

• DESCRIPTION

Polypoxy MH is a three-component solvent free, thixotropic lining and benching mortar for the protection of concrete. It is based on a blend of epoxy resins and selected quartz aggregates. The cured render exhibits very high impact and chemical resistance.

• USES

Polypoxy MH can be used in a number of different applications:

- As a chemical resistant internal lining and benching mortar for concrete structures such as manholes, sewerage tanks and drainage canals etc.
- As repair mortar for concrete joints, edges and soffits.
- For repair of cavities and honeycombs in concrete columns and structures.
- As repair and bonding mortar on stone, bricks, concrete pre-cast blocks, steel etc.
- As an abrasion and impact resistant wearing course.

• ADVANTAGES

- Highly resistant to a wide range of chemicals, acids and alkalis.
- High impact and abrasion resistance.
- Can be used in both dry and damp conditions.
- Is thixotropic, hence can be applied vertically up to 10mm in a single application. A higher build up thickness may be applied in the second coat.
- High humidity does not affect curing.
- Shrinkage free hardening.
- Increased water impermeability.
- Odourless. Can be used in enclosed applications.
- Non-toxic. Can be used in contact with potable water.
- Easy to use. Pre-weighed packs. Requires only on site mixing.

• TECHNICAL PROPERTIES

Compressive Strength (BS 6319: Part 2) (ASTM C 579)	: 24 hrs.	7 days.
	30 N/mm ²	> 60 N/mm ²
Flexural Strength (BS 6319:Part3)(ASTM C580):	> 16 N/mm ²	
Tensile Strength (BS 6319:Part3)(ASTM C307):	> 13 N/mm ²	
Pot Life	: 25° C	35° C
	90 mins.	60 mins.
Initial Cure	: 25° C	35° C
	24 hrs.	16 hrs.
Full Cure	: 25° C	35° C
	7 days.	4 days.
Bond Strength (Slant Shear)-Concrete (BS 6319: Part 4 - Steel	: > 22 N/mm ²	
	: 15 N/mm ²	
Linear Shrinkage (ASTM C-413)	: None	
Density	2.0 g/cc (Mixed Mortar)	
Water absorption (ASTM C-413)	: < 0.7%	
Application Temperature	: 10° C - 45° C	
Service Temperature	: 10° C - 70° C	

CHEMICAL RESISTANCE

Hydro Chloric Acid (20%)	: Excellent
Tartaric Acid (10%)	: Excellent
Sodium Hydroxide (50%)	: Excellent
Sulphuric Acid (10%)	: Very Good
Diesel/Petrol	: Excellent
Lactic Acid (10%)	: Very Good
Hydrocarbon (100%)	: Very Good
Nitric Acid (20%)	: Very Good
Nitric Acid (20%)	: Very Good

• APPLICATION PROCEDURE

Surface Preparation

The concrete surface should thoroughly be clean of all loosely adhering particles. Water jet blasting, sand or grit blasting is recommended for proper cleaning and removal of all deleterious materials. Traces of oil, grease or curing compounds must be removed. Cracks and pot holes are to be repaired with **Polycrete** repair mortars. Water leakages if any, are to be plugged with a quick setting mortar.

Priming

All surfaces are to be primed with **Polyprime EP** (Epoxy primer). The primer is to be properly applied on all the irregular surfaces on the concrete. On highly absorbent surfaces a second coat of primer is to be given. The epoxy render is to be applied when the primer coat is still tacky. Depending on the ambient temperature if the primer dries off fast, another coat is to be given prior to the application of the epoxy mortar. The pot life of the primer is about 30 minutes to three hours depending on the temperature. It is recommended to mix the primer for that area only on which it can be applied. The coverage rate is around 4-5 m²/lt depending on the porosity of the substrate.

Mixing

Pour the entire contents of Part B (Hardener) into Part A (Base) and mix thoroughly for a few minutes with a paddle mixer fitted to a slow speed drill to get a homogenous mix. Then add the Part C (Powder) slowly into the mixed resins container and further mix continuously until a uniform consistency is achieved. Since the products are supplied in pre-weighed packs, part mixing is not at all recommended, as the cured product will not achieve its full properties even if there is a small variation in the mixing proportions.

Application

Apply the mixed mortar immediately after mixing, with a steel trowel or spatula. For vertical and overhead surfaces the mortar is to be applied at a maximum thickness of 10mm to avoid sagging. However, for additional build ups, the epoxy mortar can be applied at thicknesses up to 30mm in the second layer. The second layer of application is to be done only after the first coat has achieved its initial cure i.e., after 24 hours of application. If a further layer is to be applied then the surface is to be cross-hatched to get the mechanical key when the render is still wet. Further priming is required if the second layer is to be applied after a period of 36 hours of application of the first layer.

Curing

The applied material will achieve its full cure after seven days of application.

• COVERAGE

Polyoxy MH : 2 kg/m²/mm thickness.

Polyprime EP : 4-5 m²/lt

• CLEANING

Clean all tools with a solvent immediately after use. Hardened materials can be removed mechanically only.

• PACKING

Polyoxy MH : 10 lt kit.

Polyprime EP : 1 and 5 lt kit.

• STORAGE & SHELF LIFE

Polyoxy MH resin components A and B should be stored in an air-conditioned location at below 25°C. The filler component can be stored under cover in shaded area.

The shelf life is 12 months in unopened conditions if stored as per recommendations.

• HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, instead call for medical assistance immediately

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The information given in this data sheet is based on our current knowledge of the product when properly stored, handled and applied. We cannot guarantee that the product will be suitable, effective or safe when used for any purpose other than its stated uses.
To the extent that it is lawful, we exclude warranties implied by law and limit our liability to the cost of replacing the product. We accept no responsibility for loss or injury caused by improper use, incompetent preparation, inexpert or negligent application, or ordinary wear and tear.
Service or advice given by our staff should not amount to responsibility for the project - since the owner, or their contractor is responsible for procedures relating to the application of the product.

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