MATERIAL SAFETY DATA SHEET
EPOXY COATING FLEXIBLE GRADE - PACK A

1. Identification of the substance/preparation and company.

Product Name	:	Epoxy Coating Flexible Grade - Pack B
Application	:	Epoxy resin floor paint
Supplier	:	Epoxy Products Limited, 7 Ferndown Industrial Estate, Wimborne, Dorset. BH21 7RZ England
Emergency Contact Number	:	01202 891899

2. Composition/Information on Ingredients

Chemical Nature Mixture of epoxy resins and a reactive diluent

Hazardous Components	CAS/EINECS	Concentration %	Classification	Risk Phrases
Epoxy Resin Bisphenol Type A (Mol..Wt.<700)	25068-38-6	20 - 25	Xi	R36/38, R43
Epoxy Resin Bisphenol Type F (Mol. Wt.=<700)	28064-14-4	10 -15	Xi, N	R36/38, R43, R51/53
Aliphatic glycidyl ether	68609-97-2	1- 5	Xi, N	R38, R43, R51/53

3. Hazards Identification

Main Hazards	Irritant Dangerous for the environment.
Human Health Hazards	Irritating to eyes and skin. May cause sensitisation by skin contact
Safety Hazards	Not classified as flammable but will burn
Environmental Hazards	Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

4. First-Aid Measures

Eye Contact	**Do not delay** 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 immediate medical attention.
Skin Contact	**Do not delay**. Wash skin thoroughly with soap and water.
Ingestion	Do not. Induce vomiting. Seek immediate medical attention.
Inhalation	No specific measures

5. Fire-fighting Measures

Extinguishing Media	Use foam, water spray or carbon dioxide.
Extinguishing Media – Not suitable	Do not use water jet.
Special Hazards of Product during Fire	Not classified as flammable but will burn. Combustion will produce smoke, carbon dioxide and carbon monoxide.
Protective Equipment for Fire-Fighting	Wear full protective clothing and self-contained breathing apparatus.

6. Accidental Release Measures

Personal Precautions	Avoid contact with skin, eyes and clothing
Environmental Precautions and Clean-up Methods	Try to prevent the material from entering the drains or water courses.
Spillages	Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal

7. Handling and Storage

Handling	Avoid contact with eyes, skin and clothing
Storage	Store in the original container securely closed.
Storage temperature	Ambient

8. Exposure Controls/Personal Protection

Engineering Control Measures	Use of the basic principles of Industrial Hygiene will enable this material to be used safely.
Respiratory Protection	Not normally required. In confined areas a half mask respirator with organic vapour cartridge and particulate filter NPF 20 (gas only)
Hand Protection	Butyl, nitrile PVC type gloves or any impermeable gloves must be worn.
Eye Protection	Safety eye glasses or goggles must be worn.
Skin and Body Protection	Standard issue work clothes.

9. Physical and Chemical Properties

Physical State	Liquid
Colour	Various
Odour	Slight
Flash Point	>150^{o}C
Auto Ignition Temperature	>400^{o}C
Water Solubility	Negligible
Density	1.80g/cm^{3} at 20^{o}C

10. Stability and Reactivity

Conditions to avoid	Caustic soda can induce vigorous polymerisation at temperatures around 200˚C.
Materials to avoid	Strong oxidising agents. Caustic soda.
Hazardous Decomposition Products	Hazardous decomposition products are not expected to form during normal storage.
Hazardous Reactions	Stable under normal use conditions. Reacts with strong oxidising agents. Polymerises exothermically with amines, mercaptans at ambient temperatures. Polymerises in contact with caustic soda. Reacts exothermically with bases (eg. caustic soda), ammonia, primary and secondary amines, alcohols and acids.

11. Toxicological Information

Acute Oral Toxicity	Expected to be of low toxicity. LD50 > 2000 mg/kg
Acute Dermal Toxicity	Expected to be of low toxicity. LD50 > 2000 mg/kg
Eye Irritation	Expected to be slightly irritant.

Skin Irritation	Expected to be slightly irritant.
Sensitisation	Expected to be a skin sensitiser.
Carcinogenicity	Not expected to be carcinogenic.
Mutagenicity	Not considered to be a mutagenic hazard.

12. Ecological Information

Persistence/Degradability

Biodegradable	This product is expected to be not readily biodegradable.
Bioaccumulation	Has the potential to bioaccumulate.

