

# MATERIAL SAFETY DATA SHEET

## GROUT HV - PACK A

### **1. Identification of the substance/preparation and company.**

Product Name : Epoxy Products Grout HV  
Product Type : Epoxy Resin  
Application : Epoxy resin grout for anchoring bolts.  
Supplier: Emergency Telephone Number: (01202) 891899  
Epoxy Products Limited, 7 Haviland Rd, Ferndown Industrial Estate, Wimborne, Dorset BH21 7RZ

### **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

Dangerous components/constituents

<u>CAS/Registry No.</u>	<u>Material Description</u>	<u>% Content</u>
25068-38-6	*4,4'-ISOPROPYLDINENEDIPHENOL-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	50-70

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	25-35
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### **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	: 1.12 kg/m <sup>3</sup> @ 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 bio accumulate.
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 rinsings 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**



**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	: 03.05.2008
Reference	: SDS/ GHV/A/03
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 GROUT HV - PACK B

### 1. Identification of the substance/preparation and company.

Product Name : Epoxy Products Epoxy Grout HV (Hardener - Pack B)  
 Product Type : Epoxy Resin Curing Agent  
 Application : Anchor Bolt Fixing Grout  
 Supplier: Emergency Telephone Number: (01202) 891899  
 Epoxy Products Limited, Unit 7 Haviland Rd, Ferndown Industrial Estate, Wimborne, Dorset. BH21 7RZ

### 2. Hazards Identification

**Classification:** **Xn Harmful**  
 R20/22 Harmful by inhalation and if swallowed  
 R52/53 Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment.  
 R41 Risk of serious damage to eyes.

#### Emergency Overview

Components of the product may effect the nervous system

Severe eye irritant  
 Mild skin irritant  
 Risk of serious damage to eyes  
 Harmful if swallowed  
 Harmful in contact with skin

#### Potential Health Effects

Inhalation	May cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. Severe cases of overexposure can result in respiratory failure.
Eye Contact	Severe eye irritation
Skin Contact	If absorbed through the skin, may cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. Mild skin irritation. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Harmful in contact with skin.
Ingestion	Harmful if swallowed
Chronic Health Hazard	This product contains no listed carcinogens according to Directive 67/548/EEC, IARC, ACGIH and/or NTP in concentrations of 0.1% or greater.
Aggravated Medical Condition	Neurological disorders. Eye disease Skin disorders and allergies
Target Organs	Eyes Central nervous system

### 3. Composition/Information on Ingredients

Substance/Preparation	Preparation			
<u>Components</u>	<u>EIINECS / ELINCS Number</u>	<u>CAS Number</u>	<u>Concentration</u>	<u>Classification</u>
4,4'-Methylenebis (cyclohexylamine)	217-168-8	1761-71-3	<5%	C; N R53,R51,R35; R22
Benzyl Alcohol	202-859-9	100-51-6	>45%	Xn; R20/22
Methyleneoxide, polymer with Benzenamine, hydrogenated		135108=88-2	30% - 60%	C ; R34;R22

Chemical Family Cycloaliphatic Amine

### 4. first-aid Measures

General Advice	Seek medical advice. If breathing has stopped or is laboured, give assisted respirations. Supplemental oxygen maybe indicated. If the heart has stopped trained personnel should begin cardiopulmonary resuscitation immediately.
Eye Contact	Rinse immediately with plenty of water also under the eyelids for at least 20 minutes. Remove contact lenses.
Skin Contact	Wash off immediately with plenty of water for at least 20 minutes. Wash off with soap and water. Immediately remove contaminated clothing and any extraneous chemical, if possible to do so without delay.
Ingestion	Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victims head to the side.
Inhalation	Move to fresh air

### 5. Fire-fighting Measures

#### Suitable Extinguishing Media

Alcohol resistant foam.  
 Carbon dioxide (CO2)  
 Dry chemical  
 Dry sand  
 Limestone powder

#### Specific Hazards

Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gases. Burning produces noxious and toxic fumes. Downwind personnel must be evacuated.

#### Special protective equipment for fire fighters

Avoid contact with the skin. Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

## **6. Accidental Release Measures**

Personal precautions	Wear suitable protective clothing, gloves and eye/face protection. Use self contained breathing apparatus and chemically protective clothing. Evacuate personnel to safe areas.
Environmental precautions	Construct a dike to prevent spreading
Methods of cleaning up	Approach suspected leak areas with caution. Place in appropriate chemical waste container.
Additional advice	If possible, stop flow of product.

## **7. Handling and Storage**

Handling	Emergency showers and eye wash stations should be readily available. Adhere to work practise rules established by government regulations. Avoid contact with eyes. Use personal protective equipment. When using, do not eat, drink or smoke
Storage	Keep away from acids and alkalis. Keep containers tightly closed in a dry, cool place.

## **8. Exposure Controls/Personal Protection**

### **Engineering measures**

Provide readily accessible eye wash stations and safety showers

Provide ventilation to ensure concentrations are kept below exposure limits.

### **Personal Protective Equipment**

Hand Protection	: Butyl rubber, Nitrile rubber, Neoprene gloves, PVC disposable gloves or impervious gloves
Eye Protection	: Chemically resistant eye goggles must be worn
Skin and body protection	: Long sleeved overalls must be worn.
Environmental exposure controls	: Construct a dike to prevent spreading
Special instructions for protection	: Discard contaminated clothing. Provide readily accessible eye wash stations and safety showers. Wash at the end of the workshift and before eating, smoking or using the toilet.

