



constructive solutions

# Nitocote NT550\*

Flexible protective coating, based on a hybrid resin system

## Uses

Provides chemical and abrasion resistance to prevent corrosion of concrete surfaces for applications such as: wall & floor coating for concrete protection, manhole & pipe linings & secondary containments, lining for sewage & effluent plants, sea water tanks, channels & intakes, foundation waterproofing, reservoirs, water treatment plants.

## Advantages

- **Flexible** - Can bridge 0.2 mm cracks
- **Environment friendly** - Totally free of carcinogenic materials like coal tar, pitch and aromatic hydrocarbons
- **Cost saving** - Primerless system, easy brush roller or spray application
- **Added value system** - Acts as an impermeable waterproof coating and excellent resistance to underground environment

## Specification

The corrosion resistant coating shall be Nitocote NT550, a tar-free flexible epoxy resin coating. It shall possess excellent bond to concrete substrate. The coating shall be resistant to underground conditions, alkalis, salt & acidic solutions.

## Properties

<b>Solids content (ASTM D1644)</b>	: 92%
<b>Specific gravity (ASTM D1475)</b>	: 1.35 g/cm <sup>3</sup> @ 23°C
<b>Pot life (ASTM D2471)</b>	: 4 hours @ 23°C : 2 hours @ 35°C
<b>Tack free time (ASTM D1640)</b>	: 6 - 8 hours @ 23°C : 2 - 4 hours @ 35°C : 1 - 2 hours @ 45°C
<b>Min. Overcoating time (ASTM D1640)</b>	: 8 hours @ 23°C : 4 hours @ 35°C : 2 hours @ 45°C
<b>Full cure (ASTM D1640)</b>	: 7 days @ 23°C : 4 days @ 35°C
<b>Adhesion Strength (ASTM D4541)</b>	: 1.5 N/mm <sup>2</sup>
<b>Water Absorption (ASTM C570)</b>	: 0.2%
<b>Tensile Strength (BS 2782)</b>	: 5 N/mm <sup>2</sup>
<b>Elongation @ break (BS 2782)</b>	: 30 - 35%

## Chemical resistance

Tests were carried out in accordance with ASTM D1308, at room temperature of 23°C and specimens were soaked in the solution for a period of 7 days.

## Aqueous solutions

<b>Tap water, sea water, ground water &amp; sewage</b>	: Resistant
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## Acids (m/v)

<b>Hydrochloric acid 10%</b>	: Resistant
<b>Sulphuric acid 25%</b>	: Resistant
<b>Nitric acid 10%</b>	: Resistant
<b>Phosphoric acid 15%</b>	: Resistant

Consult local Fosroc office for specific recommendations to meet each operating condition.

## Description

Nitocote NT550 is based on graft polymerization of epoxy resins. It is supplied as a 2 pack material in pre-weighed quantities ready for on-site mixing & use. Nitocote NT550 is applied as a 2 coat application. It is generally applied at a wet film thickness of 200 micron per coat. Nitocote NT550 is available in a standard Grey colour; other colours are available subject to minimum order quantities.

## Instructions for use

### Preparation

All surfaces to be treated with Nitocote NT550 must be clean and free from dust or loose material.

**Concrete surfaces:** All laitance must be removed by grit blasting, or other suitable removal methods. Following the preparation of a concrete surface, care should be taken to ensure that any surface irregularities are filled with Nitomortar FC\*† or Nitomortar FC (B)\*†.

**Metal surfaces:** Any metal surfaces should be grit blasted to a bright finish, meeting the requirements of Swedish Standard SA 2½ or equal.

### Priming

**Concrete surfaces:** Priming is not required on properly prepared concrete surfaces - see Preparation section.

**Metal surfaces:** All metal surfaces should be coated immediately after preparation. If this is not possible to eliminate formation of rust, prime it by Nitoprime 25IR.

## Mixing & application

The contents of the resin can should be thoroughly stirred to disperse any possible settlement. The entire contents of both the hardener and resin cans should be poured into a suitable sized mixing vessel. It is recommended that the two components are mixed together mechanically using a slow speed electric drill fitted with a Fosroc Mixing Paddle (MR3). Mixing should be carried out continuously for 3 - 5 minutes, until a uniform consistency is achieved. Although Nitocote NT550 is a non-solvented, it is still recommended that mixing should take place in an open, well ventilated area. Generally to achieve a full unbroken coating, application of minimum 2 coats is recommended.

