

SAFETY DATA SHEET



Penguard Express CF Aluminium Comp A

Section 1. Identification

Product identifier	: Penguard Express CF Aluminium Comp A
Product code	: 51445
Product description	: Paint.
Other means of identification	: Not available.
Product type	: Liquid.

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

Use in coatings - Industrial use
Use in coatings - Professional use

Supplier's details	: Jotun Paints Inc. 842 W. Sam Houston Parkway North City Center Three, Suite 300 Houston, TX 77024 USA Phone number: +1 (713) 860-8241 SDSJotun@jotun.com
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Emergency telephone number (with hours of operation)	: 1-800-424-9300 (Staffed 24/7)
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Section 2. Hazard identification

Classification of the substance or mixture	: FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 2
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GHS label elements

Hazard pictograms



Signal word	: Danger.
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Hazard statements	: H226 - Flammable liquid and vapor. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H351 - Suspected of causing cancer. H372 - Causes damage to organs through prolonged or repeated exposure. (central nervous system (CNS), hearing organs) H411 - Toxic to aquatic life with long lasting effects.
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Section 2. Hazard identification

Precautionary statements

- Prevention** :
- P201 - Obtain special instructions before use.
 - 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.
 - P260 - Do not breathe vapor.
 - P270 - Do not eat, drink or smoke when using this product.
- Response** :
- P391 - Collect spillage.
 - P308 + P313 - IF exposed or concerned: Get medical advice or attention.
 - P362 + P364 - Take off contaminated clothing and wash it before reuse.
 - P302 + P352 - IF ON SKIN: Wash with plenty of water.
 - P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
 - P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P337 + P313 - If eye irritation persists: Get medical advice or attention.
- Storage** : Not applicable.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

CAS number/other identifiers

- CAS number** : Not applicable.

Ingredient name	Synonyms	% (w/w)	CAS number
epoxy resin (MW ≤ 700)	2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane; Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-; Bisphenol A diglycidyl ether; Bisphenol A, diglycidyl ether; Bis-[4-(2,3-epoxypropoxy)phenyl]propane; 2,2-bis[4-(2,3-epoxypropoxy)phenyl]propane; Propane, 2,2-bis(p-(2,3-epoxypropoxy)phenyl)-; diglycidyl ether of bisphenol-A; 2,2-bis(4-hydroxyphenyl) propane bis(2,3-epoxypropyl) ether; Araldite; DIPHENYLOL PROPANE DIGLYCIDYL ETHER	≥10 - ≤30	1675-54-3
Solvent naphtha (petroleum), light arom.	Low boiling point naphtha - unspecified; Solvent naphtha (petroleum), light arom; Solvent naphtha, petroleum, light aromatic; Aromatic hydrocarbon solvents - medium flashpoint; Light aromatic solvent naphtha; Solvent naphtha, light aromatic; Solvent naphtha (petroleum), light aromatic; Light aromatic solvent naphtha (petroleum) (C8 to C10); Solvent naphtha, petroleum, light arom.; AROMATIC PETROLUEM DISTILLATE;	≥1 - ≤5	64742-95-6

Section 3. Composition/information on ingredients

hydrocarbons, c9-unsatd., polymd.	SOLVENT, AROMATIC PETROLEUM Hydrocarbons, (C=9)-unsatd., polymd.; Reaction product (mainly dimers, trimers and tetramers) of "Distillates (petroleum), steam-cracked, C8-12 fraction", mainly C8 - C10 unsaturated aromatic and alkylaromatic hydrocarbons, predominantly styrene- and indene-derivatives, obtained by Lewis acid-initiated alkylation and polymerisation; Hydrocarbon Resin; Hydrocarbons, C9-unsaturated, polymerized	≥1 - ≤5	71302-83-5
stoddard solvent	naphtha (petroleum), hydrodesulphurized heavy; Low boiling point hydrogen treated naphtha; Naphtha, petroleum, hydrodesulfurized heavy; naphtha (petroleum), hydrodesulfurized heavy, as light oils; low boiling point hydrogen treated naphtha, as light oils; Naphtha, (petroleum), heavy, hydrodesulfurized; ALIPHATIC HYDROCARBON; NAPHTHA (PETROLEUM), HYDROGENSULFURIZED HEAVY; OILS, NAPHTHA, HYDRODESULFURIZED HEAVY; Naphtha (petroleum), hydrodesulfurized heavy, Low boiling point hydrogen treated naphtha; Naphtha (petroleum), hydrodesulfurised heavy	≥1 - ≤5	8052-41-3
ethylbenzene	Benzene, ethyl-; Phenylethane; Ethylbenzol; photosensitive emulsion consisting of cyclized polyisoprene containing: — 55 % or more but not more than 75 % by weight of xylene (CAS RN 1330-20-7) and — 12 % or more but not more than 18 % by weight of ethylbenzene (CAS RN 100-41-4); EB; Mono-(or di-) methyl (ethyl,bromoallyl, bromopropoxyloxycarbonyl orchloropropoxyloxycarbonyl) benzene	≥1 - ≤5	100-41-4
Phenol, methylstyrenated	Isopropenylbenzene	≥0.1 - ≤1	68512-30-1
Phenol, styrenated	Styrenated phenol; Phenol modified styrene and styrene homologues; Styrenated phenols; Antioxidant SP; Mono (or di or tri)-(alpha-methylbenzyl) phenol; Phenol, derivatives (general), styrenated	≥0.1 - ≤1	61788-44-1
hexane-1,6-diol diacrylate	hexane-1,6-diol diacrylate; 2-Propenoic acid, 1,1'-(1,6-hexanediyl) ester; 2-Propenoic acid, 1,6-hexanediyl ester;	≥0.1 - ≤1	13048-33-4

