

MATERIAL SAFETY DATA SHEET

GENERAL PURPOSE ADHESIVE - PACK A

1. Identification of the substance/preparation and company.

Product Name : Epoxy Products General Purpose Adhesive - Pack A
Product Code : GPA/A
Product Type : Epoxy Resin Adhesive
Supplier : Epoxy Products Limited
Address : Unit 7, Ferndown Industrial Estate, Wimborne, Dorset. BH21 7RZ England
Contact numbers : 01202 891899
Emergency Telephone Number : 01202 891899

2. Hazards Identification

Physical Hazard : None-classifiable
Health Hazard : Irritant (Xi)
Irritating to eyes and skin. (R36/38)
May cause sensitisation by skin contact. (R43)

3. Composition/Information on Ingredients

Modified Liquid Bisphenol A/F-Epichlorohydrin Epoxide Resin.

2.2. Information on Ingredients

The ingredients listed below have been associated with one or more of the listed immediate and/or delayed (*) health hazards. Risk of damage and effects depends upon duration and level of exposure.

<u>CAS/Registry No.</u>	<u>Material Description</u>	<u>% Content</u>
25068-38-6	*4,4'-ISOPROPYLDENEDIPHENOL-EPICHLOROHYDRIN COPOLYMER Physical Hazard: Non-classifiable Health Hazard: Irritant (Xi) Irritating to eyes. (R36) Irritating to skin. (R38) May cause sensitisation by skin contact. (R43) Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment. (R51/53) OEL: None Established	35-50
55492-52-9	*BISPHENOL F-EPICHLOROHYDRIN COPOLYMER Physical Hazard: Non-classifiable Health Hazard: Irritant (Xi) Irritating to eyes. (R36) Irritating to skin. (R38) May cause sensitisation by skin contact. (R43) Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment. (R51/53) OEL: None Established	35-50

4. First-aid Measures

Ingestion: If accidentally swallowed, give large quantities of water or milk or dilute the effects on the stomach. Do not induce vomiting. Seek medical advice.

Inhalation: If inhalation causes adverse effects, remove to fresh air. If problem persists, seek medical advice.

Skin Contact: In case of contact, immediately flush with plenty of water, remove contaminated clothing. Seek medical attention.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held apart during irrigation to ensure water contact with entire surface of eyes and lids. Seek immediately medical attention.

5. Fire-fighting Measures

Non-flammable at room temperature, but will burn. In case of fire, use water spray, dry chemical, foam or carbon dioxide extinguishers. Use water to keep fire-exposed containers cool. For large fires, fire-fighters should wear full emergency protective equipment including self-contained breathing apparatus.

6. Accidental Release Measures

Always wear appropriate protective clothing (refer to Section 8.2).

Large quantities: Contain and absorb with sand or sawdust and prevent from entering drains or watercourses; should this occur, the relevant Local Authority must be notified. Small quantities: Soak up with absorbent material and remove to a chemical disposal area.

7. Handling and Storage

7.1. Handling

Handle in accordance with good industrial hygiene and safety practices. Refer to Section 8 for appropriate personal protection equipment. Wash thoroughly after handling.

Inhalation : Avoid prolonged or repeated breathing of vapour.

Skin Contact : Avoid contact with skin or clothing.

Eyes : Avoid contact with eyes.

7.2. Storage

Keep in tightly sealed containers and store in a cool dry place avoiding exposure to heat, light, moisture and air.

8. Exposure Controls/Personal Protection

8.1. Personal Protection

Where air contaminants can exceed acceptable criteria, use approved respiratory protection equipment. Use goggles if contact is likely. Wear impervious gloves as required to prevent skin contact.

9. Physical and Chemical Properties

Appearance	Pale yellow paste, slightly sweet odour
Boiling Point	>150° C
Flammability	Combustible
Auto-ignition Temperature	>200° C
Relative Density	1.70g/cm ³ at 25° C
Water Solubility	Not miscible
Viscosity	Not applicable

10. Stability and Reactivity

Normally considered stable and inert.

Hazardous polymerisation: Will not occur.

Materials to avoid:	Mineral acids, bases, amines and mercaptans.
Conditions to avoid:	None known to Epoxy Products Ltd.
Thermal decomposition products may include:	Oxides of carbon.
Other Hazards:	None known to Epoxy Products Ltd.

