

Penguard Express CF Comp B

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

1.1 Product identifier

Product name	: Penguard Express CF Comp B
Product code	: 29141
Product description	: Hardener.
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 - Professional use

1.3 Details of the supplier of the safety data sheet

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1.4 Emergency telephone number

National Poison Information Center

- +90 224 442 82 93 Uludağ Üniversitesi Zehir Danışma Merkezi (www.uludag.edu.tr/uludag/zehir.html)
a. ACİL DURUM TELEFONU: Zehirlenme durumlarında gerektiğinde ulusal zehir merkezinin (UZEM) 114 nolu telefonunu arayınız.
b. ACİL İLK YARDIM MERKEZİ:112
c. İTFAİYE:110

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to regulation SEA: RG.-10/12/2020-31330

Flam. Liq. 3, H226
Skin Corr. 1B, H314
Eye Dam. 1, H318
Skin Sens. 1, H317
Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation SEA: RG.-10/12/2020-31330.

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

: Danger.

Hazard statements

: H226 - Flammable liquid and vapour.
 H314 - Causes severe skin burns and eye damage.
 H317 - May cause an allergic skin reaction.
 H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

General

: Not applicable.

Prevention

: P280 - Wear protective gloves, protective clothing and 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

: P304 + P310 - IF INHALED: Immediately call a POISON CENTER or doctor.
 P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor.
 P363 - Wash contaminated clothing before reuse.
 P302 + P352 - IF ON SKIN: Wash with plenty of water.
 P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
 P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Storage

: Not applicable.

Disposal

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

Hazardous ingredients

: aminepoxyadduct
 3-aminomethyl-3,5,5-trimethylcyclohexylamine
 1,3-Cyclohexanedimethanamine

Supplemental label elements

: Not applicable.

Annex 17 - 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

: 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

Product/ingredient name	Identifiers	%	SEA: RG.-10/12/2020-31330	Type
amineoxyadduct	CAS: 1075254-00-0	≥10 - ≤17	Acute Tox. 4, H302 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
xylene	EC: 215-535-7 CAS: 1330-20-7	≥10 - <20	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]
benzyl alcohol	EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≤8.1	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	[1]
ethylbenzene	EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≤5	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	[1] [2]
3-aminomethyl- 3,5,5-trimethylcyclohexylamine	EC: 220-666-8 CAS: 2855-13-2 Index: 612-067-00-9	≤4.3	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317	[1]
1,3-Cyclohexanedimethanamine	CAS: 2579-20-6	≤2.8	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Chronic 3, H412	[1]
2,4,6-tris (dimethylaminomethyl)phenol	EC: 202-013-9 CAS: 90-72-2	≤1.4	Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 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 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

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

SECTION 4: First aid measures**4.1 Description of first aid measures****Eye contact**

: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

SECTION 4: First aid measures

- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use dry chemical, CO₂, water spray (fog) or foam.

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 thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen 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. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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.

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.

SECTION 6: Accidental release measures

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

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

See Technical Data Sheet / packaging for further information.

Regulation on the prevention of major industrial accidents and reduction of their effects - Reporting thresholds

Danger criteria

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

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	TR ISGGM OEL (Turkey, 12/2013). [Xylene (pure and mixed isomers)] Absorbed through skin. TWA: 221 mg/m ³ 8 hours. TWA: 50 ppm 8 hours. STEL: 442 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes.
ethylbenzene	TR ISGGM OEL (Turkey, 12/2013). Absorbed through skin. TWA: 442 mg/m ³ 8 hours. TWA: 100 ppm 8 hours. STEL: 884 mg/m ³ 15 minutes. STEL: 200 ppm 15 minutes.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : 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.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
xylene	DNEL	Long term Oral	12.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Local
	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Systemic
	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/m ³	Workers	Local
	DNEL	Long term Inhalation	221 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	260 mg/m ³	General population	Local
	DNEL	Short term Inhalation	260 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	442 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	442 mg/m ³	Workers	Systemic
	benzyl alcohol	DNEL	Long term Oral	4 mg/kg bw/day	General population
DNEL		Long term Dermal	4 mg/kg bw/day	General population	Systemic
DNEL		Long term Inhalation	5.4 mg/m ³	General population	Systemic
DNEL		Long term Dermal	8 mg/kg bw/day	Workers	Systemic

