Nitocote® EP140

constructive solutions

Epoxy resin coating for steel and concrete

Uses

Nitocote EP140 is used as a hygienic and chemical resistant coating for steel tanks, concrete walls, concrete and metal columns, sluices and ducts.

Advantages

- **Excellent adhesion** - Compatible with all substrates. Can be applied directly on to mild steel and concrete
- **Hygienic & Aesthetic** – Forms a smooth, glossy and easy to clean surface on curing
- **Chemical resistant** – Proven against a wide range of industrial chemicals

Description

Nitocote EP140 coating is based on solvented epoxy resins specially formulated to provide a durable coating suitable for application to both vertical and horizontal surfaces. It cures to form a smooth hygienic film with good resistance to a wide range of mineral and organic acids, fats, alkalis and oils.

Technical support

Fosroc provides a technical advisory service supported by a team of specialists in the field.

Properties

	@ 20°C	@ 35°C
Pot life	4 hrs	1 ½ hrs
Time between coats	4- 6 hrs	3 - 5 hrs
Initial hardness	24 hrs	18 hrs
Full cure	7 days	7 days

Below 20°C the above times will be increased.

Volume solids (mixed material) : 45%

Colours : Silvery grey, sage green and clear

Chemical resistance

Nitocote EP140 has been tested for resistance to a comprehensive range of chemicals commonly encountered in individual locations. Tests were performed by constant immersion for 3 months at 20°C and 35°C in the selected chemical solution. Samples were visually inspected and tested in accordance with ASTM D2240 for Shore D hardness.

Acids

Hydrochloric 20%	R
Nitric 15%	R
Sulphuric 50%	R
Phosphoric 50%	R
Acetic 10%	R
Lactic 10%	R
Citric 10%	R

Alkali

Sodium Hydroxide 50%	R
Ammonia (0.880) 10%	R

Solvents

Petrol, Oil, Kerosene	R
Acetone	S
Butanol	R
Skydrol	S

Other solutions

Bleach	R
Saturated sugar	R
Urea	R
Sat. NaCl solution	R

Key : R - Resistant

S - Indicates slight attck under continuous immersion. 'At tack' refers to any etching or swelling observed but ignores discolouration.

Where chemicals at temperatures higher than ambient are involved, Fosroc shall be consulted.

Nitocote EP140 has been formulated especially to provide the highest chemical resistance. However, at elevated temperatures or where mixture of chemicals are involved then the effects may be different than those found in laboratory tests as described above. Fosroc local office shall be contacted for any clarifications.

Specification clauses

Protective surface coating

The protective surface coating shall be Nitocote EP140, a chemical resistant prepacked, two part solvented epoxy coating with a minimum of 45% solids. The total dry film

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thickness shall not be less than 90 microns and shall be resistant to a range of industrial chemicals. The cured film shall be hygienic and provide smooth surface. It shall be applied on to the dry concrete surface.

Application instructions

Where relevant, the application and preparation should conform to the British Standard Code practice CP 3003 : Part 5, 1966. The advice given below is a summary.

Preparation

Surface to be coated must be structurally sound, dry and free from loose material. All surface contamination must be removed. Grease and oil should be grit blasted or water jetted. Deeper penetration must be removed by mechanical means. Any laitance must be removed from concrete surface by etching with Reebaklens, then washed off and dried. New concrete should be allowed to cure for at least 28 days prior to priming. Steel surfaces should be shot blasted to a profile of 125 microns (0.005 inches).

It is essential that Nitocote EP140 us applied to sound clean, dry substrates in order to achieve maximum adhesion between the coating and substrate.

Priming

Steel surfaces should be primed with Nitozinc Primer, a two part zinc rich primer prior to applying Nitocote EP140.

Mixing

Before mixing, the contents of each can should be thoroughly stirred to disperse any settlement which might have taken place during storage.

The entire contents of the smaller hardener can should be poured into the base container and the materials thoroughly mixed for at least 3 minutes. Mechanical mixing using a slow speed (300 - 500 rpm) heavy duty or air driven drill fitted with a mixing paddle is recommended.

Coating

The mixed Nitocote EP 140 shall be applied to the dry, prepared substrate making sure a continuous film is achieved using a standard paint brush, good quality lambswool roller or spray equipment. The optimum dry film thickness of 100 micron is achieved in two coats.

Cleaning

Tools and equipment should be cleaned with Nitoflor Sol immediately after use.

Temperature limitations

Minimum application temperature : 15^{0}C. At temperatures below 15^{0}C and over 40^{0}C, please contact your local Fosroc technical representative.

Estimating

Packaging

Nitocote EP140	4.5 Litre
Nitozinc Primer	1 & 5 Litre
Nitoflor Sol	5 & 20 Litre
Reebaklens	5 & 20 Litre

Coverage

Approximately 10 m^2/Litre @ 100 microns wft. However, practical coverage depends on the nature and porosity of the substrate and application conditions.

Storage

Shelf life

12 months if stored in unopened container below 35^{0}C.

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Precautions

Health & Safety instructions

Some people are sensitive to epoxy resin systems and may develop dermatitis on skin contact. Gloves and barrier creams should be used when handling primers and Nitocote EP140. If contact with the skin occurs, wash with soap and plenty of water. Do not use solvent. Direct contact with the eyes will cause irritation and may cause serious damage if left untreated. Any eye contamination should be washed thoroughly with plenty of water and immediate medical treatment sought. The use of goggles when mixing is recommended. Smoking to be avoided.

Fire

Nitocote EP140 and Nitoflor Sol are flammable. Ensure adequate ventilation when using primers and solvents and do not use near a naked flame.

Flash point

Nitoflor Sol	33^{0}C
Nitocote EP140	25^{0}C

Additional information

Fosroc manufactures a wide range of products specifically designed for the repair and refurbishment of damaged reinforced concrete. This includes repair mortars, fluid micro-concretes, chemical resistant epoxy mortars in addition to comprehensive package of protective coatings. In addition, a wide range of complementary products are available. This includes joint sealants, waterproofing membranes, grouts and anchors and specialised flooring materials.

Separate datahsheets are available on these products.

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