

Amroy Europe Oy

BioEpoxy System

RESIN COMPONENT A

EPOBIOX™
1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY

Product name: Name of Substance Epobiox™
 Product type: bioepoxy
 Supplier: Amroy Europe Oy VAT No. FI19869654
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2. COMPOSITION / INFORMATION ON INGREDIENTS

Preparation description: Liquid epoxy

Dangerous components/constituents:

CAS Number:

25068-38-6	Bisfenol A and epichlorohydrin reaction result, epoxy resin	50 – 80 %
	Xi, N; R36/38, R43, R51/53	
28068-14-4	Bisfenol F and epichlorohydrin reaction result, epoxy resin	30 – 50 %
	Xi, N, R36/38, R43, R51/53	
	Polyamide resin reaction result	5 – 15 %
61790-12-3	Tall oil fatty acid	0 – 5 %

3. HAZARDS IDENTIFICATION

Xi, N **Irritant, toxic to aquatic environment**
 R36/38 Irritating to eyes and skin.
 R43 May cause sensitization by skin contact.
 R51/53 Toxic to aquatic organism. May cause long term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

Symptoms and effects: Irritation of the skin and eyes.
 First Aid:
 – inhalation No specific measures
 – skin Do not delay. Remove contaminated clothing. Wash skin with water using soap if available. If persistent irritation occurs, obtain medical attention.
 – eye Do not delay. Flush eye with water. If persistent irritation occurs, obtain medical attention immediately.
 – ingestion Do not induce vomiting. In the unlikely event of ingestion, obtain medical attention immediately.
 Advice to Physicians: If skin sensitisation has developed and a causal relationship has been confirmed, further exposure should not be allowed.

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5. FIRE FIGHTING MEASURES

Special hazards:	Not classified as flammable, but will burn. Carbon monoxide may be involved incomplete combustion occurs.
Extinguishing media:	
– small fires	Dry chemical powder, carbondioxide foam, water spray or fog, sand or earth.
– large fires	Foam, water spray or fog.
Unsuitable extinguishing media:	Water in a jet.
Protective equipment:	Full protective clothing and self contained breathing apparatus.
Other information:	Keep adjacent containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Avoid contact with skin, eyes and clothing
Personal protection:	Wear protective clothing specified for normal operations (see section 8).
Environmental precautions:	Prevent contamination of soil and water. Prevent from spreading or entering into drains, ditches or rivers by using sand, earth or other appropriate barriers. If materials enters drains it should be pumped out into a open vessel. Emergence services may need to be called to assist in this operation.
Clean-up methods:	
– small spillage	Absorb or contain liquid with sand, earth or spill control material. Shovel material to labelled sealable container for safe disposal.
– large spillage	Transfer to a labelled container for product recovery or safe disposal. Otherwise treat as for small spillage.

7. HANDLING AND STORAGE

Handling:	Avoid contact with skin, eyes and clothing
Storage:	Keep container tightly closed and dry. Palletised loads should be stacked to a maximum of 4 high.
Storage temperatures:	Ambient; 0–60 °C.

8. EXPOSURE CONTROLS / personal protection

Respiratory protection:	Not normally required. In a confined space wear half mask respirator with organic vapour cartridge and build-in particular filter NPF 20 (gas only). If product is applied by spraying wear self contained breathing apparatus.
Hand protection:	Nitrile rubber gloves or butyl rubber gloves, gauntlet type.
Eye protection:	Monogoggles.
Body protection:	Standard issue work clothes, safety boots.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Colour:	clear / pale yellow
Odour:	Slight
Density:	1100 – 1200 kg/m ³ at 25 °C (typical)
Dynamic viscosity:	5,0 – 7,0 Pa·s at 25 °C
Flash point:	Over 200 °C
Solubility in water:	Negligible
N-octanol/ water partition coefficient:	Data not available

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10. STABILITY / REACTIVITY

Stability: Stable under normal use conditions. Reacts with strong oxidising agents. Polymerises exothermically with amines, mercaptans and Lewis acids at ambient temperature and above. Polymerises in contact with bases (e.g. caustic soda), ammonia, primary and secondary amines, alcohols and acids.

Conditions to avoid: Caustic soda can induce a vaporous polymerisation at temperatures over 150 °C.
Materials to avoid: Strong oxidising agents. Caustic soda.

Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:
– oral LD50 > 11400 mg/kg (rat)

Eye irritation: Irritant
Skin irritation: Irritant
Respiratory irritation: Not irritating
Skin sensitisation: Skin sensitiser

Carcinogenicity: A recent review of the available data by the International Agency for Research on Cancer (IARC), has concluded that DGEBA is not classifiable as to its carcinogenicity.

Mutagenicity: Positive in vitro, but negative in vivo assays.

12. ECOLOGICAL INFORMATION

Basis for assessment: Information given based on data on the components and the ecotoxicology of similar products.

Mobility: Sinks in water.
Persistence/degradability: Not readily biodegradable.
Bioaccumulation: Has the potential to bioaccumulate.

Acute toxicity:
– fish Toxic, $1 < LC50 \leq 10$ mg/l
– aquatic organisms Toxic

Sewage treatment: Toxic, $EC50 > 1 - 10$ mg/l, to organisms in sewage treatments plants.

13. DISPOSAL CONSIDERATIONS

Precautions: See section 8. Refer to section 7 before handling the product or containers.

Waste disposal: Recover or recycle if possible. Otherwise incineration or dispose to licensed contractor.

Product disposal: Drain container thoroughly. Rinse three times with suitable solvent. Treat rinses as for product disposal. After draining, vent in a safe place away from sparks and re. Send to drum recovered or metal reclaimed.

Local legislation: Control of Pollution Act 1974.
Control of Pollution (Special waste) Regulations 1980.
Environmental Protection Act 1990.

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14. TRANSPORT INFORMATION

Classification / ADR / RID

Name	Environmentally hazardous liquid substance N.O.S (Epoxy resin)
Classification	9
UN Number	3082
Packaging group	3
Classification	Xi, N

IMDG / Sea transport

Name	Environmentally hazardous liquid substance N.O.S (Epoxy resin)
Classification	9
UN Number	3082
Packaging group	3
Classification	Xi, N

ICAO / IATA / Air transport

Name	Environmentally hazardous liquid substance N.O.S (Epoxy resin)
Classification	9
UN Number	3082
Packaging group	3
Classification	Xi, N

15. REGULATORY INFORMATION

EC Label name	Bioepoxy, liquid (number average, molecular weight < 700)
EC Classification	Irritant. Dangerous for the environment.
EC Labelling	Xi, N

EC Risk phrases:	R36/38 Irritating to eyes and skin. R43 May cause sensitisation by skin contact. R51/53 Toxic to aquatic organisms, may cause long-term adverse affects in the aquatic environment.
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EC Safety phrases:	S24 Avoid contact with skin. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28 After contact with skin, wash immediately with plenty of soap and water. S37/39 Wear suitable gloves and eye/face protection. S61 Avoid release to the environment. (ref. to special instructions/safety data sheet)
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16. OTHER INFORMATION

Uses and restrictions:	Windmill blades and composites industry; suitable for infusion, laminating and glue applications.
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MSDS distribution:	This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of the person in your organisation responsible for advising on safety matters.
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DISCLAIMER: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as a guarantee of any specific property of the product.

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