SECTION 8: Exposure controls/personal protection

ethylbenzene	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/m ³	Workers	Systemic
	DNEL	Short term Inhalation	27 mg/m ³	General population	Systemic
	DNEL	Short term Dermal	40 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	110 mg/m ³	Workers	Systemic
	DMEL	Long term Inhalation	442 mg/m ³	Workers	Local
	DMEL	Short term Inhalation	884 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	1.6 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	15 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	77 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	293 mg/m ³	Workers	Local
	3-aminomethyl-3,5,5-trimethylcyclohexylamine	DNEL	Long term Oral	0.526 mg/kg bw/day	General population [Consumers]
DNEL		Short term Inhalation	0.073 mg/m ³	Workers	Local
DNEL		Long term Inhalation	0.073 mg/m ³	Workers	Local
DNEL		Long term Oral	0.3 mg/kg bw/day	General population	Systemic
DNEL		Short term Oral	0.3 mg/kg bw/day	General population	Systemic
DNEL		Long term Inhalation	9.47 µg/m ³	Workers	Local
1,3-Cyclohexanedimethanamine	DNEL	Long term Dermal	0.1 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	25.2 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	0.2 mg/kg bw/day	Workers	Systemic
2,4,6-tris(dimethylaminomethyl) phenol	DNEL	Long term Inhalation	0.31 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	0.075 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	0.075 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.075 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	0.13 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	0.13 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	0.15 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.53 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	0.6 mg/kg bw/day	Workers	Systemic
	DNEL	Short term	2.1 mg/m ³	Workers	Systemic

SECTION 8: Exposure controls/personal protection

Inhalation

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
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	-
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Fresh water	0.06 mg/l	-
	Marine	0.006 mg/l	-
	Sewage Treatment Plant	3.18 mg/l	-
	Fresh water sediment	5.784 mg/kg dwt	-
	Marine water sediment	0.578 mg/kg dwt	-
	Soil	1.121 mg/kg dwt	-
2,4,6-tris(dimethylaminomethyl)phenol	Fresh water	0.084 mg/l	-
	Marine	0.0084 mg/l	-
	Sewage Treatment Plant	0.2 mg/l	-
	Plant		

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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

:

SECTION 8: Exposure controls/personal protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.
 The breakthrough time must be greater than the end use time of the product.
 The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.
 Gloves should be replaced regularly and if there is any sign of damage to the glove material.
 Always ensure that gloves are free from defects and that they are stored and used correctly.
 The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.
 Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.
 Wear suitable gloves tested to ISO 374-1:2016.
 Recommended, gloves(breakthrough time) > 8 hours: Teflon (> 0.35 mm), 4H/Silver Shield® (> 0.07 mm), polyvinyl alcohol (PVA) (> 0.3 mm), fluor rubber (> 0.35 mm), Viton® (> 0.7 mm), nitrile rubber (> 0.75 mm)
 May be used, gloves(breakthrough time) 4 - 8 hours: PVC (> 0.5 mm), neoprene (> 0.35 mm), butyl rubber (> 0.4 mm)

For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.
 The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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** : Colourless.
- Odour** : Characteristic.
- Odour threshold** : Not applicable.
- Melting point/freezing point** : Not applicable.
- Initial boiling point and boiling range** : Lowest known value: 136.1°C (277°F) (ethylbenzene). Weighted average: 176.21°C (349.2°F)
- Flammability (solid, gas)** : Not applicable.

SECTION 9: Physical and chemical properties

Upper/lower flammability or explosive limits	: 0.8 - 13%
Flash point	: Closed cup: 31°C (87.8°F)
Auto-ignition temperature	: Lowest known value: 380°C (716°F) (3-aminomethyl-3,5,5-trimethylcyclohexylamine).
Decomposition temperature	: Not available.
pH	: Not applicable.
Viscosity	: Not available.
Solubility(ies)	:

Media	Result
cold water	Not soluble
hot water	Not soluble

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

Vapour pressure : Highest known value: 1.2 kPa (9.3 mm Hg) (at 20°C) (ethylbenzene). Weighted average: 0.52 kPa (3.9 mm Hg) (at 20°C)
Highest known value: 0.84 (ethylbenzene) Weighted average: 0.55 compared with butyl acetate

Density : 0.997 g/cm³

Vapour density : Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.7 (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 : 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:
oxidising 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****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure	
xylene	LC50 Inhalation Vapour	Rat	20 mg/l	4 hours	
	LD50 Oral	Rat	4300 mg/kg	-	
	TDLo Dermal	Rabbit	4300 mg/kg	-	
benzyl alcohol	LD50 Oral	Rat	1230 mg/kg	-	
	ethylbenzene	LC50 Inhalation Vapour	Rat - Male	17.8 mg/l	4 hours
		LD50 Dermal	Rabbit	>5000 mg/kg	-
3-aminomethyl-	LD50 Oral	Rat	3500 mg/kg	-	
	LD50 Oral	Rat	1030 mg/kg	-	

