SAFETY DATA SHEET

JOTUN
Jotun Protects Property

Penguard - Comp. B

1. Identification of the preparation and of the company

Product name and/or code : Penguard - Comp. B

Label No. : 612

Supplier : Jotun (Singapore) Pte Ltd
37 Tuas View Crescent
Singapore 67236
Phone: 6508 8288
Fax: 6265 7484
SDSJotun@jotun.com

Emergency telephone number : Jotun (Singapore) Pte Ltd, Tel: 6508 8288

Product use : Coatings: HardenerSolvent-borne.

2. Hazards identification

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

Flammable.
Harmful by inhalation and in contact with skin. Risk of serious damage to eyes. Irritating to skin.

Harmful

Additional warning phrases : Contains 3,6-diazaoctanethylenediamin. May produce an allergic reaction.

3. Composition/information on ingredients

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EEC.

Product/ingredient name	CAS no.	%	Classification 67/548/EEC	Classification Regulation (EC) No. 1272/2008 [CLP]	Type	Notes
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	68410-23-1	50-75	Xi; R41	Eye Dam. 1, H318	[1]	-
xylene	1330-20-7	20-25	R10 Xn; R20/21 Xi; R38	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315	[1] [2]	C
ethylbenzene	100-41-4	3-7	F; R11 Xn; R20	Flam. Liq. 2, H225 Acute Tox. 4, H332	[1] [2]	-
3,6-diazaoctanethylenediamin	112-24-3	0,25-1	Xn; R21/22 C; R34 R43 R52/53	Acute Tox. 3, H311 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412	[1]	-
			See Section 16 for the full text of the R-phrases declared above.	**See Section 16 for the full text of the H statements declared above.**		

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

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

4. First-aid measures

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.

5. Fire-fighting measures

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

Extinguishing media not to be used : Do not use water jet.

Recommendations : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required.
Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

6. Accidental release measures

Personal precautions : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

Spill : 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). Preferably clean with a detergent. Avoid using solvents.

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

7. Handling and storage

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.
To dissipate static electricity during transfer, earth drum and connect to receiving container with bonding strap. 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 preparation. 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.
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.

Storage : 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.

8. Exposure controls/personal protection

Engineering measures : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

Ingredient name	Occupational exposure limits
xylene	**EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values** STEL: 442 mg/m³ 15 minute(s). STEL: 100 ppm 15 minute(s). TWA: 221 mg/m³ 8 hour(s). TWA: 50 ppm 8 hour(s).
ethylbenzene	**EU OEL (Europe, 4/2006). Absorbed through skin. Notes: Indicative** Limit value: 100 ppm 8 hour(s). Limit value: 442 mg/m³ 8 hour(s). Short term limit value: 200 ppm 15 minute(s). Short term limit value: 884 mg/m³ 15 minute(s).

Personal protective equipment

Respiratory system : 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.

Respiratory system : Also use filter K by spraying.

Skin and body : Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.

Hands : For prolonged or repeated handling, use the following type of gloves: gloves: polyvinyl alcohol or nitrile.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

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.

Eyes : Use safety eyewear designed to protect against splash of liquids.

9. Physical and chemical properties

Physical state : Liquid.

Odour : Characteristic.

Colour : Various colours.

Flash point : Closed cup: 25°C (77°F)

Density : 0.95 g/cm³

Explosion limits : 1.1 - 7%

Solubility : Insoluble in the following materials: cold water and hot water.

10. Stability and reactivity

Stable under recommended storage and handling conditions (see section 7).

Hazardous decomposition products: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

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

11. Toxicological information

There are no data available on the preparation itself. The preparation 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 preparation 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.

Contains 3,6-diazaoctanethylenediamin. May produce an allergic reaction.

Risk of serious damage to eyes.

12. Ecological information

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

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is not classified as dangerous for the environment but contains a substance or substances dangerous for the environment. See section 2 for details.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
ethylbenzene	Population	Acute EC50 7,2 mg/L	Algae	48 hours
	Intoxication	Acute EC50 2,93 mg/L	Daphnia	48 hours
	Mortality	Acute LC50 4,2 mg/L	Fish	96 hours
3,6-diazaoctanethylenediamin	Intoxication	Acute LC50 33900 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

Ecological information

Biodegradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
ethylbenzene	-	-	Readily
3,6-diazaoctanethylenediamin	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	$LogK_{ow}$	BCF	Potential
xylene	3,12	-	high
3,6-diazaoctanethylenediamin	-1.66 to -1.4	-	low

13. Disposal considerations

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.

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.

International transport regulations

Proper shipping name : Paint.

UN Number : 1263

Class : 3

Packing group : III

Label :

Additional information

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

ADR/RID: Viscous substance. Not restricted, ref. chapter 2.2.3.1.5 (applicable to receptacles < 450 litre capacity).

IMDG : Emergency schedules (EmS): F-E, S-E
Marine pollutant: No.

IMDG: Viscous substance. Transport in accordance with paragraph 2.3.2.5 (applicable to receptacles < 30 litre capacity).

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

15. Regulatory information

EU regulations : The product is classified and labelled for supply in accordance with the Directive 1999/45/EC as follows:

Hazard symbol or symbols :

Harmful

Risk phrases : R10- Flammable.
R20/21- Harmful by inhalation and in contact with skin.
R41- Risk of serious damage to eyes.
R38- Irritating to skin.

Safety phrases : S23- Do not breathe vapour / spray.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
S51- Use only in well-ventilated areas.

Contains : xylene

Additional warning phrases : Contains 3,6-diazaoctanethylenediamin. May produce an allergic reaction.

Industrial use : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

16. Other information

CEPE Classification : 1

Europe

Full text of abbreviated H statements :

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H412 Harmful to aquatic life with long lasting effects.

Full text of abbreviated R phrases :

R11- Highly flammable.
R10- Flammable.
R20- Harmful by inhalation.
R20/21- Harmful by inhalation and in contact with skin.
R21/22- Harmful in contact with skin and if swallowed.
R34- Causes burns.
R41- Risk of serious damage to eyes.
R38- Irritating to skin.
R43- May cause sensitisation by skin contact.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This Safety Data Sheet is prepared in accordance with Annex II to Regulation (EC) No 1907/2006.

Date of issue : **01.11.2012.**

Version : **2**

Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.