Section 3. Composition/information on ingredients

	1,6-Hexanediol diacrylate; hexane-1,6-diyl bisprop-2-enoate; Acrylic acid, hexamethylene ester; Hexanediol Diacrylate; 1,6-Hexamethylene diacrylate; HDDA; Mixture of 2-[2-(2-acryloyloxypropoxy)propoxy] propyl acrylate and copolymer of 2-ethylhexyl acrylate / 2-hydroxyethyl acrylate / bornan-2-yl acrylate / 1-ethenyl-2-pyrrolidone (major component) and hexane-1,6-diyl diacrylate; Hexane-1,6-diyl diacrylate		
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Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

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

Section 4. First-aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye 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

Section 4. First-aid measures

- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- 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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

Specific hazards arising from the chemical

: Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products

: Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized 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".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials 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 release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

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

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

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. 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 oxidizing 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
ethylbenzene	<p>CA Alberta Provincial (Canada, 3/2023). OEL: 100 ppm 8 hours. OEL: 434 mg/m³ 8 hours. OEL: 543 mg/m³ 15 minutes. OEL: 125 ppm 15 minutes.</p> <p>CA British Columbia Provincial (Canada, 8/2023). TWA: 20 ppm 8 hours.</p> <p>CA Ontario Provincial (Canada, 6/2019). TWA: 20 ppm 8 hours.</p> <p>CA Quebec Provincial (Canada, 7/2023). TWAEV: 20 ppm 8 hours.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 125 ppm 15 minutes. TWA: 100 ppm 8 hours.</p>
hexane-1,6-diol diacrylate	<p>OARS WEEL (United States, 4/2022). Skin sensitizer. TWA: 1 mg/m³ 8 hours.</p>

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, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection 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

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

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.

May be used, gloves(breakthrough time) 4 - 8 hours: neoprene (> 0.35 mm), butyl rubber (> 0.4 mm)

Not recommended, gloves(breakthrough time) < 1 hour: PVC (> 0.5 mm)

Recommended, gloves(breakthrough time) > 8 hours: Teflon (> 0.35 mm), Viton® (> 0.7 mm), 4H/Silver Shield® (> 0.07 mm), polyvinyl alcohol (PVA) (> 0.3 mm), nitrile rubber (> 0.75 mm)

Body protection : Use chemical-resistant protective suit / disposable overall.

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

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : 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.

Section 9. Physical and chemical properties

Appearance

Physical state	: Liquid.
Color	: Black, Blue., Green., Grey, MCI Base 1, MCI Base 3, Off-white., Red, White., Yellow.
Odor	: Characteristic.
Odor threshold	: Not available.
pH	: Not applicable.
Melting point	: Not available.
Boiling point	: Lowest known value: 119°C (246.2°F) (butan-1-ol). Weighted average: 232.88°C (451.2°F)
Flash point	: Closed cup: 29°C (84.2°F)
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Greatest known range: Lower: 1.3% Upper: 13% (benzyl alcohol)
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 1.539 g/cm ³ 12.84 pounds/gallon
Solubility(ies)	:

Section 9. Physical and chemical properties

Media	Result
cold water	Not soluble
hot water	Not soluble

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

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Section 10. Stability and reactivity

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

Chemical stability : The product is stable.

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

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
epoxy resin (MW ≤ 700)	LD50 Dermal	Rabbit	20 g/kg	-
	LD50 Oral	Mouse	15600 mg/kg	-
hydrocarbons, c9-unsatd., polymd.	LD50 Dermal	Rat	2000 mg/kg	-
ethylbenzene	LD50 Oral	Rat	2000 mg/kg	-
	LC50 Inhalation Vapor	Rat - Male	11 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
Phenol, styrenated	LD50 Oral	Rat	3500 mg/kg	-
	LD50 Dermal	Rabbit	>5010 mg/kg	-
	LD50 Oral	Rat	2500 mg/kg	-
hexane-1,6-diol diacrylate	LD50 Oral	Rat	5 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
epoxy resin (MW ≤ 700)	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Phenol, methylstyrenated	Skin - Mild irritant	Mammal - species unspecified	-	-	-
Phenol, styrenated	Eyes - Mild irritant	Rabbit	-	0.1 Milliliters	-
	Skin - Mild irritant	Mammal - species unspecified	-	-	-

