

Polypoxy MH

Epoxy resin based lining and benching mortar
for protection of concrete.



CHARACTERISTICS

- ▶ 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



DESCRIPTION

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

FIELDS OF APPLICATION

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

APPLICATION INSTRUCTIONS

Surface preparation

The concrete surface should thoroughly be cleaned of all loosely adhering particles. Water jet blasting, sand or grit blasting is recommended for proper cleaning and removal



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of all deleterious materials. Traces of oil grease or curing compound is to be removed. Cracks and pot holes shall be repaired with a suitable repair mortar. Water leakages if any are to be plugged with a quick setting mortar.

Priming

All surfaces shall 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 shall be applied when the primer coat is still tacky. Depending on the ambient temperature if the primer dries off fast, another coat shall be given prior to the application of the epoxy mortar. The pot life of the primer is about 30 minutes to 3 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 3-5 m²/L 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 mixed continuously till a uniform consistency is achieved. As the products are supplied in

pre-weighed packs, part mixing is not at all recommended, since 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 on the tacky primed surface firmly 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 shall 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 properties after 7 days of application.

CLEANING

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

STORAGE & SHELF LIFE

Polypoxy MH resin components A & B should be stored in an air-conditioned location at below 25°C. 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, but call for medical assistance immediately.

COVERAGE

Polypoxy MH	2kg/m ² /mm thickness
Polyprime EP	3-5 m ² /L

CHEMICAL RESISTANCE

HCL [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

TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Mixed density, [g/cc]	2.0±0.05 (mixed mortar)	-
Application life, [minutes]	> 60	-
Compressive strength @7 days, [N/mm ²]	> 60	ASTM C 579
Flexural strength@7days, [N/mm ²]	> 15	ASTM C 580
Tensile strength @7 days, [N/mm ²]	> 15	ASTM C 307
Slant shear bond strength @7 days, [N/mm ²]	> 30	ASTM C 882
Water absorption, [%]	< 0.1	ASTM C 413
Initial cure, [hours]	24	
Full cure, [days]	7	
Application temperature, [°C]	5 to 35	
Service temperature, [°C]	5 to 70	

All values given are subject to 5-10% tolerance

SUPPLY

Polypoxy MH	10L kit
Polyprime EP	5L & 15L kit
Polysolvent	5L & 20L pails

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