SECTION 11: Toxicological information

3,5,5-trimethylcyclohexylamine 1,3-Cyclohexanedimethanamine 2,4,6-tris (dimethylaminomethyl) phenol	LD50 Oral LD50 Oral	Rat Rat	880 mg/kg 1673 mg/kg	- -
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Conclusion/Summary : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Penguard Express CF Comp B	2493.0	8148.1	N/A	129.3	23.1
aminepoxyadduct	500	N/A	N/A	N/A	N/A
xylene	4300	1100	N/A	20	N/A
benzyl alcohol	1230	N/A	N/A	N/A	1.5
ethylbenzene	3500	N/A	N/A	17.8	N/A
3-aminomethyl-3,5,5-trimethylcyclohexylamine	1030	N/A	N/A	N/A	N/A
1,3-Cyclohexanedimethanamine	880	1100	N/A	N/A	N/A
2,4,6-tris(dimethylaminomethyl)phenol	1673	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
aminepoxyadduct	Eyes - Irritant	Mammal - species unspecified	-	-	-
xylene	Eyes - Mild irritant Skin - Mild irritant	Rabbit Rat	- -	87 milligrams 8 hours 60 microliters	- -
benzyl alcohol	Eyes - Mild irritant	Mammal - species unspecified	-	-	-
2,4,6-tris (dimethylaminomethyl) phenol	Eyes - Severe irritant Skin - Severe irritant	Rabbit Rat	- -	24 hours 50 µg 0.25 ml	- -

Conclusion/Summary : Not available.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
aminepoxyadduct	skin	Mammal - species unspecified	Sensitising
3-aminomethyl-3,5,5-trimethylcyclohexylamine	skin	Mammal - species unspecified	Sensitising

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

SECTION 11: Toxicological information

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation

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 ethylbenzene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns. 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
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

- Conclusion/Summary** : Not available.
- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

SECTION 11: Toxicological information

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
amineoxyadduct	Acute EC50 8.1 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
xylene	Acute EC50 5.7 mg/l Acute LC50 7.9 mg/l Acute LC50 8500 µg/l Marine water	Daphnia - Daphnia magna Fish - Oncorhynchus Mykiss Crustaceans - Palaemonetes pugio	48 hours 96 hours 48 hours
ethylbenzene	Acute LC50 13400 µg/l Fresh water Acute EC50 7700 µg/l Marine water Acute EC50 2.93 mg/l Acute LC50 4.2 mg/l	Fish - Pimephales promelas Algae - Skeletonema costatum Daphnia	96 hours 96 hours 48 hours
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Acute EC50 17.4 to 21.5 mg/l Fresh water Acute IC50 37 mg/l	Fish Daphnia - Daphnia magna Algae	96 hours 48 hours 72 hours

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

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
amineoxyadduct	-	0 % - Not readily - 28 days	-	-

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
amineoxyadduct	-	-	Not readily
xylene	-	-	Readily
benzyl alcohol	-	-	Readily
ethylbenzene	-	-	Readily
3-aminomethyl-3,5,5-trimethylcyclohexylamine	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
xylene	3.12	8.1 to 25.9	low
benzyl alcohol	0.87	<100	low
ethylbenzene	3.6	-	low
3-aminomethyl-3,5,5-trimethylcyclohexylamine	0.99	-	low
1,3-Cyclohexanedimethanamine	0.783	-	low
2,4,6-tris(dimethylaminomethyl)phenol	0.219	-	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

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

SECTION 12: Ecological information

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 list





Waste code	Waste code definition
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.

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	UN3470	UN3470	UN3470	UN3470
14.2 UN proper shipping name	Paint, corrosive, flammable	Paint, corrosive, flammable	Paint, corrosive, flammable	Paint, corrosive, flammable
14.3 Transport hazard class(es)	8 (3) 	8 (3) 	8 (3) 	8 (3) 
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	No.	Yes.	No.	No.

Additional information

ADR/RID : **Hazard identification number** 83
Tunnel code (D/E)

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

IMDG : **Emergency schedules** F-E, S-C

SECTION 14: Transport information

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

Turkey Regulation No. 30105, KKDİK

Annex 14 - List of substances subject to authorization

Annex 14

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex 17 - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Ozone depleting substances

Not listed.

Regulation on the prevention of major industrial accidents and reduction of their effects

This product is controlled under the Regulation on the prevention of major industrial accidents and reduction of their effects.

Danger criteria

Category
P5c

EU regulations

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

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

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

SECTION 15: Regulatory information

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
 EUH statement = SEA-specific Hazard statement
 N/A = Not available
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 SGG = Segregation Group
 vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to regulation SEA: RG.-10/12/2020-31330

Classification	Justification
Flam. Liq. 3, H226 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412	On basis of test data 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.
H304	May be fatal if swallowed and enters airways.
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.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
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.

Full text of classifications [SEA/GHS]

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 Corr. 1A	SKIN CORROSION/IRRITATION - Category 1A

SECTION 16: Other information

Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Corr. 1C	SKIN CORROSION/IRRITATION - Category 1C
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1A	SKIN SENSITISATION - Category 1A
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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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.