Aquoxy 50

Waterborne epoxy primer

TYPE 1 EFNARC GUIDELINE

FLOOR SEAL

Description

Aquoxy 50 is based on a chemistry where the standard Bisphenol-A type epoxy resin gets emulsified with the addition of a waterborne epoxy polyamine to formulate a water based primer. Aquoxy 50 is a permeable two-component primer recommended for both old and new concrete substrates, because of its excellent adhesion to both dry and damp surfaces. It can be top coated with standard Epoxy and PU coatings.

Uses

- As primer for damp walls and floors
- As prime coat for systems such as Cipocem and Duracrete for porous concrete surfaces, to reduce porostiy.
- Used as prime coat on walls which is top coated with Aquoxy 60

Key features

- Breathable
- Food grade and no odour
- Can be applied on damp surfaces

Certified

Properties

Type	:	Waterborne epoxy polyamine
Finish	:	Glossy, hazy
Pot life @ 27^{0}C ASTM D 2471	:	80-100 minutes
Drying time ASTM D 1640		
Surface dry	:	≥ 2.30 hrs
Tack free dry	:	≥ 7.30 hrs
Hard dry	:	≥ 24 hrs
Recommended thinner	:	PUT 502 (Clean up)
Shelf life	:	12 months in the unopened container

Mixing ratio Resin to Hardener	:	2.5 : 1 by volume
Colour	:	Clear pale yellow
Volume solids ASTM D 2697	:	47%
Recommended DFT ASTM D 7091	:	50 microns
Application	:	By roller / brush
Overcoat interval Over primer application	:	Maximum 24 hours

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 on M20 grade concrete or concrete failure

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 Aquoxy 50 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. 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 scrabbling, 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.

Mixing & Application

Aquoxy 50 Resin and Hardener is supplied seperately in 20 litre packing. Mix resin and hardener in the recommended ratio of 2.5 : 1 by volume. 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 substrate and spread to the required thickness with a painting roller / stiff brushes. Porous floors may require two coats of 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. Incase overcoating window exceeds 24 hours, recoating of primer is necessary.

Packaging & Theoretical coverage

Aquoxy 50	:	Resin and Hardener available in 20 litre packing each **Mixing ratio : 2.5 : 1 by volume**	:	1 litre (Resin+Hardener) covers 10 sqm @ 50 microns

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

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. Incase of splashes on the skin, dampen the cloth with water and wipe the hands with the cloth. Wash then with soap and water. Dried film is non toxic. Incase of contact with eyes, rinse with plenty of water and seek medical advice. Incase 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.

Limitations

It is not compatible for application over asphalt, unmodified sand-cement screeds or PVC tiles and sheets. Aquoxy 50 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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