PNEC	Sewage Treatment Plant	9,6 mg/l	-
	PNEC	Fresh water sediment	13,7 mg/kg dwt	-
	PNEC	Soil	2,68 mg/kg dwt	-
	PNEC	Secondary Poisoning	20 mg/kg	-

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 with an approved standard 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






SECTION 8: Exposure controls/personal protection

Hand protection	<p>: 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. Not recommended, gloves(breakthrough time) < 1 hour: PE May be used, gloves(breakthrough time) 4 - 8 hours: Barricade, CPF 3, Responder, neoprene, butyl rubber, PVC Recommended, gloves(breakthrough time) > 8 hours: Viton®, nitrile rubber, 4H, Teflon, polyvinyl alcohol (PVA)</p> <p>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.</p>
Body protection	<p>: 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. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.</p>
Other skin protection	<p>: 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.</p>
Respiratory protection	<p>: If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use respiratory mask with charcoal and dust filter when spraying this product.(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.</p>
Environmental exposure controls	<p>: 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.</p>

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Liquid.
Colour	: Silvery.
Odour	: Characteristic. [Strong]
Odour threshold	:  Not available.
pH	:  Not applicable.
Melting point/freezing point	:  Not applicable.
Initial boiling point and boiling range	:  Lowest known value: 117°C (242.6°F) (butan-1-ol). Weighted average: 254.07°C (489.3°F)
Flash point	: Closed cup: 41°C
Evaporation rate	:  Highest known value: 0.84 (ethylbenzene) Weighted average: 0.51 compared with butyl acetate
Flammability (solid, gas)	: Not applicable.

SECTION 9: Physical and chemical properties

Burning time	: Not applicable.
Burning rate	: Not applicable.
Upper/lower flammability or explosive limits	: 0.6 - 13%
Vapour pressure	: Highest known value: 2.7 kPa (20.3 mm Hg) (at 20°C) (Naphtha (petroleum), hydrodesulfurized heavy). Weighted average: 0.26 kPa (1.95 mm Hg) (at 20°C)
Vapour density	: Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.54 (Air = 1)
Relative density	: 1.3 g/cm ³
Solubility(ies)	: Insoluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/ water	: Not available.
Auto-ignition temperature	: Lowest known value: >200°C (>392°F) (Naphtha (petroleum), hydrodesulfurized heavy).
Decomposition temperature	: Not available.
Viscosity	: Dynamic: Highest known value: 165 cP (Phenol, methylstyrenated) Weighted average: 27.65 cP Kinematic: Highest known value: 0.773 cSt (ethylbenzene) Kinematic (40C): Highest known value: 0.93 cSt (Naphtha (petroleum), hydrodesulfurized heavy) Weighted average: 0.77 cSt
Explosive properties	: Not available.
Oxidising properties	: Not available.

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	: The product is stable.
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 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.
10.5 Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
10.6 Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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 Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See Sections 2 and 15 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. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. 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. Swallowing may cause nausea, diarrhoea, vomiting, gastro-intestinal irritation and chemical pneumonia.

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.

Jotamastic Smart Pack Alu Comp A

SECTION 11: Toxicological information

Contains epoxy resin (MW ≤ 700), Phenol, methylstyrenated, epoxy resin (MW 700-1200). May produce an allergic reaction.

Product/ingredient name	Result	Species	Dose	Exposure
xylylene	LC50 Inhalation Gas.	Rat	6700 ppm	4 hours
ethylbenzene	LD50 Oral	Rat	4300 mg/kg	-
	LC50 Inhalation Gas.	Rabbit	4000 ppm	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Acute toxicity estimates

Route	ATE value
Oral	15155,5 mg/kg
Dermal	16974,9 mg/kg
Inhalation (vapours)	116,1 mg/l

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	Category 3	Not applicable.	Narcotic effects
Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
butan-1-ol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	Category 1	Not determined	Not determined
ethylbenzene	Category 2	Not determined	ears

Aspiration hazard

Product/ingredient name	Result
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1

