

# 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. When moisture in the concrete migrates to the surface or tries to escape after the coating is applied, it will cause bubbling. This is called out-gassing and occurs as the concrete is warming. This vapour drive force, known as osmotic pressure, is very strong and can exceed the adhesion strength of the coating.

Cipocem 3K is a water soluble epoxy resin enriched cementitious self levelling under lay. 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.

### Uses

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

### Key features

- Higher compressive strength than concrete
- Solvent free
- Excellent adhesion on damp surfaces
- Applied at 2mm thickness and above



**Certified**

### Properties

|                            |                                     |   |                                       |
|----------------------------|-------------------------------------|---|---------------------------------------|
| Type                       | : Water based cementitious underlay | Mixing ratio                            | : Pre-weighed packs                   |
| Finish                     | : Smooth                            | Solids content by weight<br>ASTM D 2369 | : 98%                                 |
| Drying time<br>ASTM D 1640 |                                     | Application                             | : By Notch trowel                     |
| Surface dry                | : ≥ 1.30 hrs                        | Potlife at 27°C<br>ASTM D 2471          | : 80 minutes                          |
| Tack free dry              | : ≥ 6.30 hrs                        |   |                                       |
| Hard dry                   | : ≥ 24 hrs                          |   |                                       |
| Recommended thinner        | : PUT 502 (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<br>ASTM D 7234-2022 | : ≥ 2 MPa for M20 grade concrete / Concrete failure |
|---|---|

### Other mechanical properties

|                                      |           |
|--------------------------------------|-----------|
| Flexural strength<br>ASTM D 790-2017 | : 11 MPa  |
| Water absorption<br>ASTM D 570       | : 5.54%   |
| Tensile strength<br>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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### 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

### Mixing & Application

Cipocem 3 K is supplied in pre-weighed packs ready to use on site. 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 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 12 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

### 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.

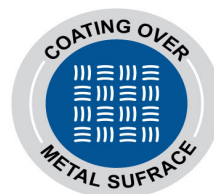
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