**Brush/Roller application:** Once mixed, material should be immediately applied, ensuring that a continuous coating is obtained. The first coat is applied to achieve a uniform coating with a wet film thickness more than 200 microns & should be allowed to dry for at least 2 hours @ 35°C before the application of second coat.

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The second coat should be applied after 4 hours (@ 35°C) from the application of first coat. The second coat should be applied as above again achieving a wet film thickness more than 200 microns.

**Spray application:** Where large areas are to be coated, it is advisable to consider spray application. Consult local Fosroc office for further details and recommendations.

## Cleaning & repairing & overcoating

Clean tools & equipment by Fosroc Solvent 102\* after use. Any applications of Nitocote NT550 which have become damaged can be readily overcoated. The existing surface should be well abraded, using a stiff wire brush, or similar, to ensure that a good mechanical bond will be achieved between 2 layers. Remove any loose material. Overcoating works can then proceed as for new work, always ensuring that the prepared substrate is free from any moisture.

## Limitations

Nitocote NT550 is formulated for application to clean sound steel or concrete substrates & where it can be protected from contact with water for first 24 hours after application as discolouration could occur. It should not be applied over other existing coatings, but can be applied on top of itself (see above). For cold weather working (down to 5°C), it is recommended that materials are stored in a heated building and only removed immediately before use. Accelerated heating methods are not to be utilized under any circumstances.

## Hot weather working practices

Whilst the performance properties of Nitocote NT550 at elevated temperatures are assured, application under such conditions can sometimes be difficult. It is therefore suggested that, for above 35°C, below guidelines are adopted as a prudent working regime:

- Store unmixed materials in a cool environment (preferably temp. controlled), avoiding exposure to direct sunlight
- Keep mixing and placing equipment cool, arranging shade protection if necessary. It is especially important to keep cool those surfaces of the equipment which will come into direct contact with the material itself
- Try to eliminate application in the middle of the day, and certainly avoid application in direct sunlight
- For hand application, ensure that there are sufficient operatives available to complete application within the material pot life
- Have a ready supply of Fosroc Solvent 102 available for immediate cleaning of tools after use



### Important note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Service.

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Cert No. THR2004006

## Estimating

### Supply

<b>Nitocote NT550</b>	: 10 litre packs
<b>Nitoprime 25IR</b>	: 1 & 3 kg packs
<b>Fosroc Solvent 102</b>	: 4 & 20 litre cans

### Coverage

<b>Nitocote NT550</b>	: 5.0 m <sup>2</sup> /litre @ 200 microns wft per coat
<b>Nitoprime 25IR</b>	: 3.5 - 4.3 m <sup>2</sup> /kg

**Note:** Coverage figures quoted are theoretical & based upon application to a properly prepared substrate of nominal C30 conc. Since application conditions vary greatly due to substrate porosity, quality of surface preparation, application thickness & wastage factors, the on-site figures may vary from those shown above.

## Storage

It is supplied in 10 litre packs has a shelf life of 12 months, when stored in warehouse conditions below 35°C.

## Precautions

### Health & safety & fire

Nitocote NT550, Nitoprime 25IR & Fosroc Solvent 102 should not come in contact with skin or eyes, nor should they be swallowed. Avoid inhalation of vapours & ensure adequate ventilation. Some people are sensitive to resins, hardeners & solvents. Wear suitable protective clothing, gloves & eye/face protection. Barrier creams such as Kerodex Antisolvent or Rozalex Antipaint provide additional skin protection. Should accidental skin contact occur, remove immediately with a resin removing cream such as Kerocleanse Standard Grade Skin Cleanser or Rozaklens Industrial Skin Cleanser, followed by washing with soap & water - do not use solvent. In case of contact with eyes, rinse immediately with plenty of water & seek medical advice. If swallowed seek medical attention immediately - do not induce vomiting. For further information consult MSDS of Nitocote NT550. Nitomortar FC is non-flammable. Nitocote NT550, Nitoprime 25IR & Fosroc Solvent 102 are flammable. Do not use near a naked flame.

### Flash points

<b>Nitocote NT550</b>	: 35°C
<b>Nitoprime 25IR</b>	: 55°C
<b>Fosroc Solvent 102</b>	: 33°C

\* Denotes the trademark of Fosroc International Ltd.

↑ See separate data sheet