Cipoxy EPN 100

A Novalac based, solvent free, epoxy flooring system

TYPE 3 EFNARC GUIDELINE

HIGH BUILD FLOOR COATING

Description

Cipoxy EPN 100 is a highly chemical resistant, solvent-free coating based on a multi functional, novalac epoxy resin, where as the conventional epoxy is based on di-functional Bisphenol A. Because of its high cross link density, Cipoxy EPN 100 is the best bet for chemical and solvent resistant applications among all Cipoxy range of product.

Uses

- Cipoxy EPN 100 is recommended for concrete, masonry or steel where extreme chemical protection is required.
- It is designed for service in harsh chemical environments and recommended for seamless acid proof floorings in lieu of acid proof tilings.

Key features

- Excellent chemical resistance
- High temperature resistance
- Cures at low temperature
- Excellent solvent resistance
- Improved wear resistance

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Properties

Type	: Amine adduct cured epoxy phenolic	Mixing ratio	: Pre-weighed packs
Finish	: Clear glossy	Solids content by wt ASTM D 2369	: 88%
Pot life @ 27^{0}C ASTM D 2471	: ≥ 35 min	Recommended WFT ASTM D 4414	: 590 microns
Drying time ASTM D 1640		Recommended DFT ASTM D 7091	: 500 microns
Surface dry	: ≥ 3.30 hrs	Application	: By roller / spike roller / notch trowel
Tack free dry	: ≥ 8 hrs		
Hard dry	: ≥ 24 hrs		
Recommended thinner	: PUT 502 (Clean up)	Shelf life	: 12 months in the unopened container

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
Abrasion resistance ASTM D 4060-2019 CS 17, 1 kg 1000 cycles	: Max 70 mg loss

Other mechanical properties

Tensile strength ASTM D 638	: 15 MPa
Elongation ASTM D 638	: 5%

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 EPN 100 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 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 achieve required concrete surface profile between 2-3.

Priming

Concrete substrates to be treated with Cipoxy EPN 100, should be primed with Cipoxy 17/18 primer. The primer should be mixed in the proportions supplied by adding the entire contents of Hardener can to the Base can. Once mixed the material 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 primer. It 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.

Screed coat

Over the primed surface, apply a coloured coating or a screed layer with Cipoxy 17 and FQ aggregates and allow to cure. 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.

Mixing & Application

Cipoxy EPN 100 is supplied in pre-weighed pack of 3 kgs. Mix the resin and hardener with a low speed drill for atleast 2-3 minutes. Apply by brush, spray or roller and allow to cure for 6-7 hours. Optimum chemical resistance is achieved after 7 days of cure at ambient temperature.

Chemical resistance

Excellent resistance is observed against distilled water, detergent solutions, alkalies and acids. Chemical spillages should always be wiped up as quickly as possible and not be allowed to concentrate up by evaporation. The data on the list of the chemicals found resistant to this product during our lab study is available on request.

Hydrofluoric acid (40%)	:	RS
Hydrofluoric acid (20%)	:	RS
Sulphuric acid (58%)	:	RS
Sulphuric acid (18%)	:	R
Hydrochloric acid (35%)	:	RS
Hydrochloric acid (15%)	:	RS
Hydrochloric acid (5%)	:	R
Hydrogen peroxide (10%)	:	RS
Hydrogen peroxide (5%)	:	R
O-Phosphoric acid (50%)	:	RS
O-Phosphoric acid (25%)	:	RS
Nitric acid (70%)	:	NR
Nitric acid (10%)	:	RS
Potassium hydroxide (50%)	:	RS
Potassium hydroxide (10%)	:	RS
Acetic acid (70%)	:	RS
Acetic acid (20%)	:	RS
Chromic acid (Concentrated)	:	NR
Methyl ethyl ketone	:	R

Note :
R : Resistant
RS : Resistant with stain
NR : Not resistant

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Xylene	:	R
MIBK	:	R
Ethyl acetate	:	R
Butanol	:	R
Acetone	:	R

Packaging and theoretical coverage

Cipoxy EPN 100 is available in 3 kg clear set pre-weighed kits and has a maximum shelf life of 12 months in the unopened container. 1 set of 3 kg will cover 5.1 sqm at 500 microns 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.

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 thinner PUT 503 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 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.

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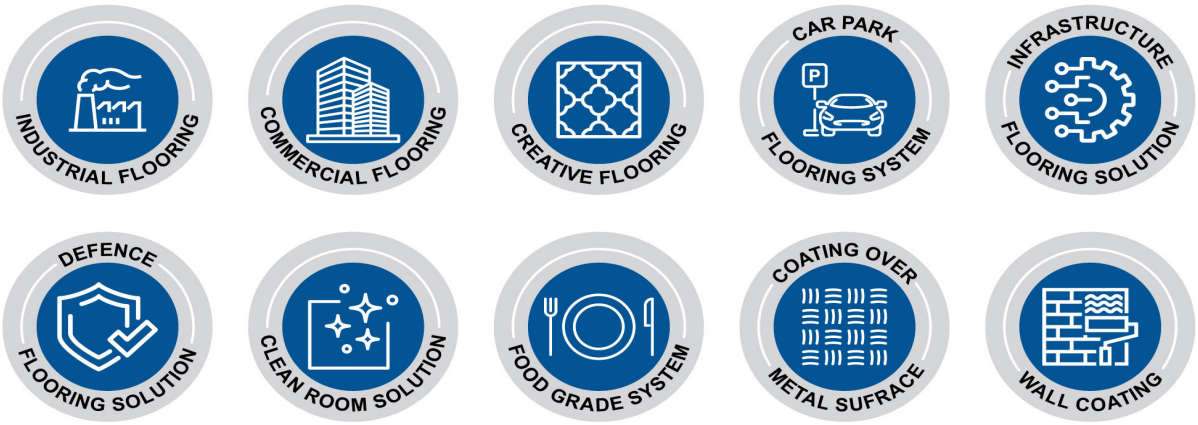

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