

Cipoxy 90

Low viscous, high strength epoxy system for screed

TYPE 6 EFNARC GUIDELINE

SCREED FLOORING

Description

Cipoxy 90, a solvent free, low viscous, two component epoxy, is recommended as high strength screed for concrete and masonry substrates. It is used as self levelling screed for high build and high strength flooring systems. Being low viscous, higher filler loading can yield economic mix.

Uses

- Cipoxy 90 is used as self levelling screed over which Cipoxy and Cipothane range of floor toppings are laid
- It is not recommended to use Cipoxy 90 as primer

Key features

- Very low viscous
- Excellent compressive strength
- Fast setting
- Higher filler loading

Properties

Type	: Epoxy-polyamine	Mixing ratio Resin to Hardener	: 2 : 1 by volume
Colour	: Brownish yellow	Density of the mix screed Liquid : Aggregate (1 : 2.5)	: 1.83 gm / cc
Pot life @ 27°C ASTM D 2471	: ≥ 2 hrs	Application	: By trowel
Drying time ASTM D 1640		Overcoat interval Over primer application Over screed application	: Maximum 24 hours : Maximum 7 days
Surface dry	: ≥ 2 hrs	Shelf life	: 12 months in the unopened container
Tack free dry	: ≥ 8 hrs	Recommended thinner	: PUT 502 (Clean up)
Hard dry	: ≥ 24 hrs		

Performance data

The mandatory performance parameters as per FeFRA and EFNARC guidelines for resin flooring system

Pull of adhesion test ASTM D 7234-2022	: ≥ 2 MPa for M20 grade concrete or Concrete failure
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Other mechanical properties

Tensile strength ASTM D 638	: 14 MPa
Flexural strength ASTM D 790	: 21.5 MPa

Note : The typical physical properties given above are derived from testing in a controlled laboratory environment. Results derived from testing field-applied samples may vary, dependent on actual site conditions

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Application instructions

Surface preparation

The long-term durability of the applied CIPOXY 90 coating is dependent upon the adhesive bond achieved between the flooring material and substrate. It is most important therefore, that substrate surfaces are correctly prepared prior to application. Ensure that the residual moisture level in the concrete is below 5%. All substrates should be sound and free from contamination such as mortar and paint splashes, curing compound residue, oil, or grease. Excessive laitance should be removed by light mechanical scrubbing, grinding or grit blasting. Oil and grease contamination must be completely removed by grinding down to sound, clean concrete. Alternatively, blasting techniques can be used to provide the required substrate.

Primer

Cipoxy 17 / 18 Resin and Cipoxy 17 / 18 Hardener is supplied separately in 20 lts packing. Mix Resin and Hardener in equal proportions. Solvent or thinners should not be added. A forced action mixer with a paddle fitted into a heavy duty, slow speed electric hand drill is recommended for mixing. The material is poured onto the prepared substrate and spread to the required thickness with a roller. Allow to cure overnight. Porous floors may require two coats of primer. Overcoating window time should not exceed 24 hours. In case overcoating window exceeds 24 hours, recoating of primer is necessary.

Mixing & Application

Mix CIPOXY 90 Resin and Hardener in 2:1 ratio by volume, mix formulated aggregates like FQ 200, 250, or 300 in recommended ratio as per the screed thickness of 3mm to 5mm. Solvent or thinners should not be added. A forced action mixer with a paddle fitted into a heavy duty, slow speed electric hand drill is recommended for mixing. The material is poured onto the primed substrate and spread to the required thickness with a roller. Allow to cure overnight. In case over coating window exceeds 48 hours, light mechanical abrading to be done on the screed surface before overlaying with subsequent topping. If the over coating window on top of screed exceeds 7 days, light abrading the screed surface and priming is essential.

Packaging & Theoretical coverage

Cipoxy 17 / 18 - Primer	: Resin and Hardener available in 20 litre packing each	1 litre (Resin + Hardener) covers 5 sqm @ 200 microns
Cipoxy 90 - Screed	: Resin and Hardener available in 20 litre packing Aggregate available in 25 kg packing	: 1.05 litre of Cipoxy 90 mixed with 2.625 kgs of FQ 200 will cover an area of 1 sqm at 2mm

Storage and handling

The product should be stored in accordance with national regulations. It should be kept in a cool, well ventilated area, away from heat, direct sunlight, sparks and children. Handle with care. Mix resin and hardener as per the ratio. Use the mix solution within the pot life time.

Health and safety precautions

Please refer to MSDS. Observe reasonable care and employ ordinary hygienic principles such as washing the hands with soap and water before eating or smoking. It is recommended to wear gloves, goggles and nose masks while application. In case of splashes on the skin, dampen the cloth with thinner PUT 503 and wipe the hands with the cloth. Wash then with soap and water. Dried film is non toxic. In case of contact with eyes, rinse with plenty of water and seek medical advice. In case of continuous exposure to vapours, the applicator should be immediately moved to get fresh air. The disposal of excess or waste material should be carried out in accordance with the local legislations.

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Limitations

It is not compatible for application over asphalt, unmodified sand-cement screed or PVC tiles and sheets. Cipoxy 90 coated floor will be scratched due to nails or sharp objects protruding from machinery, packings, or trolleys moving on the floor. Presence of sand will also cause abrasion. The product is not advised to be applied below 15°C as the flow reduces. While applying the product above 35°C, there can be a problem of low pot life etc., and it will be difficult to apply the material. Cured product is not suitable for exposure to sub-zero temperatures and above 65°C.

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