

Fosroc Nitoflor TF 120 UB



constructive solutions

Heavy duty polyurethane based floor screed, 5 mm to 12 mm thick, resistant to steam, hot water and chemicals

Uses

Nitoflor TF 120 UB is designed for use as heavy duty floor screed in environments where high resistance is required against impact, thermal shock, abrasion and chemicals. The thermal stability and chemical resistance makes it suitable for use in food processing areas, drink and beverage production areas, cold stores, freezer rooms, commercial kitchens and restaurants. It is particularly useful in areas when steam or hot water is required for cleaning.

Advantages

- Excellent mechanical properties
- High impact and abrasion resistance
- Resistant to thermal shock
- Resistant to steam and hot water cleaning
- Suitable for service range from -45°C to 115°C
- Resistant to freeze/thaw cycles
- Good resistance to a wide range of chemicals
- Antislip - provides safe, textured slip-resistant surface for pedestrian and vehicular traffic

Description

Nitoflor TF 120 UB is a polyurethane based floor screed designed for use at thickness between 5 mm and 12 mm. The product is formulated specifically to withstand thermal shock, freeze/thaw cycles and chemical attack. The product is supplied as a four-component system (including colour pack), pre-weighed for on-site mixing. Standard colours include brick red, grey and mid green.

Properties

The values given below are typical figures achieved in laboratory tests.

Compressive strength

(BS 6319) part 2, 1983 : 100 N/mm²

Flexural strength

(BS 6319) part 3, 1990 : 25 N/mm²

Tensile strength

(BS 6319) part 7, 1985 : 15 N/mm²

Impact resistance : No damage or deterioration
(BS 8204)

Resistance to fungal growth

(ASTM G21) : Passes

Resistance to elevated

temperatures (115°C) : No flow, softening, chalking or cracking
MIL-D-3134

Abrasion resistance : 0.05 grams loss
(ASTM D4060 CS17 wheel, 1kg weight @ 1000 cycles)

	20°C	35°C
Pot life	: 125 minutes	60 minutes
Initial cure	: 24 hours	12 hours
Full cure	: 7 days	5 days

Chemical resistance

Nitoflor TF 120 UB will resist spillage of the following chemicals at 25°C:

Inorganic

Sodium Hydroxide 40%, Sodium Chloride (sat.)
Chlorine Water

Organics

Glucose syrup (sat.), Sugar solution (sat.),
Citric acid (10%), Tartaric acid (10%),
Nicotinic acid (10%)

Alcoholic beverages

Wine, Brandy, Beer

Carbonated beverages

Pepsi / Coca Cola/ Mirinda / Fanta / 7 UP / Team

Fruit juices

Grape juice, Orange juice, Fruit cocktail, Apple juice,
Mango juice, Pineapple juice, Lemon juice

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Fats

Vegetable oil, Cheese, Butter

Sea food

Fish (varieties), Prawns (varieties), Fish liquid, Fish blood, Processed fish oil

Poultry

Chicken, Egg (yolk + white)

Meat

Beef, Sheep blood

Fuels

Petrol, Diesel, Engine oil, Hydraulic oil, Brake fluid, Coolant

Cleaning aids

Dishwashing liquid, Clorox, Jiff, Commercial detergents

Electrochemical solutions

Copper Sulphate 1M, Zinc Sulphate 1M

Note : The local Fosroc office should be consulted for additional chemicals, different concentrations or operating temperatures greater than 25°C.

All the above properties have been determined by laboratory controlled tests and success in use will be determined by the implementation of good house-keeping practices.

Instructions for use

Surface Preparation

It is essential that Nitoflor TF 120 UB 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 14 days old (at 20°C) with maximum moisture content not exceeding 5%. Laitence deposits on new concrete floors are best removed by light grit blasting, mechanical scabbling or grinding.

Old concrete floors

Again, 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, hot compressed air and Nitocote RI are recommended for this purpose. Proprietary chemical degreaser may be used on small areas of light contamination only.

Any damaged areas or surface irregularities should be repaired using one of the Nitoflor EU** range of products.

Steel surfaces

Steel surfaces should be degreased and grit blasted to SA2½ immediately prior to application. Clean steel surfaces should be primed with Nitocote Primer Sealer prior to the application of Nitoflor TF 120 UB.

Priming

All surfaces treated with Nitoflor TF 120 UB should be primed with Nitocote Primer Sealer, a solvent free epoxy resin primer designed for maximum absorption and adhesion to the substrate. Add the entire contents of the 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 puddling. On porous floors, Nitocote Primer Sealer will be absorbed very quickly leaving characteristic light coloured dry patches. It is recommended that a second priming coat is applied in these areas.

While still wet, dress the surface with ½kg/m² of Antislip Grain No. 3 to provide a key for the application of Nitoflor TF 120 UB. Ensure that the primer is touch dry prior to the application of Nitoflor TF 120 UB.

