Nitocote ET550*

constructive solutions

Tar extended epoxy resin coating

Uses

To provide protection to concrete and metal structures in aggressive environments.

The material is particularly useful and economic in dirty water situations such as sewage works, effluent plants and dock and harbour installations.

Advantages

- High film build in a single application
- Easily applied by brush and airless spray
- Provides long term protection
- No primer necessary
- Economic and versatile

Specification

Corrosion, chemical & abrasion resistant lining

The chemical and abrasion resistant coating shall be Nitocote ET550, a high build, solvent containing, tar extended two pack epoxy material, specifically designed to provide a tough, impermeable and resistant film.

Description

Nitocote ET550 is a thixotropic, tar extended, two pack epoxy formulation, containing inert, reinforcing fillers and a special blend of solvents.

It is supplied in pre-measured quantities ready for site mixing and use.

Design criteria

Nitocote ET550 is designed to be applied in two coats to achieve a minimum total dry film thickness of 350 microns.

To achieve the correct protective properties, Nitocote ET550 must be applied at the coverage rates recommended.

Properties

Volume solids	: 70%
Pot life	: 4 hours @ 20°C 90 minutes @ 35°C
The fully cured coating is resistant to	: Water Saturated sodium chloride sewage water Dilute mineral acids and alkalis Salt solutions

The local Fosroc office should be consulted for resistance to specific chemicals and conditions.

Instructions for use

Preparation

Concrete surfaces

All surfaces must be dry, smooth, sound and free from debris and loose material. Surfaces must be free from contamination such as oil, grease, dust, loose particles and organic growth. Concrete surfaces must be fully cured, laitance free and free from any traces of shuttering, release oils and curing compounds. All surfaces should then be prepared to remove all foreign matter, surface laitence and provide a suitable key for Nitocote ET550. All blow holes and imperfections should be filled with Nitomortar FC***↑**. Consult separate data sheet for pot life and overcoating time.

Steel surfaces

All surfaces should be prepared to meet the requirements of BS 4232, First Quality. The lining work should be programmed so that newly cleaned steel is coated as soon as possible before the formation of rust or scale.

Mixing

The contents of the base can should be stirred thoroughly to disperse any settlement. The entire contents of the hardener can should then be added to the base container and mixed thoroughly until a uniform colour and consistency are obtained, taking particular care to scrape the sides and bottom of the container. It is recommended that mechanical mixing be employed using a heavy duty, slow speed electric drill, fitted with Fosroc Mixing Paddle (MR3).

Application

Number of coats	: 2
Theoretical application rate per coat	: 0.27 litres per m^2
Theoretical wet film thickness per coat	: 270 microns
Overcoating times	
@ 5°C	: 16 – 96 hours
@20°C	: 16 – 72 hours
@35°C	: 16 – 48 hours
Fully cured	
@5°C	: 14 days
@20°C	: 7 days
@35°C	: 4 days

The minimum application temperature is 5°C. All surfaces should be treated with at least two coats of Nitocote ET550. The first coat should be applied by brush or airless spray to achieve a uniform coating with a wet film thickness not less than 270 microns. This coat should be allowed to dry for 16 hours at 20°C.

The second coat should be applied as above, again achieving a wet film thickness not less than 270 microns. If a wet film thickness of 270 microns per coat is not achievable, nor desired because of possible problems with solvent entrapment, then the number of coats must be increased to obtain a total wet film application of 540 microns. When using airless spray equipment, a nozzle pressure of 2000 psi (140 bar) and a nozzle orifice of 0.031 inch are required at 20°C. A minimum 2 coat application is generally recommended to ensure a full, unbroken coating is achieved.

Cleaning

Nitocote ET550 should be removed from tools and equipment with Fosroc Solvent 102***** immediately after use. Cured material can only be removed mechanically.

Limitations

- Nitocote ET550 is formulated for application to clean, sound concrete and steel
- Nitocote ET550 should not be applied over existing coatings
- Application should not be undertaken if the temperature is below 5°C, or is 5°C and falling, nor when the prevailing Relative Humidity exceeds 90%
- Nitocote ET550 is not colour stable when exposed to direct sunlight, nor when in contact with some chemicals

Estimating

Supply

Nitocote ET550	:	20 kg drums (17.5 Base + 2.5 Hardener)
Fosroc Solvent 102	:	4 & 20 litre cans

Coverage

Nitocote ET550	:	1.23 m^2/kg@ 375 microns dry film thickness (540 wft)

The coverage figure is theoretical - due to wastage factors and the variety and nature of substrates, practical coverage figures may be substantially reduced.

Storage

All products have a shelf life of 6 months if kept in a dry store between 5°C and 30°C in the original, unopened containers.

Store in dry conditions at temperatures between 5°C and 30°C in the original, unopened containers. If stored at high temperatures the shelf life may be reduced.

Precautions

Health and safety

Nitocote ET550 contains coal tar pitch, so it is flammable. Possible risk of irreversible effects if contact with skin. Avoid contact with skin and eyes and inhalation of vapour. Ensure adequate ventilation. If working in confined areas, then suitable respiratory equipment must be worn.

Some people are sensitive to resins and solvents. Wear suitable protective clothing, gloves and eye/face protection. Barrier creams provide additional skin protection. Should accidental skin contact occur, remove immediately with a resin-removing cream, followed by soap and water. Do not use solvent.

In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately - do not induce vomiting.

Fire

Nitocote ET550 and Fosroc Solvent 102 are flammable. Keep away from sources of ignition. No smoking.

In the event of fire, extinguish with CO_2 or foam. Do not use a water jet.

Flash points

Nitocote ET550	:	26°C
Fosroc Solvent 102	:	33°C

For further information, refer to the Product Material Safety Data Sheet.

*** Denotes the trademark of Fosroc International Ltd.**

† See separate data sheet

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