SECTION 12: Ecological information

12.1 Toxicity

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 - fathead minnow	96 hours
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	Acute EC50 <10 mg/l	Daphnia	48 hours
	Acute IC50 <10 mg/l	Algae	72 hours
	Acute LC50 <10 mg/l	Fish	96 hours
Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	Acute EC50 <10 mg/l	Daphnia	48 hours
	Acute IC50 <10 mg/l	Algae	72 hours
	Acute LC50 <10 mg/l	Fish	96 hours
ethylbenzene	Acute EC50 7,2 mg/l	Algae	48 hours
	Acute EC50 2,93 mg/l	Daphnia	48 hours
	Acute LC50 4,2 mg/l	Fish	96 hours

Conclusion/Summary

:

SECTION 12: Ecological information

Water polluting material. May be harmful to the environment if released in large quantities. This material is toxic 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
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	-	-	Not readily
Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	-	-	Not readily
benzyl alcohol	-	-	Readily
ethylbenzene	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
epoxy resin (MW ≤ 700)	>3	31	low
xylene	3,12	8.1 to 25.9	low
Phenol, methylstyrenated	3,627	-	low
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	-	10 to 2500	high
Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	-	10 to 2500	high
benzyl alcohol	1,1	<100	low
butan-1-ol	0,88	-	low
ethylbenzene	3,15	-	low

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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

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

European waste catalogue (EWC) : 08 01 11* Waste paint and varnish containing organic solvents or other dangerous substances If this product is mixed with other wastes, this code may no longer apply. If mixed with other wastes, the appropriate code should be assigned. For further information, contact your local waste authority.

SECTION 14: Transport information

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

International transport regulations

14.1 UN number : 1263

14.2 UN proper shipping name : Paint. Marine pollutant (epoxy resin (MW ≤ 700), Naphtha (petroleum), hydrodesulfurized heavy)

14.3 Transport hazard class(es) : 3



Marking : The environmental hazardous / marine pollutant mark is only applicable for packages containing more than 5 litres for liquids and 5 kg for solids.

14.4 Packing group : III

14.5 Environmental hazards : Yes.

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.

Additional information

ADR / RID : Tunnel restriction code: (D/E)
Hazard identification number: 30
Special provisions: 640E

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Emergency schedules (EmS)

F-E, S-E

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

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

Other EU regulations

Europe inventory : Not determined.

Black List Chemicals : Not listed

Priority List Chemicals : Not listed

Integrated pollution prevention and control list (IPPC) - Air : Listed

SECTION 15: Regulatory information

Integrated pollution prevention and control list (IPPC) - Water : Not listed

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : 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
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
 Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Chronic 2, H411	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method

Full text of abbreviated H statements :

 H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H302 (oral)	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312 (dermal)	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 (inhalation)	Harmful if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H372	Causes damage to organs through prolonged or repeated exposure.
H373 (ears)	May cause damage to organs through prolonged or repeated exposure.
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.

SECTION 16: Other information

Full text of classifications [CLP/GHS]	:	Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4
		Acute Tox. 4, H312	ACUTE TOXICITY (dermal) - Category 4
		Acute Tox. 4, H332	ACUTE TOXICITY (inhalation) - Category 4
		Aquatic Chronic 2, H411	LONG-TERM AQUATIC HAZARD - Category 2
		Aquatic Chronic 3, H412	LONG-TERM AQUATIC HAZARD - Category 3
		Asp. Tox. 1, H304	ASPIRATION HAZARD - Category 1
		Eye Dam. 1, H318	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
		Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
		Flam. Liq. 2, H225	FLAMMABLE LIQUIDS - Category 2
		Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
		Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
		Skin Sens. 1, H317	SKIN SENSITIZATION - Category 1
		STOT RE 1, H372	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
		STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
		STOT RE 2, H373 (ears)	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (ears) - Category 2
		STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
		STOT SE 3, H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Full text of abbreviated R phrases	:	R11- Highly flammable.
		R10- Flammable.
		R20- Harmful by inhalation.
		R22- Harmful if swallowed.
		R20/21- Harmful by inhalation and in contact with skin.
		R20/22- Harmful by inhalation and if swallowed.
		R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation.
		R65- Harmful: may cause lung damage if swallowed.
		R41- Risk of serious damage to eyes.
		R37- Irritating to respiratory system.
		R38- Irritating to skin.
		R36/38- Irritating to eyes and skin.
		R37/38- Irritating to respiratory system and skin.
		R43- May cause sensitisation by skin contact.
		R66- Repeated exposure may cause skin dryness or cracking.
		R67- Vapours may cause drowsiness and dizziness.
		R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
		R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications [DSD/DPD]	:	F - Highly flammable
		Xn - Harmful
		Xi - Irritant
		N - Dangerous for the environment

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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.

