



# Material Safety Data Sheet

## Liquid Epoxy Damp Proof Membrane

### 1. Identification of Substance / Preparation and Company.

**Product Name :** Liquid Epoxy Damp Proof Membrane

**Company :** Permagard Products Limited  
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Avonmouth  
Bristol  
BS11 0YB

**Telephone :** 0117 9381596  
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### 2. Composition / Information on Ingredients.

**Description :** A two pack epoxy system comprising of a base and a hardener which are supplied in separate containers to be mixed at the site of application.

Hazardous Ingredients	CAS No.	% Range	Hazard	Risk No.
Composition of base				
Epoxy Resin	25068-38-6	40-60%	Xi	R36,38,43,51,53
Epoxy Resin	28064-14-4	15-25%	Xi	R36,38,43
Composition of hardener				
Polymide Polymer	135108-88-2	20-40%	C	R22,34
Benzyl Alcohol	100-51-6	10-25%	Xn	R20,22
369 Triazaundecamethylenediamine	112-57-2	5-15%	C,N	R21,22,34,43,51,53
N AEP	140-31-8	<5	C	R37,41,43,62
Bis phenol A	80-05-7	<5	Xn	R37,41,43,62
Amines		<2	C	R10,21,22,34,43

### 3. Hazards Identification.

**Base:** Irritating to eyes and skin.  
Dangerous to the environment  
May cause sensitisation by skin contact.  
Toxic to aquatic organisms.  
May cause long-term adverse effects in the aquatic environment.

**Hardener:** Corrosive.  
Causes burns.  
Harmful by inhalation, in contact with skin, and if swallowed.  
Irritating to eyes and skin.  
May cause sensitisation by skin contact.

### 4. First Aid Measures.

**Eye contact:** Hold eyelids apart and rinse immediately with water, continuing for at least 15 minutes. Seek medical attention immediately.

**Skin contact:** Wipe off mechanically and wash with plenty of soap and water, continuing for at least 15 minutes. Remove contaminated clothing. Cover the affected

area with a sterile dressing but do not apply greases or ointments. Seek medical attention.

**Inhalation:** Remove the affected person to fresh air. If breathing has stopped or is laboured, give artificial respiration (eg mouth-to-mouth) and oxygen if available. Seek medical attention.

**Ingestion:** If swallowed, do not induce vomiting. Give large quantities of water. Seek medical attention immediately.

## 5. Fire Fighting Measures.

**Special hazards:** If involved in a fire, may generate noxious or toxic vapours.

**Protective equipment:** Fire fighters wear self contained breathing apparatus.

**Extinguishing agents:** Foam, dry powder, CO<sub>2</sub> or waterspray.

## 6. Accidental Release Measures.

**Personal precautions:** Wear full protective clothing when dealing with a spillage.

**Environmental precautions:** Prevent from entering sewer system, surface water, or soil.

**Methods for cleaning up:** Absorb with earth, sand or other absorbent materials.

**Disposal:** See section 13.

## 7. Handling and Storage.

Wear goggles or a face shield, impervious gloves and protective clothing.

Keep out of the reach of children.

Keep away from food, drink and animal feedstuffs.

Avoid contact with skin.

Avoid contact with eyes.

Do not empty into drains.

This material and its container must be disposed of in a safe way.

## 8. Exposure Controls / Personal Protection.

Always consult the label before use.

Gloves Impervious, recommended.

Eye / Face Protection Safety goggles recommended.

Protective Clothing Coveralls recommended.

## 9. Physical and Chemical Properties.

**Base:**

Physical state:	clear liquid.
Colour:	pale yellow.
Odour:	weak odour.
Vapour pressure:	<0.01 kPa at 20 °C.
Boiling point:	>150 °C.
Flash point:	>100 °C.
Density:	about 1.15 g/cm <sup>3</sup> at 20 °C.
Solubility:	immiscible with water.
Viscosity:	<1 Pa.s at 25 °C.

