Fosroc® Nitocote EP405

constructive solutions

Solvent-free epoxy resin coating for water retaining and water excluding structures

Uses

For lining and waterproofing potable water retaining structures* and surfaces subject to contact with foodstuffs. The cured film is corrosion, chemical and abrasion resistant and is suitable for application to basements, tunnels, tanks, silos, reservoirs*, water treatment works*, breweries, dairies and meat and food processing plants. The cured film is non toxic and meets the requirements of BS 6920. (* See 'Limitations'.)

Advantages

- High build application
- Can be applied directly to mild steel and concrete
- Smooth, glossy, easy to clean surface
- Corrosion, chemical and abrasion resistant
- Can be applied to damp surfaces
- Waterproof
- Water Regulations Advisory Service - approved product
- Provides protection against water vapour and ground gases such as radon, carbon dioxide and methane.

Description

Nitocote EP405 is a two-part, solvent free, epoxy resin material. It is supplied in pre-measured quantities ready for site mixing and use and is available in blue and white.

Standards compliance

Nitocote EP405 meets the requirements of BS 6920, the Water Regulations Advisory Service, tests of effect on water quality.

Properties

Volume solids:	100%
Viscosity:	Pourable, spreadable liquid
Pot life —	
@ 20°C:	30 to 40 minutes
@ 35°C:	10 to 15 minutes

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

Application instructions

All coating work to be carried out in accordance with the relevant sections of BS6150:2006, Painting of Buildings - Code of Practice.

Preparation

Concrete surfaces

All surfaces must be smooth, sound and free from contamination and areas of standing water. 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 grit blasted to remove all foreign matter and open up blow-holes and provide a suitable key for Nitocote EP405.

All blow holes and imperfections should be filled with Nitomortar FC. Consult the local data sheet for pot life and overcoating time.

Spalled surfaces, those containing large blow holes or surface imperfections should be repaired or rendered using a Fosroc approved repair mortar or render. Contact the local Fosroc office for further advice on suitable materials.

Steel surfaces

All surfaces should be grit blasted to meet the requirements of BS 7079 Sa2.5 . 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

Thoroughly stir the contents of the base can. Empty the entire contents of the hardener can into the base container and mix thoroughly until a uniform consistency is obtained, taking particular care to scrape the sides and bottom of the container. It is recommended that mechanical mixing be employed, using a Jiffy mixer on a heavy duty, slow speed electric drill.

Application

Number of coats:	2
Theoretical application rate per coat:	0.2 litres per m²
Theoretical wet film thickness per coat:	200 microns
Overcoating times —	
@ 5°C:	18 to 48 hours
@ 20°C:	6 to 18 hours
@ 30°C:	3 to 9 hours
Fully cured *—	
@ 5°C:	14 days
@ 20°C:	7 days
@ 30°C:	7 days

* see Limitations

The minimum application temperature is 5°C.

All surfaces should be treated with two coats of Nitocote EP405. The thoroughly mixed material should be applied with a suitable stiff nylon type brush.

The first coat must be firmly applied and be well scrubbed into the surface, ensuring a uniform coating with a wet film thickness not less than 200 microns. The first coat should be allowed to dry for not less than 6 hours and not more than 18 hours at 20°C.

APPROVED WRAS MATERIAL

Fosroc® Nitocote EP405

The second coat should be applied exactly as above, again achieving a wet film thickness not less than 200 microns.

For ease of overcoating, it is recommended that the first coat be white and the second coat blue, or vice-versa.

For cold weather working, it is recommended that Nitocote EP405 be stored in a heated building and removed immediately before use, as workability deteriorates and curing times increase at lower temperatures.

Cleaning

Nitocote EP405 should be removed from tools and equipment with Fosroc Solvent 102 immediately after use. Cured material can only be removed mechanically.

Estimating

Nitocote EP405 is supplied in 2.5 kg packs (1.5 litres) each yielding 3 m² per kg per coat (5 m² per litre).

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

Limitations

Nitocote EP405 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%.

Although Nitocote EP405 may be applied to damp concrete, there must be no standing or running water.

Nitocote EP405 is not colour stable when exposed to direct sunlight nor when in contact with some chemicals. On curing Nitocote EP405, the final colour can vary with curing conditions, and in adverse conditions such as low temperature and/or high humidity, a white bloom may appear on the surface. However, this does not affect the performance of the coating.

* Before commencing application it is important to ensure that Nitocote EP405 meets all current compliance requirements. Note: Nitocote EP405 meets the requirements of BS 6920 the United Kingdom Water Regulations Advisory Scheme but not Regulation 31 of the Water Supply (Water Quality) Regulations 2000.

In accordance with WRAS listing, when Nitocote EP405 is used in contact with potable water, curing conditions are 21 days at 7°C.

Storage

All products have a shelf life of 12 months if kept in a dry store between 5°C and 30°C in the original, unopened containers. Material from different batches shall be stored separately.

If stored at high temperatures the shelf life may be reduced.

Precautions

Health and safety

For further information refer to appropriate Product Safety Datasheet.

Disposal

To eliminate risk of exotherm, only mix product when ready for use and then apply without delay. Any unused residue should be poured on to a disposable impervious surface to allow cure before disposal.

Fire

Nitocote EP405 is non-flammable.

For further information, refer to Product Safety Data Sheet.

Fosroc Solvent 102 is 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 point

Fosroc Solvent 102:	33°C

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

Fosroc Limited
Drayton Manor Business Park
Coleshill Road, Tamworth,
Staffordshire B78 3TL. UK

telephone:
+44 (0) 1827 262222

fax:
+44 (0) 1827 262444

email:
enquiryuk@fosroc.com

www.fosroc.com

Certificate number FM 610