

MATERIAL SAFETY DATA SHEET

EPOXY COATING SB - PACK A

1. Identification of the substance/preparation and company.

Product Name : Epoxy Products Epoxy Coating SB - Pack A
Product Code : ECSB/A
Product Type : Epoxy Resin
Supplier : Epoxy Products Limited
Address : Unit 7, Haviland Road, Ferndown Industrial Estate, Wimborne, Dorset. England
Contact numbers : 01202 891899
Web Site : www.epoxyproducts.co.uk
E Mail : epoxyproducts.co.uk
Emergency Telephone Number : 01202 891899

2. Hazards Identification

Physical Hazard : Non classifiable
Health hazards : Irritant.(Xi). Irritating to eyes and skin. May cause sensitisation by skin contact.
Safety hazards : Not classified as dangerous under EC criteria
Environmental hazards : Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

3. Composition/Information on Ingredients

Preparation description : Blend of liquid epoxy resin, inert fillers, pigments and reactive diluent and solvents

Dangerous components/constituents

| CAS/Registry No. | Material Description | % Content |
|------------------|--|-----------|
| 25068-38-6 | *4,4'-ISOPROPYLLINDENEDIPHENOL-EPICHLOROHYDRIN COPOLYMER (Number average molecular weight less than 700) Physical Hazard : Non classifiable Health Hazard: Irritant (Xi). R Phrases : R36, R38, R43, R51 and R53 OEL : None Established | < 50 |
| 28064-14-4 | *PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER Physical Hazard : Non classifiable Health Hazard: Irritant (Xi). R Phrases : R36, R38, R43, R51 and R53 OEL : None Established | < 25 |
| 1330 - 20 -7 | XYLENE Physical Hazard : Flammable Health Hazard: Harmful (Xn). R Phrases : R10, R20/R21, R38 OEL : 50ppm | < 20 |

4. First Aid Measures

Symptoms and effects : Irritation of the skin and eyes.
First aid - inhalation : No specific measures.
First aid - skin : DO NOT DELAY. Remove contaminated clothing. Wash skin with water using soap if available. If persistent irritation occurs, obtain medical attention.
First aid - eye : DO NOT DELAY. Flush eye with water. OBTAIN MEDICAL ATTENTION IMMEDIATELY.
First aid - ingestion : DO NOT INDUCE VOMITING. If rapid recovery does not occur, obtain medical attention.
Advice to Physicians : If skin sensitisation has developed and a casual relationship has been confirmed, further exposure should not be allowed.

5. Fire-fighting Measures

Specific hazards : Carbon monoxide may be evolved if incomplete combustion occurs.
Extinguishing media - small fires : Dry chemical powder, carbon dioxide, foam, water spray or fog, sand or earth.
Extinguishing media - large fires : Foam, water spray or fog.
Unsuitable extinguishing media : Water jet.
Protective equipment : Full protective clothing and self contained breathing apparatus.

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). Use barrier cream.
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 material enters drains, it should be pumped out into an open vessel.. Emergency 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 up and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled drum. Scrub contaminated surfaces with a detergent solution.
Clean up methods - large spillage : Transfer to a labelled container for product recovery or safe disposal. Treat residues as for small spillage.

7. Handling and Storage

Handling : Avoid contact with skin, eyes and clothing.
Storage : Keep container tightly closed and store in a dry cool place.
Storage temperatures : Ambient.

8. Exposure Controls/Personal Protection

Occupational exposure standards : None established
Respiratory protection : Not required.

Hand Protection : PVC Gloves
 Eye Protection : Safety glasses
 Body Protection : Standard issue work clothes

9. Physical and Chemical Properties

Physical state : Viscous liquid
 Colour : Various
 Density : 1700 kg/m³ @ 25°C
 Solubility in Water : Not miscible
 Solubility in Other Solvents : Readily soluble in various organic solvents

10. Stability and Reactivity

Stability : Stable and inert.
 Conditions to avoid : Temperatures above 90°C.
 Materials to avoid : Strong oxidising agents. Amines mercaptans, mineral acids and caustic soda.
 Hazardous decomposition products : Oxides of carbon

11. Toxicological Information

Basis for assessment : Information given is based on data on the components and the toxicology of similar products.
 Acute toxicity - oral : LD50 : > 2000 mg/kg
 Acute toxicity -dermal : LD50 : > 2000 mg/kg
 Eye irritation : Irritant.
 Skin irritation : Irritant.
 Skin sensitisation : Skin sensitiser
 Mutagenicity : Not mutagenic

12. Ecological Information

Basis for assessment : Information given is 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.
 Ecotoxicity : Toxic, 1< LC50 or EC50< or = 10mg/l, to aquatic organisms.
 Sewage Treatment : Data not available

