



Nitoflor TF510

(Formerly: Techfloor 510M)

Heavy duty, chemical and abrasion resistant epoxy floor screed

Uses

Nitoflor TF510 provides a high strength floor topping with exceptional resistance to attack from mechanical wear and chemical spillage. In addition to being impervious its use facilitates a safe slip resistant finish for personnel and vehicular traffic, and is ideally suited for:

- Heavy engineering plants and steelworks.
- Electricity substations and battery rooms.
- Chemical handling and process areas.
- Oil refineries and plating factories.
- Dairies and soft drinks factories.
- Car parks & garages ramps.

In areas where high degrees of cleanliness are required, the surface of Nitoflor TF510 can be sealed with either Nitoprime SF*†, Nitoflor FC50*† or Nitoflor FC25*† epoxy resin floor coatings.

Advantages

- Available in a wide range of colours.
- Low odour.
- Excellent abrasion and impact resistance.
- High degree of slip resistance, suitable for use in wet conditions.
- Excellent chemical resistance.
- Long service life - exceptional resistance to abrasion and a wide range of chemicals.
- Safe working environment - Fine slip resistant texture for both vehicular and pedestrian traffic.

Description

Nitoflor TF510 is a solvent-free combination of epoxy resin, modified hardener, filled with specially graded inert aggregates. It is supplied in pre-weighed units of three-part system, which are ready for on-site mixing and application.

Typical properties

Density	: 2.3 kg/ltr ± 0.05
Touch dry @ 23°C	: 3 - 5 Hours
Full Cure @ 23°C	: 7 days
Pot life @ 23°C	: 90 minutes
Solid content by weight	: 100 %
Compressive strength (7 Days ASTM C579)	: 58.38 N/mm ²
Flexural strength (7 Days ASTM D790)	: 20.02 N/mm ²
Modulus of Elasticity (7 Days ASTM D790)	: 1116.25 N/mm ²
Bond strength (7 Days ASTM D4541)	: 2.12 N/mm ²
Tensile strength (7 Days ASTM D638)	: 12.66 N/mm ²
Shore D Hardness (7 Days ASTM D2240)	: 90
Impact Resistance (EN ISO 6272)	: No Cracks
Abrasion resistance-weight loss (Wheel CS10, 1000 Cycles, Weight 1000 gm)	: 49.1 mg

Chemicals resistant (Exposure Time 7 days)

FORMALDEHYDE 40 %	: No Effect
SODIUM HYDROXIDE 50%	: No Effect
NITRIC ACID 10%	: No Effect
SKYDROL	: No Effect
SULPHURIC ACID 50%	: No Effect
HYDROCHLORIC ACID 50%	: No Effect

All the above properties have been determined by laboratory-controlled tests and are in excess of those expected in practice.

Nevertheless, success in use will be determined by the implementation of good housekeeping practices.

Instruction for use

Surface preparation

It is essential that Nitoflor TF510 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.

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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

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 millimeters into the concrete. To ensure adhesion, all contamination should be removed. Proprietary chemical degreaser may be used on small areas of light contamination only.

Priming

All surfaces treated with Nitoflor TF510 should be primed with Nitoprime SF, a solvent free 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 puddling. On porous floors, the Nitoprime SF will be absorbed very quickly leaving characteristic light-coloured dry patches. It is recommended that a second priming coat is applied in these areas.

The minimum over coating times will vary slightly according to the porosity of the substrate. However, they should be in accordance with the following ambient application temperatures

20°C	:	12-24 Hours
30°C	:	8-12 Hours

The primer should tacky during the application of Nitoflor TF510.

Mixing

It is important that Nitoflor TF510 is mixed correctly.

Pour the entire colour pack into the base container and mix for 15-30 seconds.

Add the entire contents of the hardener into the mix and stir for further 30 seconds.

Gradually empty the filler (aggregate) into the mix of base, and hardener and continue mechanical mixing, using a suitable mixing paddle fitted to a slow speed forced action mixer, for a further 2-3 minutes, until all components are thoroughly blended.

Application

The mixed Nitoflor TF510 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 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 4-5 mm.

Once mixed, the material must be used within the specified pot life (see under "Properties"). After this time, any unused material will have stiffened and should be discarded.

Limitations

Nitoflor TF510 should not be used when the temperature is below 5°C and falling. Do not mix part packs under any circumstances. Nitomortar TF510M should not be exposed to moving water during application. Exposure to heavy rainfall prior to the final set may result in surface scour. If any doubts arise concerning temperature or substrate conditions, consult the local Fosroc office.

Nitoflor TF510 should not be applied on to surfaces which are known to or likely to suffer from rising damp or have a relative humidity greater than 75%.

Fosroc does not recommend acid etching as a method of floor preparation. If used, the method should be approved by the project consultant.

Remove or isolate food stuffs during priming and application of the screed.

Consult your local Fosroc technical department where application or service temperatures are outside the range of 5°C - 40°C.

Generally, not suitable for external use. Contact local Fosroc office for further details.



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Technical Support

Fosroc offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.

Estimating

Supply

Nitoflor TF510 : 25.02 Kg 3 Packing system:
(1.860 kg Base – 0.960 kg
Hardener – 22.200 Kg Filler)

Coverage

Nitoflor TF510:

11.50 kg/m² for 5 mm thickness

23 kg/m² for 10 mm thickness

coverage for each 1mm thickness: 2.3 kg / m²

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.

Storage

Shelf life

Nitoflor TF510 has a shelf life of 12 months when stored in warehouse conditions below 35°C in the original, unopened packs.

Storage conditions

Store under warehouse conditions, below 35°C in the original, unopened packs.

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

Cleaning and disposal

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



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 recent version.**

Fosroc Chemtech
Construction Chemicals

Head Office

6th of October City, 3rd Industrial Zone, Arab Republic of Egypt.

Tel: (02) 38242045 / (02) 38242046

Fax: (02) 38242098

E-mail: Eqvnt@Fosroc.com

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