

SAFETY DATA SHEET



Jotun Protects Property

Marathon 1000 GF Comp B

Section 1. Identification

Product identifier : Marathon 1000 GF Comp B
Product code : 33223
Other means of identification : Not available.
Product type : Liquid.
Product description : Hardener.

Recommended use of the chemical and restrictions on use

Identified uses

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

Restrictions on use

Not applicable.

Supplier's details : Jotun (Philippines) Inc.
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Section 2. Hazard identification

Classification of the substance or mixture : ACUTE TOXICITY (oral) - Category 4
SKIN CORROSION/IRRITATION - Category 1B
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
SKIN SENSITISATION - Category 1
REPRODUCTIVE TOXICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1

GHS label elements

Hazard pictograms



Signal word : Danger.

Section 2. Hazard identification

Hazard statements	: H302 - Harmful if swallowed. H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H361 - Suspected of damaging fertility or the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure. H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements	
General	: Not applicable.
Prevention	: P203 - Obtain, read and follow all safety instructions before use. P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. P273 - Avoid release to the environment. P260 - Do not breathe vapour or spray. P270 - Do not eat, drink or smoke when using this product. P264 + P265 - Wash hands thoroughly after handling. Do not touch eyes. P272 - Contaminated work clothing should not be allowed out of the workplace.
Response	: P391 - Collect spillage. P318 - IF exposed or concerned, get medical advice. P304 + P340, P316 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help immediately. P301 + P316, P317, P330, P331 - IF SWALLOWED: Get emergency medical help immediately. Get medical help. Rinse mouth. Do NOT induce vomiting. P302 + P316, P352, P361, P354 - IF ON SKIN: Get emergency medical help immediately. Wash with plenty of water. Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. P333 + P317 - If skin irritation or rash occurs: Get medical help. P362 + P364 - Take off contaminated clothing and wash it before reuse. P363 - Wash contaminated clothing before reuse. P305 + P354 + P338, P317 - IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help. P319 - Get medical help if you feel unwell.
Storage	: P405 - Store locked up.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

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

Section 3. Composition/information on ingredients

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

Ingredient name	%	Identifiers
Carbomonocyclic alkylated mixtures of poly-aza-alkanes, hydrogenated	≥25 - ≤50	CAS: 1173092-74-4
1,2-Ethanediamine, N-(2-aminoethyl)-, reaction products with glycidyl tolyl ether	≥25 - ≤50	CAS: 84144-79-6
benzyl alcohol	≥10 - ≤22	CAS: 100-51-6
Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis(methylamine)	≤10	CAS: 57214-10-5
3-aminopropyl-diethylamine	≤5	CAS: 104-78-9
m-phenylenebis(methylamine)	≤5	CAS: 1477-55-0

Section 3. Composition/information on ingredients

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with ethylenediamine	≤1.9	CAS: 72480-18-3
2,2'-iminodiethylamine	<1	CAS: 111-40-0

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 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** : 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.
- 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.

Most important symptoms/effects, 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** : Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
 stomach pains
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

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

- 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.
- 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.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

- Suitable extinguishing media** : Recommended: alcohol-resistant foam, CO₂, powders, water spray.
- Unsuitable extinguishing media** : Do not use water jet.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. This material is very 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
 nitrogen oxides
 halogenated compounds

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.

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 spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

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".

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

Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Absorb with an inert 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. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. 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.

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. Avoid exposure during pregnancy. 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 vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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 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. 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Biological exposure indices

No exposure indices known.

Section 8. Exposure controls/personal protection

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- 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 to EN 166 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** : 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.
- 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.
- 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 and safety characteristics

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

Appearance

- Physical state** : Liquid.
- Colour** : Colourless.
- Odour** : Characteristic.
- Odour threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: 100°C (212°F)

Section 9. Physical and chemical properties and safety characteristics

Evaporation rate : Not available.

Flammability : Not available.

Lower and upper explosion limit/flammability limit : Not available.

Vapour pressure :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
1,2-Ethanediamine, N-(2-aminoethyl)-, reaction products with glycidyl tolyl ether	1.1	0.15				
benzyl alcohol	0.05	0.0067				

Relative vapour density : Not available.

Relative density : Not available.

Density : 1.018 g/cm³

Solubility(ies) :

Media	Result
cold water	Not soluble
hot water	Not soluble

Solubility in water : Not available.

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

Auto-ignition temperature :

Ingredient name	°C	°F	Method
benzyl alcohol	436	816.8	

Decomposition temperature : Not available.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): >20.5 mm²/s (>20.5 cSt)

Particle characteristics

Median particle size : Not applicable.

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 : No specific data.

Incompatible materials : No specific data.