## **9. Physical and Chemical Properties**

Form	: Liquid
Colour	: Amber
Odour	: Ammoniacal
pH	: Alkaline
Boiling Point/Range	: 222 <sup>o</sup> C (432F)
Flash Point	: 103 <sup>o</sup> C (219F) (Closed Cup Method)
Flammability	: Not applicable
Auto-ignition Temperature	: No data
Explosive Limits	: No data
Vapour Pressure	: 0.70 mmHG @ 21 <sup>o</sup> C (70 <sup>o</sup> F)
Relative Density	: 1.06
Water Solubility	: Slightly

## **10. Stability and Reactivity**

### **Stability**

Stable under normal conditions

### **Materials To Avoid**

Amines. Incompatible with bases. Reducing agents. Reactive metals (e.g. sodium, calcium, zinc etc.). Materials reactive with hydroxyl compounds.

Caution : N-Nitrosamines, many of which are known to be potent carcinogens, maybe formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. Nitrous acid and other nitrosating agents. Organic acids (i.e. acetic acid, citric acid etc.) Mineral acids, sodium hypochlorite. Product slowly corrodes copper. Aluminium, zinc and galvanised surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.

### **HAZARDOUS DECOMPOSITION PRODUCTS**

Ammonia. Nitric acid. Nitrogen oxides Carbon monoxide. Carbon dioxide. Aldehydes. Flammable hydrocarbon fragments. Nitrosamine. Organic vapours

## **11. Toxicological Information**

### **Acute Health Hazard**

Ingestion	LD50 : 1,200mg/kg (species : rat)
Inhalation	No data is available on the product itself.
Inhalation – Components	
Benzyl alcohol	LC50 (4 hours) : 4.178mg.IOECD Test Guideline 403 (species : rat)
Skin	No data is available on the product itself.
Skin – Components	
4,4'-Methylenebis (cyclohexylamine)	LD50 : 2,110mg/kg (species : rabbit)
Benzyl Alcohol	LD50 : 2,000mg/kg (species : rabbit)
Methyleneoxide, polymer with	LD50 : 1,000mg/kg (species : rabbit)
Benzenamine, hydrogenated	
Eye irritation/corrosion	Severe eye irritation. Irritation based on estimates
Acute dermal irritation/corrosion	Mild skin irritant to the skin of a rabbit.
Sensitization	May cause sensitization of susceptible persons by skin contact

### **Chronic Health Hazard**

In vitro tests have shown mutagenic effects on bacterial cultures. The product or a component maybe mutagenic, the data is inconclusive. A component has shown to cause reproductive/teratogenic effects in laboratory animals. Mixed polycycloaliphatic amines were tested in rats for systemic effects in a subchronic (28 day) oral study at doses ranging from 15 to 300 mg/kg/day. Effects seen at 300mg/kg/day included decreased survival, decreased body weight gain, increased liver, kidney and adrenal weights and historical changes in the liver, kidney, adrenals and spleen. The No –Observed-Adverse-Effect-Level (NOAEL) was 15mg/kg/day.

Rats exposed orally to 800mg/kg benzyl alcohol for 13 weeks exhibited CNS depression and histopathological changes in the brain, thymus and skeletal muscles. The No –Observed-Adverse-Effect-Level (NOAEL) was 400mg/kg.

No evidence of carcinogenicity was seen in a two year study with rats and mice.

## **12. Ecological Information**

### Ecotoxicity effects

Aquatic toxicity No data is available on the product itself.

Toxicity to fish- Components

4,4'-Methylenebis (cyclohexylamine)	LC50 (96 Hours)	46 – 100mg/l	species : Golden Orfe (Leuciscus idus)
Benzyl Alcohol	LC50 (96 Hours)	10mg/l	species : Blue Gill Sunfish (Lepomis macrochirus)
Benzyl Alcohol	LC50 (96 Hours)	460mg/l	species : Fathead Minnow (Pimephales promelas)

Toxicity to daphnia- Components

4,4'-Methylenebis (cyclohexylamine)	EC50 (48 Hours)	6.84mg/l	species : Daphnia magna)
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Toxicity to algae- Components

4,4'-Methylenebis (cyclohexylamine)	EC50 (72 Hours)	140 -200mg/l	species : Algae
Benzyl Alcohol	IC50 (72 Hours)	700mg/l	species : Algae

### Persistence and Degradability

Mobility

No data available

Bioaccumulation

No data is available on the product itself.

Bioaccumulation – Components

Benzyl alcohol

Low bioaccumulation potential

Methyleneoxide, polymer with

Does not bioaccumulate

Benzenamine, hydrogenated

## **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	:	Not dangerous goods
IATA	:	Not dangerous goods
IMDG	:	Not dangerous goods
RID	:	Not dangerous goods

## **15.Regulatory Information**



**HARMFUL**

Hazard Symbol	:	Xn. Harmful
Risk phrases	:	R20/22 Harmful by inhalation and if swallowed. R52/53 Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment R41 Risk of serious damage to eyes
Safety phrases	:	S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39 Wear suitable protective clothing, gloves and eye/ face protection. S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible) S60 This material and its container must be disposed of as hazardous waste

## **16. Other Information**

Date Issued	:	06.01.2010
Reference	:	SD/ EGHV/B/04
Intended Use	:	Epoxy Resin Curing Agent
Product Code	:	Epoxy Products Epoxy Grout HV (Pack B - Hardener)

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