Jotamastic Smart Pack Alu Comp A

Exposure Scenario: Uses in Coatings - Industrial use

Sector of Use	: Industrial use
Process Category	: PROC05 PROC07 PROC08a PROC10
Environmental release category(ies)	: ERC4

Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.

Operational conditions and risk management measures

Control of worker exposure

Frequency and duration of use	: Covers daily exposures up to 8 hours (unless stated differently)
General - Operational conditions	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented
General - Risk management measures	: Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Use suitable eye protection. See Section 8 for information on appropriate personal protective equipment.

Type of activity or process Risk management measures

Preparation of material for application	: Provide a good standard of controlled ventilation (10 to 15 air changes per hour).
Roller, spreader, flow application	: Provide extract ventilation to points where emissions occur.
Spraying - Manual	: Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. Wear a respirator conforming to EN140 with type A/P2 filter or better.

Control of environmental exposure

Organisational measures to prevent/limit release from site	: Prevent environmental discharge consistent with regulatory requirements.
Conditions and measures related to external treatment of waste for disposal	: External treatment and disposal of waste should comply with applicable local and/or national regulations. See Section 13 for additional waste treatment information.
Conditions and measures related to external recovery of waste	: External recovery and recycling of waste should comply with applicable local and/or national regulations.

Additional information

The exposure scenario for the mixture is based on the following substances:

REACH #: 01-2119488216-32
 REACH #: 01-2119456619-26

Jotamastic Smart Pack Alu Comp A

Exposure Scenario: Uses in Coatings - Professional use

Sector of Use	: Professional use
Process Category	: PROC05 PROC08a PROC10 PROC11
Environmental release category(ies)	: ERC8a ERC8d

Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.

Operational conditions and risk management measures

Control of worker exposure

Frequency and duration of use	: Covers daily exposures up to 8 hours (unless stated differently)
General - Operational conditions	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented
General - Risk management measures	: Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. Wear suitable coveralls to prevent exposure to the skin. Use suitable eye protection. See Section 8 for information on appropriate personal protective equipment.

Type of activity or process

Risk management measures

Preparation of material for application - Indoor	: Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 1 hour. or Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Wear a respirator conforming to EN140 with type A/P2 filter or better.
Preparation of material for application - Outdoor	: Ensure operation is undertaken outdoors. Avoid carrying out activities involving exposure for more than 1 hour. or Ensure operation is undertaken outdoors. Wear a respirator conforming to EN140 with type A/P2 filter or better.
Roller, spreader, flow application - Indoor	: Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Wear a respirator conforming to EN140 with type A/P2 filter or better.
Roller, spreader, flow application - Outdoor	: Ensure operation is undertaken outdoors. Wear a full-face respirator conforming to EN136 with Type A/P2 filter or better.
Spraying - Manual - Indoor	: Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. Wear a full-face respirator conforming to EN136 with Type A/P2 filter or better.
Spraying - Manual - Outdoor	: Ensure operation is undertaken outdoors. Wear a full-face respirator conforming to EN136 with Type A/P2 filter or better.

Control of environmental exposure

Organisational measures to prevent/limit release from site	: Prevent environmental discharge consistent with regulatory requirements.
Conditions and measures related to external treatment of waste for disposal	: External treatment and disposal of waste should comply with applicable local and/or national regulations. See Section 13 for additional waste treatment information.
Conditions and measures related to external recovery of waste	: External recovery and recycling of waste should comply with applicable local and/or national regulations.

Additional information

The exposure scenario for the mixture is based on the following substances:

REACH #: 01-2119488216-32
 REACH #: 01-2119456619-26