11. Toxicological Information

Ingestion :	May be harmful if accidentally swallowed.
Inhalation :	Not expected to be harmful under normal conditions of use.
Skin :	Irritating to skin.
Eyes :	Irritating to eyes.
25068-38-6	*4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN COPOLYMER
	May cause sensitisation by skin contact.
55492-52-9	*BISPHENOL F-EPICHLOROHYDRIN COPOLYMER
	May cause sensitisation by skin contact.

12. Ecological Information

Mobility :	Not determined.
Degradability :	Not determined.
Bio-accumulative potential :	Not determined.
Aquatic toxicity:	Toxicity to bacteria, algae and higher marine organisms not tested. COD: Not determined.

13. Disposal Considerations

DO NOT reuse containers containing residual product without thorough cleaning. All waste should be disposed of using a Registered Waste Carrier operating under the Environmental Protection Act (Duty of Care) Regulations 1992. (S.I. No 2839).

14. Transport Information

UK Supply Classification	(Xi) Irritant
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



DANGEROUS FOR THE ENVIRONMENT



HARMFUL /IRRITANT

EC Label name	: Contains Epoxy Resin (number average molecular weight <700)
EC Classification	: Harmful/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	: 1.02.2008
Reference	: SD/GPA/A/03
Intended Use	: Epoxy Resin Adhesive.
Product Code	: Epoxy Products General Purpose Adhesive (Resin - Pack A)

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

GENERAL PURPOSE ADHESIVE - PACK B

1. Identification of the substance/preparation and company.

Product Name : Epoxy Products General Purpose Adhesive - Pack B
Product Code : GPA/B
Product Type : Epoxy Resin Adhesive
Supplier : Epoxy Products Limited
Address : Unit 7, Ferndown Industrial Estate, Wimborne, Dorset. BH21 7RZ England
Contact numbers : 01202 891899
Emergency Telephone Number : 01202 891899

2. Hazards Identification

Harmful if swallowed (R22) Toxic in contact with skin (R24). May cause sensitisation by skin contact (R43). Causes burns (R43).

SIGNS AND SYMPTOM OF EXPOSURE (Possible Longer Term Effects)

Repeated and/or prolonged exposures may result in: adverse skin effects (such as defatting, rash, irritation or corrosion), adverse eye effects (such as conjunctivitis or corneal damage).

Repeated and/or prolonged contact with the skin ,au cause allergic reaction/sensitisation.

3. Composition/Information on Ingredients

CAS Number and Chemical Name	%	Classification
108-95-2 PHENOL	<50	T;R24/25. R34
111-40-0 DIETHYLENTRIAMINE	<10	C;R21/22. R34.R43

4. First-aid Measures

SIGNS AND SYMPTOM OF EXPOSURE (Acute effects)

Contact with eyes causes severe irritation and pain. Product vapour in low concentrations can cause lacrimation, conjunctivitis and corneal edema when absorbed into the tissue of the eye from the atmosphere. Corneal edema may give rise to a perception of "blue haze" or "fog" around lights. The effect is transient and has no known residual effect.

Contact with skin causes severe irritation and pain.

Inhalation of vapours may cause irritation in the respiratory tract.

Inhalation of aerosol, mist or fog may cause harm if inhaled.

Ingestion may cause bleeding of the gastrointestinal tract and the vomiting of blood.

(a) INHALATION;

In cause of inhalation or suspected inhalation, move the patient at once to fresh air and seek medical advice. Keep patient absolutely quiet and start oxygen inhalation through suitable equipment.

Prevent aspiration of vomit. Turn victim's head to the side.

(b) SKIN CONTAMINATION

Remove product and immediately flush affected area with water for at least 15 minutes. Seek medical advice. Launder contaminated clothing prior to reuse. Contaminated leather wear should be discarded.

(c) EYE CONTAMINATION

Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice, preferably an eye specialist.

(d) INGESTION

If swallowed, seek medical advice immediately. Induce vomiting or remove stomach contents by gastric suction only as directed by medical personnel. Never give anything by mouth to an unconscious person.

5. Fire-fighting Measures

Suitable Extinguishing Media

Ignition will give rise to a Class B fire. In case of fire use : Water Spray, Carbon Dioxide (Co²), Dry Chemical Alcohol Foam.

6. Accidental Release Measures

Potential for carbon monoxide and/or nitrous oxides generation in a fire must be recognised.