Section 11. Toxicological information

hexane-1,6-diol diacrylate	Skin - Mild irritant Eyes - Mild irritant	Rabbit Mammal - species unspecified	-	0.5 Milliliters	-
	Skin - Mild irritant	Mammal - species unspecified	-	-	-

Sensitization

Product/ingredient name	Route of exposure	Species	Result
epoxy resin (MW ≤ 700)	skin	Mammal - species unspecified	Sensitizing
hydrocarbons, c9-unsatd., polymd.	skin	Mouse	Sensitizing
Phenol, methylstyrenated	skin	Mammal - species unspecified	Sensitizing
Phenol, styrenated	skin	Mammal - species unspecified	Sensitizing
hexane-1,6-diol diacrylate	skin	Mammal - species unspecified	Sensitizing

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Solvent naphtha (petroleum), light arom.	Category 3	-	Respiratory tract irritation
stoddard solvent	Category 3 Category 3	-	Narcotic effects Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
stoddard solvent	Category 1	-	central nervous system (CNS)
ethylbenzene	Category 2	-	hearing organs

Aspiration hazard

Name	Result
Solvent naphtha (petroleum), light arom. stoddard solvent ethylbenzene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Section 11. Toxicological information

- Inhalation** : No known significant effects or critical hazards.
Skin contact : Causes skin irritation. May cause an allergic skin reaction.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

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

Delayed and immediate effects and also 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.

- General** : Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	12387.7 mg/kg
Dermal	34509.8 mg/kg
Inhalation (vapors)	162.96 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
epoxy resin (MW ≤ 700)	Acute EC50 1.4 mg/l Acute LC50 3.1 mg/l Chronic NOEC 0.3 mg/l	Daphnia Fish - pimephales promelas Fish	48 hours 96 hours 21 days
Solvent naphtha (petroleum), light arom.	Acute EC50 <10 mg/l	Daphnia	48 hours
stoddard solvent	Acute IC50 <10 mg/l	Algae	72 hours
	Acute LC50 <10 mg/l	Fish	96 hours
	Acute EC50 <10 mg/l	Daphnia	48 hours
ethylbenzene	Acute IC50 <10 mg/l	Algae	72 hours
	Acute LC50 <10 mg/l	Fish	96 hours
	Acute EC50 7700 µg/l Marine water	Algae - Skeletonema costatum	96 hours
Phenol, styrenated	Acute EC50 2.93 mg/l	Daphnia	48 hours
	Acute LC50 4.2 mg/l	Fish	96 hours
	Acute EC50 100 mg/l	Algae	72 hours
	Acute EC50 54 mg/l	Daphnia	48 hours
	Acute LC50 25.8 mg/l	Fish	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
epoxy resin (MW ≤ 700)	-	-	Not readily
Solvent naphtha (petroleum), light arom.	-	-	Not readily
stoddard solvent	-	-	Not readily
ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
epoxy resin (MW ≤ 700)	2.64 to 3.78	31	low
Solvent naphtha (petroleum), light arom.	-	10 to 2500	high
hydrocarbons, c9-unsatd., polymd.	3.627	-	low
stoddard solvent	-	10 to 2500	high
ethylbenzene	3.6	-	low
Phenol, methylstyrenated	3.627	-	low
hexane-1,6-diol diacrylate	2.81	-	low

Mobility in soil

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

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

Section 13. Disposal considerations










Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or

Section 13. Disposal considerations

liners may retain some product residues. Vapor 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

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

Section 14. Transport information

	TDG Classification	DOT Classification	ADR/RID	IMDG	IATA
UN number	UN1263	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	Paint	Paint	Paint	Paint	Paint
Transport hazard class(es)	3  	3  	3  	3  	3 
Packing group	III	III	III	III	III
Environmental hazards	Yes.	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

TDG Classification

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.

DOT Classification

: This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and 173.24a. **Reportable quantity** 3137.3 lbs / 1424.3 kg [244.49 gal / 925.48 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

ADR/RID

: Tunnel restriction code: (D/E)
Hazard identification number: 30

IMDG

: Emergency schedules (EmS): F-E, S-E
Marine pollutant: Yes.

IATA

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

Marking

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

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.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

Canadian lists

- Canadian NPRI** : The following components are listed: aluminum (fume or dust only); light aromatic solvent naphtha; xylene (all isomers); n-butyl alcohol; ethylbenzene
- CEPA Toxic substances** : None of the components are listed.
- Canada inventory** : Not determined.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

History

Date of printing : 29.05.2024

Date of issue/Date of revision : 29.05.2024

Date of previous issue : 27.01.2022

Version : 1.01

Key to abbreviations

- : ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 UN = United Nations
 HPR = Hazardous Products Regulations

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 3	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method

References : Not available.

✔ Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

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.