

Spray-applied, chemical and abrasion resistant epoxy liner system

Uses

Asprayable epoxy mortar with maximum chemical and abrasion resistance for the protection of concrete and similar substrates. Ideal for rehabilitation of manholes, lining of outfalls, sewers and similar structures.

Nitocote EP500 can be used in brick, block and precast concrete manholes. Nitocote EP500 provides a permanent impermeable, high strength, monolithic lining to the interior of manhole walls.

Advantages

- Enhanced formulation provides increased resistance to a wide range of acids and alkali's, specifically sulphuric acid found in waste water environments
- Resistant to biological attack
- Superior chemical and physical bond to virtually all substrates, dry or damp
- No need for priming concrete surfaces, therefore cutting labour costs and reducing risk of bad priming
- Prepacked for ease of mixing
- 100% solids content - contains no solvent
- Strengths in excess of most concrete substrates to which material is applied. Excellent resistance to abrasion and impact
- Cured material provides a long lasting waterproof barrier
- Unaffected by freeze-thaw attack

Description

Nitocote EP500 is a a new generation epoxy lining mortar based on the latest epoxy resins and chemical technology to provide a lining system that has increased hydrophobic properties meaning the chemical resistance is significantly enhanced.

The two component system has a high epoxy content and fine graded fillers ensuring the material is easy to spray as well as ensuring a tortuous path for sulphuric acid penetration.

Design Criteria

Nitocote EP500 is spray applied generally in layers between 2mm and 5mm per layer - the minimum total thickness should be 2mm.

Specification Clause

Chemical and abrasion resistant lining

The chemical and abrasion resistant lining shall be Nitocote EP500, a high build, two pack epoxy system specifically designed to provide a tough and impermeable lining.

Properties

The following results are typical for the product but do not constitute a specification.

Compressive strength:	40 MPa @ 28 days
Pot life:	1 hour @ 25°C
Initial hardness:	4 hours @ 25°C
Minimum "back to service" time:	6 hours @ 25°C
Full cure:	7 days @ 25°C
Adhesion to concrete:	>1 MPa substrate failure
Min. application temperature:	5°C

Note: Cure times will increase by a factor of 2 for each 10°C reduction in temperature.

Chemical resistance:

Performance of Nitocote EP500 blocks continually immersed at 23°C for 28 days:

Bleach		Excellent
Detergent		Excellent
Sodium hydroxide	25%	Excellent
Diesel fuel/petrol	100%	Excellent
Sulphuric acid	50%	Excellent
Nitric Acid	25%	Excellent (Colour Change)
Phosphoric Acid	25%	Excellent
Hydrochloric Acid	25%	Excellent
Toluene	100%	Excellent
Kerosene	100%	Excellent

Application Instructions

Preparation

Clean the surface and remove any dust, unsound concrete, oil, paint, grease, corrosion deposits or algae. Roughen the surface and remove any laitance by light scabbling or grit-blasting. Where possible, saw cut or cut back the extremities of the repair locations to a depth of 3mm to avoid feather-edging and to provide a square edge.

Prior to application of Nitocote EP500 all active hydrostatic leaks must be stopped by the use of Vandex Plug, a rapid setting mortar.

Mixing

Nitocote EP500 is supplied in the correct proportions to facilitate easy on-site mixing. A forced-action mixer is essential. Mixing at a slow speed (400/500 rpm) in a suitably sized drum using appropriate equipment such the Ransom 140 x 600 M14 Helical mixing paddle (product code: N4020892-UNIT) fitted to a heavy-duty 1600W mixer, such as Ransom 1602 E (product code: NP7EV160-UNIT) or equivalent. Satisfactory mixing

Fosroc®

Nitocote® EP500

can be achieved by thoroughly mixing all contents of the base resin and hardener component in the original container. Mix continuously for approximately 3 minutes until a uniform consistency has been reached.

Application

Nitocote EP500 is spray applied using specialised equipment and contractors are **strongly** advised to carry out trials prior to proceeding with any contract. Advice on suitable application equipment and application method is contained in the **Spraying Nitocote EP500 Application Guidelines** document available on request from Fosroc.

To avoid sagging on overhead surfaces, do not apply Nitocote EP500 greater than 5mm per layer. If a smooth surface is required, close the surface with a steel trowel.

Note: do not thin components as solvents will prevent proper cure and result in blisters in the coating.

Nitocote EP500 should be applied only when the substrate temperature and the ambient temperature is above 5°C.

If the applied coating becomes wet through immersion, rain or dew, the surface must be mechanically prepared prior to subsequent overcoating.

Nitocote EP500 will continue to cure after application and subsequent immersion, however the coating must be protected from "wash-out"/flowing water until it hardens (6 to 8 hours).

Do not attempt to mix part packs as incorrect proportioning can severely affect the cured properties of the product.

Cleaning

Nitocote EP500 should be removed from tools, equipment and mixers with Fosroc Solvent 10 immediately after use.

Limitations

Nitocote EP500 should not be used when the temperature is below 5°C and falling. Do not mix part packs under any circumstances. The ambient and substrate temperatures will affect the spray application and product film build characteristics. If any doubts arise concerning temperature or substrate conditions, consult Fosroc.

Supply

Nitocote EP500 Base component of 16L Pack:	FC836688-9.5L
Nitocote EP500 Hardener component of 16L Pack:	FC836699-6.5L
Fosroc Solvent 10 4 litre:	FC600800-4L
Fosroc Solvent 10 20 litre:	FC600800-20L

Coverage

Nitocote EP500:	8.0 m ² / 16 litre pack at 2mm thick
	3.2 m ² / 16 litre pack at 5mm thick

Notes: The coverage figures for Nitocote EP500 are theoretical - due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced.

Storage

Nitocote EP500 should be kept in a dry store below 35°C in the original, unopened packs.

Important notice

A Safety Data Sheet (SDS) is available from the Fosroc website. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

Product disclaimer

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.