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

Carbomonocyclic alkylated mixtures of poly-
aza-alkanes, hydrogenated
benzyl alcohol

3-aminopropyldiethylamine

m-phenylenebis(methylamine)

4,4'-Isopropylidenediphenol, oligomeric
reaction products with 1-chloro-
2,3-epoxypropane, reaction products with
ethylenediamine
2,2'-iminodiethylamine

Result

Rat - Oral - LD50

500 mg/kg

Rat - Oral - LD50

1230 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Excitement Behavioral - Coma

Rat - Oral - LD50

550 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Lung, Thorax, or Respiration - Respiratory depression

Other - Hair

Rabbit - Male - Dermal - LD50

524 mg/kg

OECD 402

Mouse - Oral - LD50

1180 mg/kg

Rabbit - Dermal - LD50

3100 mg/kg

Rabbit - Oral - LD50

300 to 2000 mg/kg

Rat - Oral - LD50

1080 mg/kg

Toxic effects: Behavioral - Convulsions or effect on seizure threshold

Rabbit - Dermal - LD50

1090 mg/kg

Rat - Inhalation - LC50 Vapour

0.5 mg/l [4 hours]

Conclusion/Summary[Product] : Not available.

Skin corrosion/irritation

Product/ingredient name

Carbomonocyclic alkylated mixtures of poly-
aza-alkanes, hydrogenated
3-aminopropyldiethylamine
m-phenylenebis(methylamine)

4,4'-Isopropylidenediphenol, oligomeric
reaction products with 1-chloro-
2,3-epoxypropane, reaction products with
ethylenediamine
2,2'-iminodiethylamine

Result

Mammal - species unspecified - Skin - Severe irritant

Rat - Skin - Severe irritant

Rabbit - Skin - Severe irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 750 µg

Rabbit - Skin - Not irritant

OECD 404

Duration of treatment/exposure: 4 hours

Rabbit - Skin - Moderate irritant

Amount/concentration applied: 500 milligrams

Conclusion/Summary[Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name

Result

Section 11. Toxicological information

Carbomonocyclic alkylated mixtures of poly-
aza-alkanes, hydrogenated
benzyl alcohol
3-aminopropyldiethylamine
m-phenylenebis(methylamine)

Mammal - species unspecified - Eyes - Severe irritant

Mammal - species unspecified - Eyes - Mild irritant

Rabbit - Eyes - Severe irritant

Rabbit - Eyes - Severe irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 50 µg

Mammal - species unspecified - Eyes - Severe irritant

OECD 437

4,4'-Isopropylidenediphenol, oligomeric
reaction products with 1-chloro-
2,3-epoxypropane, reaction products with
ethylenediamine

Conclusion/Summary[Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary[Product] : Not available.

Respiratory or skin sensitization

Product/ingredient name

Carbomonocyclic alkylated mixtures of poly-
aza-alkanes, hydrogenated
3-aminopropyldiethylamine

Result

Mammal - species unspecified - skin

Result: Sensitising

Guinea pig - skin

Result: Sensitising

Mammal - species unspecified - skin

Result: Sensitising

Mouse - skin

Result: Sensitising

m-phenylenebis(methylamine)

4,4'-Isopropylidenediphenol, oligomeric
reaction products with 1-chloro-
2,3-epoxypropane, reaction products with
ethylenediamine
2,2'-iminodiethylamine

Mammal - species unspecified - skin

Result: Sensitising

Skin

Conclusion/Summary[Product] : Not available.

Ingredient name

Carbomonocyclic alkylated mixtures of poly-
aza-alkanes, hydrogenated
m-phenylenebis(methylamine)
2,2'-iminodiethylamine

Conclusion/Summary

May cause an allergic skin reaction.

May cause an allergic skin reaction.

May cause an allergic skin reaction.

Respiratory

Conclusion/Summary[Product] : Not available.

Germ cell mutagenicity

Product/ingredient name

3-aminopropyldiethylamine

Result

In vivo - Mammalian-Animal - Oral

OECD 489

Result: Negative

In vitro - Bacteria

OECD 471

Result: Negative

In vitro - Mammalian-Animal

OECD 473

Result: Negative

In vitro - Mammalian-Animal

Section 11. Toxicological information

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with ethylenediamine

OECD 490

Result: Positive

Bacteria

OECD [Bacterial Reverse Mutation Test]

Result: Negative

Conclusion/Summary[Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary[Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary[Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name

3-aminopropyl-diethylamine

2,2'-iminodiethylamine

Result

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

Specific target organ toxicity (repeated exposure)

Product/ingredient name

Carbomonocyclic alkylated mixtures of polyaza-alkanes, hydrogenated

Result

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

Aspiration hazard

Not available.

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** : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Section 11. Toxicological information

- Skin contact** : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
 stomach pains
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

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[Product] : Not available.

