



Fosroc Nitoflor EU50

High strength epoxy underlay

Uses

Provides an economical method of levelling floors prior to laying epoxy screeds or toppings such as Nitoflor TF5000⁺⁺, Nitoflor SL2000⁺⁺ and Nitoflor SL4000⁺⁺.

Advantages

- Cost effective
- Quick and easy to lay
- Seamless
- Durable

Description

Nitoflor EU50 consists of specially graded aggregates bound together with an epoxy resin and formulated to withstand chemical attack and impact shock. The product is supplied as a 3 component system comprising resin base, resin hardener and aggregates. When correctly laid, Nitoflor EU50 will provide a surface with a slight texture ready to receive applications of other Fosroc flooring systems.

Design Criteria

Nitoflor EU50 is designed for application in the range of 10mm - 50mm: greater thickness can be achieved by the application of subsequent layers.

Substrates should be dry and not suffer, or be likely to suffer, from rising dampness. If necessary, suitable damp-proof membranes should be installed to prevent this. Substrates should not have a relative humidity greater than 80% at any time during the installation.

Properties

The values given below are typical figures achieved in laboratory tests. Actual values obtained on-site may show minor variations from those quoted.

Physical properties

Compressive strength

(BS 6319) part 2, 1983 : 40 N/mm² @ 7 days

Curing characteristics @ 35 °C

Pot life : 70 minutes

Initial hardness : 10 hours

Full cure : 7 days

Instructions for use

Surface Preparation

It is essential that Nitoflor EU50 is applied to sound, clean and dry surfaces in order that maximum bond strength is achieved between the substrate and the flooring system. All dust and debris should be removed prior to application of the product or its primer.

New concrete floors

Should be at least 21 days old (at 20°C) with maximum moisture content **not exceeding** 5%. Laitance deposits on new concrete floors are best removed by light grit blasting, mechanical scabbling or grinding.

Old concrete floors

Mechanical cleaning methods are strongly recommended on old concrete floors particularly where heavy contamination by oil and grease has occurred or existing coatings are present. These may well have been absorbed several millimetres into the concrete. To ensure adhesion, all contamination should be removed by the use of a proprietary chemical degreaser.

Priming

All surfaces treated with Nitoflor EU50 should be primed with a Nitocote Primer Sealer, an epoxy resin primer designed for maximum absorption and adhesion to concrete substrates. Add the entire contents of the smaller hardener tin to the base tin and mix thoroughly. Once mixed, immediately apply the primer in a thin continuous film to the clean prepared surfaces. Work the primer into the surface and avoid over application and ponding. On porous floors, Fosroc Primer Sealer will be absorbed very quickly leaving characteristic light coloured dry patches. It is recommended that a second priming coat is applied in such cases.

While still wet, dress the surface with ½kg/m² of antislip grain no. 3 to provide a key for the application of Nitoflor EU50. Ensure that the primer is touch dry prior to commencing application

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Mixing

It is important that Nitoflor EU50 is mixed correctly.

Suitable mixing equipment must be used, such equipment being defined as either a drill and Fosroc Mixing Paddle (MR4), or forced action mixers such as Creteangle, Mixall or similar machines. Where large volumes of product are required a small free fall concrete mixer may be used, however mix trials should be conducted to assess machine suitability.

Immediately prior to mixing the first batch of Nitoflor EU50 the internal surfaces of the mixer and any mixing blades should be 'wetted out' with Fosroc Solvent 102*. Only sufficient solvent should be added to the mixer to ensure complete wetting of the surfaces with any excess being discarded prior to the addition of the Nitoflor EU50.

Whilst the internal surfaces of the mixer are still wet with solvent empty the complete aggregate bag from the Nitoflor EU50 pack into the mixer. The aggregates should be blended dry for one minute prior to the addition of the resin from the Nitoflor EU50 pack. Empty the entire contents of the resin hardener component into the can containing the resin base component and mix until homogeneous. When mixed, the resin components are to be added to the aggregate in the mixer. Mixing of all components shall continue for a further 3-5 minutes, until such time as the resin has evenly coated all the aggregate.

