

Nitocote EP410

constructive solutions

Highly chemical resistant two pack epoxy system

Uses

To provide protection to concrete and steel structures in aggressive chemical immersion conditions. The material is particularly suitable for applications in process plants and sewage works.

Advantages

- Excellent chemical resistance
- Excellent adhesion to concrete and steel
- Excellent abrasion resistance

Description

Nitocote EP410 is a high build, solvent free, two pack epoxy formulation. It is supplied in pre-measured quantities ready for site mixing and use.

Nitocote EP410 is designed to be applied in one coat to achieve a minimum total dry film thickness of 250 microns. When used in conjunction with glass fibre reinforcement to bridge fine cracks, it is applied in two coats to achieve a minimum total dry film thickness of 500 microns. Nitocote EP410 is designed to be used with Nitoprime 25 on concrete surfaces and Nitoprime 28 on mild steel. It is green in colour. The coating shall be applied in accordance with the Fosroc data sheet.

Specification clauses

The chemical resistant, solvent free epoxy coating shall be Fosroc Nitocote EP410. It shall be applied in one coat at a dry film thickness of 250 microns or, where incorporating fibreglass reinforcement, in 2 coats with a dry film thickness of 500 microns.

Properties

Volume solids:	100%
Viscosity:	Pourable, spreadable liquid
Pot life @ 20°C:	90 minutes
Pot life @ 35°C:	35 minutes
Number of coats:	1
Theoretical application rate per coat:	0.25 litres/0.36kg per m ²
Theoretical wet film thickness per coat:	250 microns
Overcoating times	
@ 5°C:	16 to 72 hours
@ 20°C:	16 to 24 hours
@ 35°C:	6 to 18 hours
Fully cured	
@ 5°C:	14 days
@ 20°C:	7 days
@ 35°C:	6 days

The minimum application temperature is 5°C.

The fully cured coating is resistant to:

Sodium hydroxide: 50%
Citric acid: 50%
Hydrochloric acid: 30%
Lactic acid: 10%
Acetic acid: 15%
Sulphuric acid: 25%

The local Fosroc office should be consulted in respect of other chemicals, or at operating temperatures greater than 20°C.

Application instructions

All coating work to be carried out in accordance with the relevant sections of BS6160:2006, Painting of Buildings - Code of Practice.

Preparation

Concrete surfaces

All surfaces must be dry, smooth, free from contamination and loose material. Concrete surfaces must be fully cured, laitance-free and free from any traces of shuttering release oils and curing compounds. All surfaces should be grit blasted to provide a suitable key and all blow holes and imperfections should be filled with Nitomortar FC.

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.

All surfaces should then be primed with Nitoprime 25. Mix in the proportions supplied and apply in a thin, continuous film. The primer should be touch dry but allowed to cure for no more than 24 hours at 20°C or no more than 18 hours at 35°C before the application of Nitocote EP410.

Steel surfaces

All surfaces should be prepared to meet the requirements of BS 7079, Sa2.5, abrasive blasting is recommended. The lining work should be programmed so that newly cleaned steel is primed before the formation of rust or scale.

All surfaces should then be primed with Nitoprime 28. Mix in the proportions supplied and apply as a thin continuous film. The primer should be touch dry but allowed to cure for no more than 24 hours at 20°C or no more than 18 hours at 35°C before the application of Nitocote EP410.

Mixing

Thoroughly stir the contents of the base can, then the entire contents of the hardener can should be stirred and added to the base container and mixed thoroughly until a uniform colour and consistency are obtained, taking particular care to scrape the sides and bottom of the container. Mechanical mixing is recommended using a Jiffy mixer on a heavy duty, slow speed electric drill. In cold

Nitocote EP410

weather, materials should be stored between 15°C and 20°C for 24 hours before use.

Application

All primed surfaces should be treated with one coat of Nitocote EP410. The mixed material should be applied by a nylon brush and finally smoothed out with a steel trowel to achieve a uniform coating with a wet film thickness not less than 250 microns. Any movement joints in the structure should be expressed through the coating and sealed with an appropriate sealant.

Use of glass fibre reinforcement

Nitocote EP410 may be used in conjunction with glass fibre cloth to increase thickness or, where necessary, bridge fine cracks in the substrate. The cloth should be laid directly on the first coat whilst wet and should be pressed in and smoothed out with a stiff nylon brush or split washer roller. A second coat should then be applied, allowing no more than 24 hours at 20°C and no more than 18 hours at 35°C between coats, and again achieving a wet film thickness not less than 250 microns. Suitable cloth is open weave 110 g/m² glass cloth.

Cleaning

Nitocote EP410 should be removed from tools and equipment with Fosroc Solvent 102 immediately after use. Cured material can only be removed mechanically.

Estimating

Supply

Nitocote EP410:	5.6kg packs
Nitoprime 25:	0.95kg 'Handy' packs 5kg 'Industrial' packs
Nitoprime 28:	0.45kg 'Handy' packs 4.2kg 'Industrial' packs
Fosroc Solvent 102:	5 and 25 litre tins

Coverage

Nitocote EP410:	15.68m ² /5.6kg pack
Nitoprime 25:	5m ² /0.95kg 'Handy' pack 26m ² /5kg 'Industrial' pack
Nitoprime 28:	2.4m ² /0.45kg 'Handy' pack 20m ² /4.2kg 'Industrial' pack

Limitations

Nitocote EP410 is formulated for application to clean, sound concrete and steel. It 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%.

Nitocote EP410 is not colour stable when exposed to direct sunlight, nor when in contact with some chemicals.

Storage

Shelf life: Nitocote EP410 has 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. Storage at higher temperatures may reduce shelf life.

Precautions

Health and safety

For further information refer to appropriate Product Safety Data Sheet.

Disposal

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

Fire

Nitocote EP410 is non-flammable. Nitoprime 25, Nitoprime 28 and Fosroc Solvent 102 are flammable. Keep away from sources of ignition. In the event of fire, extinguish with CO₂ or foam. Do not use a water jet.

Flash points

Fosroc Solvent 102:	33°C
Nitoprime 25:	55°C
Nitoprime 28:	27°C

For further information, consult the Product Safety Data Sheet.

Nitocote is the trade mark of Fosroc International Limited



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.

Fosroc Limited

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

www.fosroc.com

telephone:
+44 0 (1827) 262222

fax:
+44 0 (1827) 262444

email:
uk@fosroc.com



Certificate number FM 610