

Nitocote® ET550

Epoxy tar based high performance resin coating

Uses

Nitocote ET550 provides protection to concrete and metal structures against corrosion from aggressive environments. Suitable for tanks above ground or in totally submerged conditions such as pipelinings. Particularly useful in sewage works, effluent plants and dock and harbour installations.

- High film build in single application
- 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

Description

Thixotropic pitch extended epoxy amine adduct formulation containing reinforcing inert fillers and special blend of solvents.

The product is supplied as a two-component system comprising a special blend of epoxy resins and a separate low viscosity amine hardener

Technical support

Fosroc offers technical support service to specifiers, end-users and contractors, as well as on-site technical assistance in locations all over the country.

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 given overleaf

Properties

Specific gravity 1.38 - 1.40

Volume Solids Mixed 66% (approx)

Dry film thickness (DFT) 350 microns

Wet film thickness(WFT) 530 microns

Number of coats	1 - 3 depending on application conditions and method. phuric	
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Pot life	at 20°C	35°C
	4 hours	1 hour 30 min

Drying Time

Touch dry	4 hours	2 hours
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Fully dry	7 days	4 days
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Recoat able	24 hours	18 hours
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Application temperature	20° - 40°C.	
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Outside this temperature - consult Fosroc for guidance.

Water permeability	0.00 mm
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for 5 bar Pressure @ 72 hrs

(BSEN 12390 (Part 8) 2009

Chemical resistance: The fully cured coat is resisant to Water

Sea water

Effluent water

Ground water

Sewage water

Distilled water

Atmospheric conditions

Exhaust and sewage gases

Dilute mineral acids and alkalis

Many organic solvents

Barnacles and organic growths

Specification clauses

Corrosion, chemical and abrasion resistant

The chemical and abrasion resisant coating shall be Nitocote ET550, a high build, pitch extended epoxy amine adduct, two pack system, specifically designed to provide a tough, impermeable and corrosion resistant film.

Application Instructions

Surface preparation

Concrete

Surface should be clean, dry, free from laitance, loose particles and previous coatings. This should be achieved by blast cleaning, water jetting, wire brushing or grinding. Blow holes, if any, should be filled with a suitable putty like Nitomortar FC.

Steel

Any rust, millscale and other impurities should be removed from the substrate by blast cleaning to SA 2 1/2.

Note : In very hot or very cold conditions lower application-thickness is advised to avoid solvent entrapment. Recommended dft can be obtained in one coat by airless spray. Other methods will give lower film build.

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Hot dip galvanised steel

Galvanised steel should be lightly blast cleaned or cold phosphated. When the galvanised process includes quenching in an aqueous chromate solution, Nitocote ET550 can be applied directly to the substrate, provided it is clean and dry.

Mixing

Mix both components until a homogenous mixture is obtained. It is important that both components are intermixed thoroughly and that no traces of the components remain unmixed. If necessary adjust the viscosity by adding up to 5% Nitoflor Sol to the base component before mixing with hardener.

Application

Nitocote ET550 may be applied by brush or spray to give uniform finish. Faster rates of application are possible using airless spray equipment. A minimum nozzle pressure of 140 bar with an orifice size of 0.65 - 0.79mm has been found suitable. Upto 5% by volume Nitoflor Sol may be added to ease spray application.

Cleaning

Tools should be cleaned with Nitoflor Sol immediately after use.

Technical support

Fosroc offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.

Estimating

Packaging

Nitocote ET550 is supplied in 18L packs.
Nitoflor Sol - 5 and 20 litre jerry cans.

Coverage

Theoretical coverage : 1.80 - 1.90 m²/ litre for 350 microns DFT.
Practical coverage : Practical coverage may vary depending on substrate condition and application method.

Storage

Shelf life

6 months if stored at 30°C. Store in a cool dry place in unopened tins.

Precautions

Health and safety instructions

Some people are sensitive to epoxy resins, so gloves and a barrier cream should be used when handling these products. If contact with the resin occurs, it must be removed, before it hardens, with a resin removing cream followed by washing with soap and water. Solvent should not be used.

The use of goggles is recommended but should accidental eye contamination occur, it shall be washed thoroughly with plenty of water and medical treatment shall be sought immediately.

Ensure good ventilation and do not smoke during use.

Organic Vapour mask (with filter type) is mandatory for the persons, while doing application.

Person may feel vomiting sensation during application if proper PPE is not worn, mainly in confined application areas. It is advisable to have proper ventilation in place as per applicable standards while working in less ventilated areas.

Fire

Nitocote ET550 and Nitoflor Sol are flammable. Do not smoke or use near naked flame.

Flash points

Nitocote ET550 Base 36°C

Nitocote ET550 Hardener 26°C

Nitoflor Sol 33°C

Additional information

Dekguard S was formerly known as Nitocote Dekguard S. 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.



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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.



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