Nitocote EP405 Data Sheet

Specification notes

Product: Nitocote EP405

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Nitocote EP405

Solvent-free epoxy resin coating for water retaining 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 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
- Water Regulations Advisory Service - approved product

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Specification</th>
</tr>
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<tbody>
<tr>
<td>Volume solids</td>
<td>100%</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Pourable, spreadable liquid</td>
</tr>
<tr>
<td>Pot life</td>
<td>@ 20°C: 30 to 40 minutes, @ 35°C: 10 to 15 minutes</td>
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</tbody>
</table>

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

Application instructions

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.

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 |

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.

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

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.
Nitocote EP405

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 Advisery Scheme but not Regulation 31 of the Water Supply (Water Quality) Regulations 2000.

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. 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 CO₂ 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.

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 Services, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification of information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation of information given by it.

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