**Hardener:**

Physical state:	free-flowing liquid.
Colour:	pale yellow.
Odour:	ammoniacal, irritating.
Vapour pressure:	no data.

Boiling point:	>100 °C.
Flash point:	>76 °C.
Density:	about 1.0 g/cm <sup>3</sup> at 20 °C.
Solubility:	partially miscible with water.
Viscosity:	<1 Pa.s at 25 °C.

## 10. Stability and Reactivity.

<b>Base:</b>	May react exothermally with amines and mercaptans, also with acids. In case of a fire, carbon monoxide carbon dioxide and other harmful gases may be formed.
<b>Hardener:</b>	Reacts exothermally with acids. Liberates ammonia when heated. In case of a fire, toxic fumes of nitrogen oxides, amines and carbon monoxide may be formed. Nitrogen oxide can react with water vapours to form corrosive nitric acid.

## 11. Toxicological Information.

<b>Base:</b>	LD50 oral, rat: >5000 mg/kg. Epoxy resins such as contained in this product have been shown to cause irritation in humans on skin and eyes. Sensitisation by skin contact may also occur.
<b>Hardener:</b>	LD50 oral, rat: >5 ml/kg. The amine/diamine constituents of this product are irritant to skin and mucous membranes, irritant to eyes, and may cause sensitisation.

This product has not been tested. The data has been calculated using data from the individual components.

## 12. Ecological Information.

<b>Environmental precautions:</b>	Prevent from entering sewer system, surface water, or soil. Epoxy resins such as contained in this product have been shown to be toxic to fish and are not readily biodegradable.
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## 13. Disposal Considerations.

Care should be taken to ensure that all containers are properly and thoroughly cleaned prior to disposal to minimize risk of environmental pollution. Check with local / national waste disposal regulations and Local authorities with regard to acceptable routes for disposal. Do not reuse containers.

## 14. Transport Information.

<b>Base:</b>	Irritant. Contains epoxy constituents, see information supplied by the manufacturer.
ADR Class:	9
IMO, IATA:	Non classifiable.
UN No:	3082 environmentally hazardous substance , liquid n.o.s..
<b>Hardener:</b>	Amines, Liquid, Corrosive NOS*
Packaging group III	
ADR/RID Class:	8
IMDG Class:	8
ICAO/IATA Class:	8
UN No:	2735

## 15. Regulatory Information.

<b>Base:</b>	
<b>Hazard Symbols :</b>	<b>Xi IRRITANT, N DANGEROUS FOR THE ENVIRONMENT.</b>

**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 :** 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.  
S36 Wear suitable protective clothing.  
S61 Avoid release to the environment. Refer to special instructions/safety data sheet.

**Hardener:**  
**Hazard Symbols:** **C CORROSIVE, Xn HARMFUL**

**Risk Phrases:** R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
R34 Causes burns.  
R43 May cause sensitisation by skin contact.  
R50 Toxic to aquatic organisms.  
R53 May cause long-term adverse effects in aquatic environments.  
R62 possible risk of impaired fertility

**Safety Phrases:** S23 Do not breathe vapour/spray.  
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.  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
S61 Avoid release to the environment. Refer to special instructions/safety data sheet.

## 16. Other Information.

Liquid epoxy resins are classified as dangerous to the environment under a voluntary agreement by the Association of Plastic Manufacturers Europe (APME) based on available data. Resin Surfaces Limited have adopted this practice as part of their duty of care under the Environmental Protection Act 1992.

The base and hardener are mixed together in the approximate ratio as follows:

base: 60-70 % by weight

hardener: 30-40 % by weight

All the foregoing information should be regarded as being applicable to the finished product as well as to the individual base and hardener components.

### Note

R 62 Possible risk of impaired fertility statement will be required for all materials containing Bis Phenol A as a reactant, due to the possible presence of the monomer in the reaction product, at this time it has been included on the label, but may be removed following full calculation, as a result of the low level in the overall formulation.

**Legal Disclaimer :** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.