- General** : May cause damage to organs through prolonged or repeated exposure. 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** : Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

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)
Marathon 1000 GF Comp B	598.5	16794.9	N/A	366.7	N/A
Carbomonocyclic alkylated mixtures of poly-aza-alkanes, hydrogenated	500	N/A	N/A	N/A	N/A
1,2-Ethanediamine, N-(2-aminoethyl)-, reaction products with glycidyl tolyl ether	500	N/A	N/A	N/A	N/A
benzyl alcohol	1200	N/A	N/A	N/A	N/A
3-aminopropyldiethylamine	550	524	N/A	N/A	N/A
m-phenylenebis(methylamine)	1180	3100	N/A	11	N/A
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with ethylenediamine	500	N/A	N/A	N/A	N/A
2,2'-iminodiethylamine	1080	1090	N/A	0.5	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name

Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis (methylamine)
3-aminopropyldiethylamine

Result

Acute - LC50

Fish
25.9 mg/l [96 hours]

EC50

OECD 201
Algae - *Raphidocelis subcapitata*
34 mg/l [72 hours]

NOEC

OECD 201
Algae - *Raphidocelis subcapitata*
19.53 mg/l [72 hours]

Acute - LC50

Fish - *Leuciscus idus*
146.6 mg/l [96 hours]

Acute - EC50

ISO 6341
Daphnia - *Daphnia magna*
30.16 mg/l [48 hours]

Chronic - NOEC

Daphnia - *Daphnia magna*
2.01 mg/l [21 days]

m-phenylenebis(methylamine)

Acute - EC50

Algae
12 mg/l [72 hours]

Acute - EC50

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with ethylenediamine

OECD [Activated Sludge, Respiration Inhibition Test]
Micro-organism - Activated sludge
>100 mg/l [3 hours]

Chronic - EC50

OECD [Activated Sludge, Respiration Inhibition Test]
Micro-organism - Activated sludge
>100 mg/l [3 hours]

2,2'-iminodiethylamine

Acute - EC50 - Fresh water

Algae - Green algae - *Pseudokirchneriella subcapitata*
345600 µg/l [96 hours]
Effect: Population

Conclusion/Summary[Product] : Not available.

Persistence and degradability

Product/ingredient name

3-aminopropyldiethylamine

Result

OECD 301 A
90 to 100% [28 days] - Readily

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with ethylenediamine

Aerobic

OECD 301B
0% [28 days] - Not readily

Conclusion/Summary[Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
benzyl alcohol	-	-	Readily
3-aminopropyldiethylamine	-	-	Readily

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
benzyl alcohol	0.87	<100	Low
m-phenylenebis (methylamine)	0.18	2.69	Low
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with ethylenediamine	1.97	-	Low
2,2'-iminodiethylamine	-5.58	2.8 to 6.3 [OECD 305 C]	Low

Mobility in soil

Soil/water partition coefficient : 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 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. 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 liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	ADR/RID	ADN	IMDG	IATA
UN number	UN2735	UN2735	UN2735	UN2735
UN proper shipping name	Polyamines, liquid, corrosive, n.o.s. (Carbomonocyclic alkylated mixtures of poly-aza-alkanes, hydrogenated)	Polyamines, liquid, corrosive, n.o.s. (Carbomonocyclic alkylated mixtures of poly-aza-alkanes, hydrogenated)	Polyamines, liquid, corrosive, n.o.s. (Carbomonocyclic alkylated mixtures of poly-aza-alkanes, hydrogenated). Marine pollutant (Formaldehyde, oligomeric reaction products with phenol and m-phenylenebis (methylamine))	Polyamines, liquid, corrosive, n.o.s. (Carbomonocyclic alkylated mixtures of poly-aza-alkanes, hydrogenated)
Transport hazard class(es)	8  	8  	8  	8 
Packing group	II	II	II	II

Section 14. Transport information

Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
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Additional information

- ADR/RID** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Hazard identification number 80
Tunnel code (E)
- ADN** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-A, S-B
 Segregation Group:
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.

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

Philippines - Priority Chemical List (PCL)

Not applicable.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

SDS based on UN GHS Revision : 9

History

- Date of printing** : 18.05.2026
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Section 16. Other information

Abbreviations and acronyms

: 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
 IMO = International Maritime Organization
 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)
 N/A = Not available
 SGG = Segregation Group
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
ACUTE TOXICITY (oral) - Category 4	Calculation method
SKIN CORROSION/IRRITATION - Category 1B	Calculation method
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	Calculation method
SKIN SENSITISATION - Category 1	Calculation method
REPRODUCTIVE TOXICITY - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2	Calculation method
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1	Calculation method
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1	Calculation method

Key literature references and sources for data : Not available.

✔ Indicates information that has changed from previously issued version.

Notice to reader

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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.