Application

The mixed Nitoflor EU50 should be spread to uniform thickness on the primed surface using either a garden rake or the edge of a plastic trowel. The material should be thoroughly tamped to ensure complete compaction and finally finished to an **open** even texture using a wooden trowel. Screeding rods are useful to maintain a minimum compacted thickness of 10mm.

The material must be applied within the pot life after mixing (see "Properties"). After this time unused material should be discarded.

Overcoating

Overcoating of the Nitoflor EU50 with any other Fosroc floor system should not start until the Nitoflor EU50 is at least 24 hours old. The primers advocated by the flooring systems are to be employed prior to overcoating. It is very important that the application of Nitoflor EU50 be sealed with Nitoflor EU5** or Nitoflor EU10** prior to application of the primer.

Expansion joints

Expansion joints in the existing substrate should be continued through the Nitoflor EU50 and any subsequent topping, and filled to the required level with a suitable sealant from the Fosroc range - contact the local Fosroc office for further details

Cleaning

All tools and equipment should be cleaned immediately after use with Fosroc Solvent 102

Technical Support

Fosroc offers a comprehensive range of high performance, high quality flooring, jointing and repair products for both new and existing floor surfaces. In addition, the company offers a technical support package to specifiers, end-users and contractors, as well as on-site technical assistance in locations all over the world.

Limitations

- Nitoflor EU50 must not be used in external conditions.

Estimating

Supply

Nitocote Primer Sealer	: 1 & 4 litre packs
Nitoflor EU50	: 12 litre packs
Antislip grains No 3	: 20 kg packs
Fosroc Solvent 102	: 5 litre packs

Coverage

Nitocote Primer Sealer	: 4-5 m ² per litre
Nitoflor EU50	: 1.2 m ² / pack @ 10mm thickness

Note : The above coverage rates are given for guidance only as actual quantities used will vary on nature of substrate and conditions on site.



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Precautions

Health and safety

Nitoflor EU50, Nitocote Primer Sealer, Fosroc Solvent 102, should not come in contact with skin and eyes or be swallowed. Avoid prolonged inhalation of solvent vapours.

Some people are sensitive to epoxy resins, hardeners and solvents. Gloves, goggles and a barrier cream such as Kerodex Antisolvent or Rozalex Antipaint should be used. Ensure adequate ventilation and if working in enclosed areas use suitable breathing apparatus.

If mixed resin comes into contact with the skin, it must be removed before it hardens with a resin removing cream such as Kerocleanse Standard Grade Skin Cleanser or Rozaklens Industrial Skin Cleanser, followed by washing with soap and water. **Do not** use solvent.

Fosroc Solvent 102 should be washed from the skin immediately with soap and water.

Should accidental eye contamination occur with any of the above products, wash well with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately.

Do not induce vomiting.

Fire

Fosroc Solvent 102, is flammable. Do not expose to naked flames or other sources of ignition. **No smoking during use.** Containers should be tightly sealed when not in use. In the event of a fire, extinguish with a CO₂ or foam type extinguisher.

Flash points

Fosroc Solvent 102	:	33°C
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Also refer to the Material Safety Data Sheet.

Storage

Nitocote Primer Sealer and Nitoflor EU50 have a shelf life of 12 months when stored in a dry place below 35°C in their original, unopened packs.

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Additional Information

Fosroc manufactures a wide range of complementary products which include :

- waterproofing membranes & waterstops
- joint sealants & filler boards
- cementitious & epoxy grouts
- specialised flooring materials

Fosroc additionally offers a comprehensive package of products specifically designed for the repair and refurbishment of damaged concrete. Fosroc's 'Systematic Approach' to concrete repair features the following :

- hand-placed repair mortars
- spray grade repair mortars
- fluid micro-concretes
- chemically resistant epoxy mortars
- anti-carbonation/anti-chloride protective coatings
- chemical and abrasion resistant coatings

For further information on any of the above, please consult your local Fosroc office - as below.

* Denotes the trademark of Fosroc International Limited

† See separate 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 Service. **All Fosroc datasheets are updated on a regular basis. It is the user's responsibility to obtain the latest version.**

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