Mixing

It is important that Nitoflor TF 120 UB is mixed correctly.

Pour the entire colour pack into the base container and mix thoroughly with a slow speed electric drill fitted with a suitable Fosroc mixing paddle for 15-20 seconds or until the mix becomes homogeneous.

The entire contents of the hardener should then be poured into the base container and mixed thoroughly until homogeneous.

Pour the mixed base, hardener and colour pack slowly into



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a suitable forced action mixer such as Mixal, Cretangle or similar. A free fall mortar mixer is not suitable. Add the filler. Continue mechanical mixing for a further 2-3 minutes, until all components are thoroughly blended.

Application

The mixed Nitoflor TF 120 UB should be spread to uniform thickness on the primed surface using either a garden rake or the edge of a plastic trowel only when the primer is in a tacky condition. The material should be tamped with a wooden float to ensure complete compaction and finally finished to a closed even texture using a steel trowel. Screeding rods are useful to maintain a minimum compacted thickness of 5mm (5000 microns).

Once mixed, the material must be used within its pot life, after this time any unused material will have stiffened and should be discarded.

Expansion joints

Expansion joints in the existing substrate should be continued through the Nitoflor TF 120 UB topping, and filled to the required level with a suitable sealant from the Nitoseal* range incorporating the appropriate movement accommodation factor (MAF).

Sealing

Although Nitoflor TF 120 UB is impervious at 5mm thick, in constantly wet operation areas or where a high degree of cleanliness is required, it may be sealed with a mixed binding compound of Nitoflor TF 120 UB. This binder consists of base, hardener and colour pack (excluding filler). Alternatively Nitoflor TF 120 Sealer can be used which is the binder component as described without the filler. The preliminary application of Nitoflor TF 120 UB must have reached initial cure and high spots such as trowel marks rubbed down prior to the application of the Nitoflor TF 120 UB binder.

Cleaning

Nitocote Primer Sealer and Nitoflor TF 120 UB should be removed from tools and equipment with Fosroc Solvent 102* immediately after use. Hardened material can only be removed mechanically.

Maintenance

The service life of a floor can be considerably extended by good housekeeping. Regular cleaning should be carried out using a rotary scrubbing machine with a water-miscible cleaning agent.

Limitations

- Nitoflor TF 120 UB should not be installed at temperatures below 5°C.
- Fosroc does not recommend acid etching as a method of floor preparation. If used, the method should be approved by the project consultant.
- Nitoflor TF 120 UB should not be applied on to surfaces which are known to or likely to suffer from rising damp, osmosis or have a relative humidity greater than 75% as measured in accordance with BS 8203 Appendix A or by Hammond concrete/mortar moisture tester type COCO.
- Nitoflor TF 120 UB should not be applied to asphalt, unmodified sand/cement screeds, PVC tiles or sheet. For information on the suitability of other substrates, consult the local Fosroc office.
- Nitoflor TF 120 UB results in colour change in contact with oxidising acids, and lactic acid if not removed may cause blistering, recommend Nitoflor TF 100 UH for dairy industry.

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.

Estimating

Supply

Nitoflor TF 120 UB	:	12 litre packs
Antislip Grain No. 3	:	25 Kg bags
Nitocote Primer Sealer	:	1 and 4 litre packs
Nitocote TF 120 Sealer	:	4.5 litre packs
Fosroc Solvent 102	:	5 litre can

Coverage

Nitoflor TF 120 UB	:	1.2m ² /pack @ 10 mm thickness
Nitocote Primer Sealer	:	4 - 5 m ² /litre
Nitocote TF 120 Sealer	:	50 m ² /pack

Note : The coverage figures given are theoretical - due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced. Typically an additional 10% should be allowed for surface irregularities and wastage although this will vary with site conditions.



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Storage

Shelf life

All products have a shelf life of 12 months if kept in a dry store in the original, unopened packs.

Storage conditions

Store in dry conditions between 5°C and 30°C, away from sources of heat and naked flames, in the original, unopened packs. If stored at high temperatures the shelf life may be reduced.

Precautions

Health and safety

Nitoflor TF 120 UB, Nitocote Primer Sealer and Fosroc Solvent 102 should not come into contact with the skin and eyes, or be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. Some people are sensitive to resins, hardeners and solvents.

Wear suitable protective clothing, gloves and eye protection. If working in confined areas, suitable respiratory protective equipment must be used.

The use of barrier creams provide additional skin protection. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent.

In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately - do not induce vomiting.

Fire

Nitoflor TF 120 UB and Nitocote Primer Sealer are non-flammable.

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 points

Fosroc Solvent 102 : 33°C

Disposal

Spillages of component products should be absorbed onto earth, sand or other inert material and transferred to a suitable vessel. Disposal of such spillages or empty packaging should be in accordance with local waste disposal regulations.

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

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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