

Floorscreed

3 component Epoxy cementitious concrete

Description

Floor screed is a three-component water dispersible epoxy modified cementitious, fine textured mortar for selfsmoothing floor screeds in thin layers of 1.5 to 5 mm.

Uses

Floor screed is used as a self-smoothing underlay for levelling or patching horizontal concrete surfaces for new work or repairs. It's resistant to aggressive chemical environments over which regular floor coatings, tiles, sheet floors, carpets or wooden floors can be applied. It's a temporary moisture barrier for Epoxy and Polyurethane resin floors, so it can be applied on damp and green concrete.

Key features

- Can be top coated with resin-based floors after 24 hours
- Prevents osmotic blistering of resin-based coatings over damp substrates
- Economical, Good levelling and easy application
- Impervious to liquids but permeable to water vapour
- Excellent bond to green or hardened concrete whether damp or dry
- Excellent early and final mechanical strengths
- Contains no solvents
- Floor screed is used as a self smoothing underlay



Properties

Type	: Epoxy concrete	Mixing ratio	: Pre-weighed packs
Mixed density ASTN D 1475	: 2.15 gm / cc	Application	: By Notch trowel, spike roller
Drying time ASTM D 1640		Recommended DFT ASTM D 7091	: 1.5 mm to 5 mm
Surface dry	: ≥ 40 minutes	Potlife at 27°C ASTM D 2471	: 20 minutes
Tack free dry	: ≥ 4 hrs	Shelf life	: 12 months in the unopened container
Hard dry	: ≥ 24 hrs		
Clean up	: Water		

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 / Concrete failure
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Other mechanical properties

Flexural strength ASTM D 790-2017	: 12 MPa
Tensile strength ASTM D 698	: 3.3 MPa
Moisture vapour transmission ASTM E 96	: 168 g / m ² / 24 hrs
Water absorption ASTM D 570	: 7.77%

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 instruction:

Surface preparation

The long-term durability of the applied Floorscreed 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 Floorscreed coating, should be primed with Aquoxy 50 should be mixed in the proportions supplied by adding the entire contents of hardener can to the base can. Once mixed 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 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. Use Floorscreed to get screed thickness for the system up to 1- 5mm.

Mixing & Application :

Floorscreed 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

1 set of 21.7 kgs would consist of 3 kg Resin, 0.5 kg Hardener & 18.2 kgs of aggregates.

This set would give a coverage as follows -

5 sqm @ 2mm thickness / 4 sqm @ 2.5 mm thickness / 3 sqm @ 3mm thickness.

Storage and handling :

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 lifetime.

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 vapour, 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.

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. Floorscreed 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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Do's

- Clean regularly
- Remove aggressive chemical spillage immediately
- Maintain wheel for proper rolling, should not get dragged. Nylon / teflon wheel trolleys are recommended
- Handle heavy material gently and cautiously
- Immediately clean spillage of any oil or fatty liquid which may cause accident during people's movement

Don't

- Drag any sharp and heavy object. Movement of metal wheel trolley
- Expose to fire or welding spark
- Expose to very high temperature than recommended by Manufacturer
- Drop down any heavy material on the floor
- Expose to highly corrosive chemicals

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