Fosroc® Nitomortar FC

constructive solutions

Epoxy resin fairing coat

Uses

For filling blow-holes, and eliminating minor irregularities in concrete prior to the application of Nitocote and Nitoflor epoxy coatings.

Advantages

- Non-slump, can be applied to vertical surfaces and trowelled into blow-holes
- Superior bond strength to virtually all substrates
- Smooth paste consistency is easy to apply and finish
- Reduced usage of subsequent coating
- Pre-weighed components ensure consistency

Description

Nitomortar FC is a two-component thixotropic material based on high quality solvent-free epoxy resin systems. The colour coded material is supplied in pre-weighed quantities ready for on-site mixing and use.

Nitomortar FC can be applied to damp surfaces and quickly cures to form a completely impermeable surface ready for overcoating.

Nitomortar FC can be applied up to 5 mm thickness on vertical and overhead locations in a single application without the use of formwork. Greater thicknesses than those specified can be achieved by application of subsequent layers. Consult Fosroc Customer Services Department for further information.

For higher build characteristics to vertical or overhead locations, Nitomortar HB is recommended.

Specification clauses

Epoxy resin based fairing coat mortar

The epoxy resin based fairing coat mortar shall be Nitomortar FC a two-component solvent-free epoxy resin mortar with a density not greater than 1700 kg/m^3. The cured mortar shall achieve a compressive strength of 70 N/mm^2. The material shall be colour coded to facilitate mixing.

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Properties

The following properties were obtained at a temperature of 20°C unless otherwise specified.

Test method	Typical results
Compressive strength (BS 6319, Pt 2):	70 N/mm² @ 7 days
Pot life:	4 hours @ 20°C 1½ hours @ 35°C
Initial cure:	10 hours @ 20°C 4 hours @ 35°C
Overcoating time:	10 to 24 hours @ 20°C 4 to 18 hours @ 35°C
Full cure:	7 days @ 20°C 4 days @ 35°C
Fresh wet density:	Approximately 1700 kg/m³ (fully compacted)
Chemical resistance:	The low permeability of Nitomortar FC retards chemical attack in aggressive environments

Performance of Nitomortar FC continually immersed at 20°C:

Citric acid	10%	Excellent
Tartaric acid	10%	Excellent
Diesel fuel / Petrol	100%	Excellent
Sugar solution	Saturated	Very good
Lactic acid	10%	Very good
Hydrocarbons	100%	Very good
Phosphoric acid	50%	Very good

Application instructions

Preparation

Clean the surface and remove any dust, unsound or contaminated material, plaster, oil, paint, grease, corrosion deposits or algae.

The surface should preferably be prepared using high-pressure water jetting or light abrasive blasting, followed by thorough washing to remove dust and remaining particles.

Oil and grease deposits should be removed by steam cleaning, detergent scrubbing or the use of a proprietary degreaser. The effectiveness of decontamination should then be assessed by a pull-off test.

All steel surfaces should be abrasive blasted to meet the requirements of BS 7079, SA2.5 immediately before application.

No independent priming system is required.

Mixing

Care should be taken to ensure that Nitomortar FC is thoroughly mixed to produce a fully homogeneous trowellable mortar.

Nitomortar FC can be mixed by hand or with a slow speed drill fitted with a suitable paddle.

The ‘base’ and ‘hardener’ components should be stirred thoroughly in order to disperse any settlement before mixing them together. The entire contents of the ‘hardener’ tub should be emptied into the ‘base’ container and the components mixed thoroughly until a uniform colour consistency is obtained, taking particular care to scrape the sides and bottom of the container. Under no circumstances should part packs be used.

Application

Apply the mixed Nitomortar FC to the prepared substrate by spatula, filling knife, squeegee or steel float, tight trowelling onto the substrate to ensure positive adhesion and that all blow-holes and defects are completely filled to produce a smooth even finish.

Application thickness will vary with profile and alignment of substrate. Where necessary, mortar should be built-up in layers.

Build-up

Additional build-up can be achieved by application of multiple layers. Where thicker sections are required, the surface of the intermediate applications should be lightly abraded and the resulting dust removed to provide a suitable surface for subsequent layers. The application of additional layers should follow between 10 and 24 hours (at 20°C) after the first application. This time should be increased at lower temperatures. Application of Nitomortar FC may then proceed.

If sagging occurs during application, the Nitomortar FC should be completely removed and re-applied at a reduced thickness on to the substrate.

Finishing

Any ridges left by the trowel can be brushed out while the material is still wet or ground down with a carborundum stone before overcoating.

Important note: Do not use solvent to thin components as this will prevent proper cure.

High temperature working

At ambient temperatures above 35°C, Nitomortar FC will have shorter pot life and working life. The materials should be stored in the shade or in air-conditioned environments and should not be applied in direct sunlight.

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Curing

Curing protection is not necessary for Nitomortar FC.

Overcoat with protective/decorative finishes.

The Nitomortar FC should be overcoated within 24 hours at 20°C.

For surrounding areas not subjected to chemical or physical wear, Fosroc recommend the use of the Dekguard range of anti-carbonation, anti-chloride coatings, thus bringing them up to the same protective standard as the repair itself. These products provide a decorative and uniform appearance as well as protecting areas of the structure which might otherwise be at risk from the environment.

Nitocote epoxy resin coatings should be applied within 24 hours. Dekguard products should not be applied over the repair area until the Nitomortar FC is at least 3 days old. For further advice, consult Fosroc Customer Services Department.

Cleaning

Nitomortar FC should be removed from tools, equipment and mixers with Fosroc Solvent 102 immediately after use. Hardened material can only be removed mechanically.

Estimating

Supply

Nitomortar FC:	1 kg packs
Fosroc Solvent 102:	5 and 25 litre tins

Coverage and yield

Nitomortar FC:	1 kg pack = 0.6 ltr Coverage 0.6 m^2 @ 1mm thickness

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

Limitations

Do not mix part packs under any circumstances. Nitomortar FC should not be exposed to moving water during application. Exposure to heavy rainfall prior to final set may result in surface scour. If any doubt arises concerning temperature or substrate condition, consult Fosroc Customer Services Department.

Application should not be undertaken if the temperature is below 5°C or is 5°C and falling, nor when the prevailing humidity exceeds 90%.

Storage

Store in dry conditions in the original, unopened containers. All products have a shelf life of 18 months at 20°C if kept in a dry store in the original, unopened containers.

Precautions

Health and safety

For further information refer to appropriate Product Safety Data Sheet.

Fire

Nitomortar FC is non-flammable.

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 International Limited
Drayton Manor Business Park
Coleshill Road, Tamworth,
Staffordshire B78 3XN, UK

telephone:
+44 (0)1827 262222

email:
enquiryuk@fosroc.com

www.fosroc.com