Nitocote® ET140

FOSROC constructive solutions

Epoxy tar based coating for steel and concrete surfaces

Uses

Provides protection to concrete and metal structures against corrosion from aggressive environments. Suitable for tanks above ground or in totally submerged conditions such as pipelines. Particularly useful in sewage works, effluent plants and dock and harbour installations.

Advantages

- Excellent resistance to all types of water
- Easily applied by brush or spray
- Provides long term corrosion protection
- No priming necessary in most cases
- Chemical and abrasion resistant
- Economic and versatile product
- Acts as antirooting for Roof Gardens

Description

Nitocote ET140 coating is based on solvented coal tar epoxy resins specially formulated to provide a durable coating suitable for application to both vertical and horizontal surfaces.

Supplied as a two - component system comprising a special blend of pitch epoxy resins and amine hardeners.

Technical support

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

Properties

Nitocote ET140	20^{0}C	35^{0}C
Potlife	2 hrs	1 ½ hrs
Time between coats	4 hrs	2 hrs
Initial hardness	24 hrs	16 hrs
Full cure	7 days	5 days
Below 20^{0}C these times will be increased.		
Specific gravity (mixed material) : 1.20		
Volume Solids	: 50%	
Wet film thickness	: 100 microns	
Dry film thickness	: 50 microns	
No of Coats	: 2 (minimum)	
Adhesive bond strength to concrete /steel	: >1N/mm^2	

Chemical resistance

Nitocote ET140 has been tested for resistance to a comprehensive range of various chemicals and types of water, commonly encountered in individual locations. Tests were performed by constant immersion for 3 months at 30^{0}C in the selected chemical solution. The fully cured coat is resistant to the attack of :

Water	Sea water
Effluent water	Ground water
Sewage water	Distilled water
Atmosphere conditions	Exhaust and sewage gases
Salt solutions	Many organic solvents
Diluted mineral acids & alkalis	
Vegetable and mineral oils & fats	
Barnacles and organic growths	

However at elevated temperatures or where mixtures of chemicals are involved then the effects may be different than those found in laboratory tests described above. Fosroc local office shall be contacted for any clarifications.

Specification clauses

Protective surface coating

The protective coating shall be Nitocote ET140, a chemically resistant prepacked, two part solvented, coal tar epoxy coating with a minimum of 45% volume solids. The total dry film thickness shall not be less than 100 microns and shall be capable of resistant to a range of industrial chemicals and all types of water. The cured film shall be tough and abrasion resistant. It shall be applied on the dry concrete or steel surfaces.

Application instructions

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 laitence must be removed from concrete surface by etching with Reebaklens then washed off and dried. New concrete should be allowed to cure for atleast 28 days prior to priming. Steel surfaces should be shot blasted to a profile of 125 microns.

It is essential that Nitocote ET140 is applied to sound clean, dry substrates in order to achieve maximum adhesion between the coating and substrate.

Mixing

Before mixing, the contents of each can should be thoroughly stirred to disperse any settlement which may 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 atleast 3 minutes. Mechanical mixing using a slow speed (300 - 500 rpm) flame proof or air driven drill fitted with a mixing paddle is recommended.

Coating

The mixed Nitocote ET140 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 microns is achieved in two coats.

Cleaning

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

Temperature limitations

Minimum application temperature : 15^0C

At temperatures below 15^0C and above 40^0C, please contact your local Fosroc representative.

Estimating

Packaging

Nitocote ET140	4 Litres
Nitoflor Sol	1 & 5 Litres
Reebaklens	5 & 20 Litres

Coverage

Nitocote ET140, 4 Litre pack covers approx. 35-40m^2 per coat at a WFT of 100 microns. However, practical coverage depends on the nature and porosity of the substrate and application conditions.

Storage

Shelf Life

6 months shelf life if stored in unopened containers below 35 deg.C.

Precautions

Health and Safety

Some people are sensitive to epoxy resin and coal tar products and may develop dermatitis on skin contact. Gloves and barrier creams should be used when handling cleaning SOLs and Nitocote ET140. If contact with the skin occurs, wash with soap and copious amounts of water. Solvent shall not be used. 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 ET140 and Nitoflor Sol are flammable. Adequate ventilation to be ensured when using primers and solvents and do not use near a naked flame.

Flash Point

Nitoflor Sol	33^0C
Nitocote ET140	25^0C

Additional information

Fosroc manufactures a wide range of products specifically designed for repair and refurbishment of damaged reinforced concrete. This includes hand-placed and spray grade repair mortars, fluid micro - concretes, chemical resistant epoxy mortars and a comprehensive package of protective coatings. In addition, a wide range of complementary products is available. This includes joint sealants, water proofing membranes, grouting, anchoring and specialised flooring materials.

Fosroc have also produced several educational training videos which provide more detail about the mechanisms which cause corrosion within reinforced concrete structures and the solutions which are available to arrest or retard these destructive mechanisms. Further information is available from the publication : "Concrete Repair and Protection - The Systematic Approach'.

For further information about products, training videos or publications, contact the local Fosroc office.

Important note :
Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products whether or not in accordance with any advice, specification, recommendation or information given by it.

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