13. Disposal Considerations

Product disposal : Recover or recycle if possible. Otherwise incinerate or dispose to licensed disposal contractor.
 Container disposal : Drain container thoroughly, rinse three times with suitable solvent and treat rinsing as for product disposal. Dispose to licensed disposal contractor.
 Local legislation : The UK. All waste should be disposed of using a registered waste carrier operating under the Environmental Protection Act (Duty and Care) Regulations 1992 (S.I. No 2839)

14. Transport Information

UK Carriage Classification : Environmentally Hazardous Substance
 UN Conveyance Classification: Environmentally Hazardous Substance
 UN Class : 9
 UN Packaging Group : 111
 UN Number : 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (Contains Epoxy Resin)
 ADR/RID Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains Epoxy Resin)
 HS Code Number : 390730 00

15. Regulatory Information

EC Label name : Contains Epoxy Resin (number average molecular weight <700)
 EC Classification : Irritant. Dangerous for the environment.
 EC Symbols : 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 effects in the aquatic environment.
 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.

16. Other Information

Date Issued : 31.04.2008
 Reference : SDS/ ECSB/A/05
 Other information : Technical Services Department

The information is based on our current knowledge and is intended to describe the product for the purpose of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

MATERIAL SAFETY DATA SHEET

EPOXY COATING SB - PACK B

1. Identification of the substance/preparation and company.

Product Name : Epoxy Products Epoxy Coating SB - Pack B
 Product Code : ECSB/B
 Product Type : Epoxy Resin Curing Agent
 Supplier : Epoxy Products Limited
 Address : Unit 7, Haviland Road, Ferndown Industrial Estate, Wimborne, Dorset. England
 Contact numbers : 01202 891899
 Web Site : www.epoxyproducts.co.uk
 E Mail : epoxyproducts.co.uk
 Emergency Telephone Number : 01202 891899

2. Hazards Identification

Human health hazards : Harmful by inhalation and if swallowed. May cause sensitisation by skin contact.
 Signs and symptoms of exposure (Acute effects) : Product vapour in low concentrations can cause lacrimation, conjunctivitis and corneal edema when absorbed into the tissue of the eye from the atmosphere. Contact with the eye may cause dryness (defatting), itching and/or rash. Contact with the skin causes mild irritation and discomfort. Inhalation of mists may cause irritation in the respiratory tract. Product is absorbed through the skin and may cause nausea, headache and general discomfort.
 Signs and symptoms of exposure (Possible longer term effects) : Repeated and/or prolonged exposure may cause allergic reaction/sensitisation. Repeated and/or prolonged exposure may result in : adverse eye effects (such as conjunctivitis or corneal damage), adverse skin effects (such as defatting, rash or irritation), adverse skin effects (such as rash, irritation or corrosion). Dryness of nasal passages may be experienced when material is inhaled over a long period of time.

3. Composition/Information on Ingredients

Preparation description : Cycloaliphatic amine
 Dangerous components/constituents

| CAS / Registry Number | Materials Description | % | | |
|-----------------------|------------------------------|------|---------------|-----------------------------|
| 100-51-6 | Benzyl Alcohol | > 45 | Irritant : Xn | R Phrases : R20/22 |
| 1761-71-3 | Methylenedi(cyclohexylamine) | <5 | Corrosive : C | R Phrases : R35 R22 R37 R43 |

4. First Aid Measures

Inhalation : Move patient to fresh air. If breathing has stopped or is laboured give assisted respiration (mouth to mouth). Supplemental oxygen may be indicated. Prevent aspiration of vomit. Turn victim's head to the side. Seek medical advice.
 Skin contamination contaminated : Wash affected area with mild soap and water. Remove contaminated clothing and shoes. Destroy leather apparel. Launder contaminated clothing prior to reuse.
 Eye contamination : Rinse immediately with plenty of water.
 Ingestion : If swallowed call a physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person.

5. Fire-fighting Measures

Suitable extinguishing media fire : Ignition will give rise to a class B fire. In case of large fire use : water spray, alcohol foam. In case of small use : carbon dioxide (CO₂), dry chemical, dry sand or limestone. Extinguishing media - small fires : Dry chemical powder, carbon dioxide, foam, water spray or fog, sand or earth.
 Special exposure hazards (Fire fighting) : May generate toxic, irritating or flammable combustion products. Sudden reaction and fire may result if product is mixed with an oxidising agent. May generate toxic nitrogen oxide gases. May generate ammonia gas. Personnel in vicinity and downwind should be evacuated.
 Special fire fighting procedures : Fire fighters should wear butyl rubber boots, gloves, body suit and self contained breathing apparatus.

6. Accidental Release Measures

Precautions : Wear protective clothing, boots, gloves, and eye protection
 Methods for cleaning up : If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container. Transfer to containers by suction, preparatory for later disposal. Flush area with water spray. Clean-up personnel must be equipped with self contained breathing apparatus and butyl rubber protective clothing. For large spills, recover spilled material with a vacuum track.

