

Cipocem 3K

Epoxy Cementitious based underlay

Description

Moisture continues to create application and performance difficulties for concrete floor coatings. The residual moisture present in the concrete, greater than the allowable limits, is the major cause for a large percentage of the coating failures on concrete. Blister formation is a common mode of failure for conventional solvent free epoxy or PU coatings. This problem is caused by a build up of osmotic pressure within the concrete substrate. Cipocem 3K is a water dispersible epoxy resin enriched cementitious self levelling underlay. The excess water available in the concrete substrate is consumed by the cement component in Cipocem 3K and so it can be applied on damp, green concrete.



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Uses

Cipocem 3K is used as underlay over which regular SL / SF system is applied

Key features

- Solvent free
- Excellent adhesion on damp surfaces
- Applied at 2mm thickness and above.

Properties

Type	: Water dispersible epoxy amine based	Mixing ratio	: Pre-weighed packs
Finish	: Smooth	Solids content by weight ASTM D 2369	: 98%
Drying time ASTM D 1640		Application	: By Notch trowel
Surface dry	: ≥ 1.30 hrs	Potlife at 27°C ASTM D 2471	: 1 hr 20 minutes
Tack free dry	: ≥ 6.30 hrs		
Hard dry	: ≥ 24 hrs		
Recommended thinner	: Water (Clean up)	Shelf life	: 12 months in the unopened container

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 / Concrete failure
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Other mechanical properties

Flexural strength ASTM D 790-2017	: 11 MPa
Tensile strength ASTM D 638	: 3.5 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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Directions to use :

Surface preparation: The long-term durability of the applied Cipocem 3K 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.

Priming :

Prepared substrates to be treated with Cipocem 3K coating, should be primed with Aquoxy 50 primer should be mixed in the proportions supplied by adding the entire contents of hardener can to the base can. Once mixed the Aquoxy 50 should be immediately applied in a thin, continuous film using stiff brushes or rollers. Over application and puddles should be avoided. Porous floors may require two coats of Aquoxy 50 primer. Aquoxy 50 primer should be allowed to become tack free prior to application. Primer coverage will depend on the texture and porosity of the substrate and also the application thickness. Overcoating window time should not exceed 24 hours. In case overcoating window exceeds 24 hours, recoating of primer is necessary.

Mixing & Application

Cipocem 3 K is supplied in pre-weighed packs ready to use on site. Solvent, thinners or water 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 tacky substrate and spread to the required thickness with a notched trowel. Deaerate the layer by a spike roller and allow to cure for 24 hours.

Packaging

Cipocem 3K is available in 22.5 kg packings and has a maximum shelf life of 6 months in the un-opened containers. It should be stored in a cool place, away from direct sun light and rains.

Theoretical Coverage

1 set of 22.5 would consist of :

- 3.5 kgs Resin,
- 1 kg Hardener
- 18 kgs of aggregates

The above set would give a coverage as follows : **NO ADDITION OF WATER.**

- 5 sq mt @ 2.0 mm thickness
- 4 sq mt @ 2.5 mm thickness
- 3 sq mt @ 3.0 mm thickness

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. Ideal temperature for storage of the material is 25°C to 30°C, in a covered shed.

Health and safety precautions

Cipocem does not fall into the hazard classifications of current regulations. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. For further information refer to the Material Safety Data Sheet available for this product.

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Limitations

Self-smoothing is a term used in the flooring industry to describe a composition which after being spread to a uniform layer of appropriate thickness, develops a smooth, resin-rich surface. This self-smoothing action is very localized and does not eradicate irregularities of level present in the original substrate. It is most important, therefore, that adequate surface preparation and repair is undertaken prior to application. It is not compatible for application over asphalt, unmodified sand-cement screeds or PVC tiles and sheets. Cipocem 3K coating laid 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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