Prevent accidental spillages to enter streams or drinking water supplies. Notify local health authorities and other appropriate agencies if such contamination should occur. All personnel remain up wind of the spill.

METHODS FOR CLEANING UP

Cover minor spills with sodium bisulphate to neutralise and reduce vapours. Spray with water. Place in metal containers for recovery or disposal.

Clean up personnel must be equipped with self contained breathing apparatus and butyl rubber protective clothing.

7. Handling and Storage

Handling : Avoid contact with eyes. Avoid breathing vapours. Handle in well ventilated work space.

Storage : Keep away from oxidisers, heat or flames. 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. Keep container closed.

8.2. Personal Protection

- a) Respiratory Protection : In poorly ventilated areas a cartridge mask approved for organic vapours is recommended under the following conditions: emergency situations, when product vapour concentration is greater than 20 ppm for a period longer than 15 minutes, during repair and cleaning of equipment during transfer or discharge of the product.
- b) Hand Protection : Nitrile rubber gloves or any impermeable gloves must be worn.
- c) Eye Protection : Goggles
- d) Skin Protection : Protective long sleeved overalls must be worn.

9. Physical and Chemical Properties

Appearance	:	Thixotropic liquid
Colour	:	Black
Odour	:	Ammoniacal
pH	:	Alkaline
Boiling Point	:	156C (313F) (estimate)
Flash Point	:	92C (198F) (closed cup method)
Flammability	:	(solid, gas) Not applicable.
Auto-ignition Temperature:	:	No data
Explosive Limits :	:	No data
Vapour Pressure	:	(mm Hg) < 0.1 @ 25C (77F)
Vapour Density	:	(Air = 1) No Data
Water Solubility	:	< 1% @ 25C (77F)

10. Stability and Reactivity

MATERIALS TO AVOID

Oxidizing Agents (i.e. perchlorates, nitrates etc.). A reaction accompanied by large heat release occurs when the product is mixed with acids Epoxy Resins. Heat generated may be sufficient to cause a hazard due to splashing of hot material.

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon Monoxide in a fire. Carbon Dioxide in a fire. Nitrogen Oxides in a fire. Hydrogen Cyanide when heated. Combustion of product under oxygen-starved conditions can be expected to produce numerous toxic products including: nitrides, cyanic acid, isocyanates, amides and carbonates.

HAZARDOUS POLYMERISATION

Will not occur.

11. Toxicological Information

No Data

IRRITATION EFFECTS DATA

No irritation data are known for this product. Irritation data available on components only.

12. Ecological Information

108-95-2 PHENOL Biodegradability = 99.5% at 7 days.

Waste from this product may present long term environmental hazards, thus landfill must be considered less acceptable than incineration.

13. Disposal Considerations

Dispose of in accordance with local and national regulations. For example, in the UK regulations made under the Control of Pollution Act 1974 and the Environmental Protection Act 1990. Wear protective clothing during disposal operations. If disposal is by a waste contractor, make sure that he has sufficient information and that waste containers are properly labelled.

14. Transport Information

ADR/RID SHIPPING DATA: Polyamine/Phenol Mixture 8,55 (c)

IMO SHIPPING DATA : Corrosive liquid NOS (Polyamine/Phenol); UN1760; Class 8; IMDG CODE PAGE: 8147; Packaging Group III

ICAO/IATA SHIPPING DATA: Corrosive liquid NOS (Polyamine/Phenol); UN1760; Class 8; Packaging Group III

IS THE PRODUCT CLASSIFIED AS A MARINE POLLUTANT? ... No

15. Regulatory Information



T - TOXIC

EEC SYMBOL TOXIC (T)

EEC Council Directive relating to the classification, packaging and labelling of dangerous substances and preparations Risk ® and Safety (S) phrases Harmful by inhalation and if swallowed (R20/220). May cause sensitisation by skin contact (R43).

In case of contact with eyes, rinse thoroughly with plenty of water and seek medical advice (S26). Wear suitable gloves and eye/face protection (S37/39).

16. Other Information

This Safety Data Sheet has been written to comply with Directives 91/155/EEC (the "Safety Data Sheet Directive") and 88/379/EEC (the "General Preparations Directive").

Date Issued	:	1.02.2008
Reference	:	SD/GPA/B/03
Intended Use	:	Epoxy Curing Agent
Product Code	:	Epoxy Products General Purpose Adhesive (Pack B - Hardener)