Ecotoxicity Effects

Toxicity to fish	Expected to be toxic.1 < LC/EC/IC 50 > 10 mg/l
Toxicity to algae	Expected to be toxic 1. LC/EC/IC 50 > 10 mg/l
Acute toxicity to invertebrates	Expected to be toxic 1. LC/EC/IC 50 > 10 mg/l
Mobility	Sinks in water.
Sewage treatment	Expected to be practically non toxic 1. LC/EC/IC 50 > 100 mg/l

13. Disposal

Product Disposal	Recover and recycle if possible. Arrange for disposal via a licensed waste contractor.
Container Disposal	Dispose of containers with care. Empty packaging should be removed by a licensed contractor.
Local legislation	The recommendations given are considered appropriate for safe disposal. However, local regulations maybe more stringent and these must be complied with.

14. Transport Information

Land Transport ADR / RID

UN Number	3082
Class	9
Classification Code	M6
Packaging Group	111
Labelling Number	9
Risk Number	90
Description of the goods contains	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S. CONTAINS LIQUID EPOXY RESIN, ALIPHATIC GLYCIDYL ETHER

Air Transport ICAO-TI / IATA-DGR

UN Number	3082
ICAO/IATA Class	9
Packaging Group	111
Label	9
Correct Technical Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S. CONTAINS LIQUID EPOXY RESIN, ALIPHATIC GLYCIDYL ETHER

Maritime Transport IMDG / GGVSea

UN Number	3082
IMDG- CODE	9
EmS Number	F-A/ S-B
Packaging Group	111
Description of the goods contains	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S. CONTAINS LIQUID EPOXY RESIN, ALIPHATIC GLYCIDYL ETHER

15. Regulatory Information

Labelling according to EC Directives	EPOXY RESIN (NUMBER AVERAGE MOLECULAR WEIGHT < 700)
Classification	Irritant Dangerous for the environment

Symbol (s)

X – IRRITANT

N - DANGEROUS FOR THE ENVIRONMENT

Risk Phrases - R	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 - S	S24	Avoid contact with skin
	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S28A	After contact with skin, wash immediately with plenty of water.
	S37/39	Wear suitable gloves and eye/face protection.
	S46	If swallowed seek medical advice immediately and show this container or label.
	S61	Avoid release to the environment. Refer to special instructions/safety data sheet.

16. Other Information

Date Issued	06.01.2015
Reference	ECFG/A/06
Product Code	Epoxy Products Epoxy Coating Flexible Grade (Resin - Pack A)
Intended Use	Epoxy Resin floor paint.

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 FLEXIBLE GRADE - PACK B

1. Identification of the substance/preparation and company.

Product Name	:	Epoxy Coating Flexible Grade - Pack B
Product Code	:	ECFG/B
Product Type	:	Epoxy Resin Curing Agent
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

Human health hazards	:	Harmful by inhalation and if swallowed.(R20/22). May cause sensitisation by skin contact (R43). In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. (S26) Wear suitable gloves and eye/ face protection.(S37/39)
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) prolonged effects of	:	Repeated and/or prolonged exposure may cause allergic reaction/sensitization. Repeated and/or exposure may result in: adverse eye effects (such as conjunctivitis or corneal damage), adverse skin (such as defatting, rash or irritation), adverse skin effects (such as rash, irritation or corrosion). Dryness 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	>30
1761-71-3	Methylenebiscyclohexanamine, 4.4'-	>2
135108-88-2	Formaldehyde, polymer with benzeneamine Hydrogenerated	>45
	Organic Acid	>5

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	:	Wash affected area with mild soap and water. Remove contaminated clothing and shoes. Destroy contaminated leather apparel. Launder contaminated clothing prior to reuse.
Eye contamination	:	Rinse immediately with plenty of water.
Ingestion vomiting	:	If swallowed call a physician immediately. Remove stomach contents by gastric suction or induce only as directed by medical personnel. Never give anything by mouth to an unconscious person.

5.Fire-fighting Measures

Suitable extinguishing media small	:	Ignition will give rise to a class B fire. In case of large fire use: water spray, alcohol foam. In case of fires 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 appropriate with	:	If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an chemical waste container. Transfer to containers by suction, preparatory for later disposal. Flush area 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 trauck.

7. Handling and Storage

Handling	:	Avoid contact with skin, eyes. When handling, do not eat, drink or smoke.
Storage	:	Keep away from: acids, alkalis, oxidizers. 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 and 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	:	Liquid
Colour	:	Amber
Odour	:	Ammoniacal
pH	:	Alkaline
Density	:	1060 kg/m³ @ 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, Phosphuric, 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. 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 acid 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 : 1200 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

HARMFUL

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

Date Issued	:	06.01.2015
Reference	:	SDS/ ECFG/B/06
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.