7. Handling and Storage

Handling : Avoid contact with skin, eyes. When handling, do not eat, drink or smoke.
 Storage : Keep away from : acids, alkalis, oxidisers. Keep in cool, dry, ventilated storage and in closed containers.
 Store : in steel containers preferably located outdoors, above ground, and surrounded by dikes to contain spills or leaks.
 Do not store in reactive metal containers.

8. Exposure Controls/Personal Protection

Occupational exposure standards : None established
 Respiratory protection : Not required under normal conditions in a well ventilated workplace. .
 Hand protection : PVC, neoprene rubber, butyl rubber or nitrile rubber gloves.
 Eye protection : Safety glasses
 Skin protection : Long sleeved work clothes

9. Physical and Chemical Properties

| | | |
|------------------------------|---|---|
| Physical state | : | Low viscosity liquid |
| Colour | : | Amber |
| Odour | : | Ammoniacal |
| pH | : | Alkaline |
| Density | : | 1050 kg/m ³ @ 25°C |
| Solubility in Water | : | Slight |
| Solubility in Other Solvents | : | Readily soluble in various organic solvents |
| Flash Point | : | 103°C |

10. Stability and Reactivity

| | | |
|--------------------------------------|---|---|
| Stability | : | Stable |
| Conditions to avoid | : | Not applicable |
| Incompatibility (Materials to avoid) | : | Mineral acids (i.e., Sulphuric, Phosphoric, etc.). Alkalis (Sodium or Potassium Hydroxide etc.) Organic acids (i.e., Acetic, Citric etc.) Reducing agents (i.e. hydrides, sulphites etc.) Oxidising agents i.e. perchlorates, nitrates etc.) Reactive metals (i.e. zinc, sodium, calcium etc.) Sodium Hypochlorite . CAUTION! N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes into contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. Product slowly corrodes copper, aluminium, zinc and galvanised surfaces. Amines. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Materials reactive with hydroxyl compounds. Nitrites, nitrosating agents. A reaction accompanied by large heat release occurs when the product is mixed with acids. Heat generated may be sufficient to cause vigorous boiling creating a hazard due to splashing or spattering of hot material. |
| Hazardous decomposition products | : | Carbon Monoxide in a fire. Carbon Dioxide in a fire. Ammonia when heated. Nitrogen Oxides in a fire. Irritating and toxic fumes at elevated temperatures. Nitric acid in a fire. Nitrosamines. Aldehydes. Organic vapours. Nitrogen oxide can react with water vapours to form corrosive nitric acid. |

11. Toxicological Information

| | | |
|-----------------------------|---|--|
| Basis for assessment | : | Information given is based on data on the components and the toxicology of similar products. |
| Acute toxicity - oral | : | LD50, Rat : > 500 mg/kg |
| Acute toxicity -dermal | : | LD50, Rabbit : > 2800 mg/kg |
| Acute toxicity - Inhalation | : | LC50, Rat : No data |
| Irritation effects data | : | Mild irritant to the skin of a rabbit |
| Chronic / Subchronic data | : | No delayed, subchronic or chronic test data are known. |

12. Ecological Information

| | | |
|-------------|---|---------|
| Ecotoxicity | : | No data |
|-------------|---|---------|

13. Disposal Considerations

| | | |
|-------------|---|---|
| legislation | : | All waste should be disposed of using a registered waste carrier operating under the Environmental Protection Act (Duty and Care) Regulations 1992 (S.I. No 2839) |
|-------------|---|---|

14. Transport Information

| | | |
|-----------------------|---|-----------------------------------|
| ADR/RID Shipping Data | : | Not regulated |
| IMO Shipping Data | : | RESIN COMPOUND - Not regulated |
| ICAO/IATA | : | RESIN COMPOUND - Not regulated |
| Other Information | : | Not classed as a marine pollutant |

15. Regulatory Information

| | | |
|-------------------|---|--|
| EEC Number | : | All components listed. |
| EC Label name | : | Epoxy Curing Agent |
| EC Classification | : | HARMFUL |
| EC Symbols | : | Xn. |
| EC Risk phrases | : | R20/22 Harmful by inhalation and if swallowed. R43 May cause sensitisation by skin contact |
| EC Safety phrases | : | S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37/39 Wear suitable gloves and eye/ face protection. |

16. Other Information

| | | |
|---------------------------|---|---|
| Safety Data Sheet History | : | Edition No 4 |
| Revisions Highlighted | : | Amendment to Composition/Information on ingredients. See section 2 |
| SDS Distribution | : | This document contains important information to ensure the safe storage, handling and end 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. |
| Date Issued | : | 1108.2008 |
| Reference | : | SDS/ ECSB/B/03 |
| Other information | : | Technical Services Department |

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