

## High build, solvent free textured finish epoxy coating

### Uses

Nitoflor FC150T provides a hard wearing, chemical and abrasion resistant textured floor finish. It is ideally suited for use in wet areas where a high degree of resistance to chemicals, oils and grease is required such as

- Dairies
- Soft drinks production facilities
- Chemical manufacturing plants
- Car parks and workshops

### Advantages

- Durable, low maintenance costs.
- Proven against a wide range of industrial chemicals.
- Solvent free - no odour during application.
- Liquid applied providing complete protection.
- Available in a wide range of colours to improve the working environment and identify slip hazard areas.

### Description

Nitoflor FC150T is a solvent free system based on epoxy resins and curing agents specially selected for their ability to withstand chemical attack. The system consists of pre-weighed base & hardener components and a Nitoflor colour pack, all of which contain reactive elements that are essential to the installation of the system.

### Specification

The epoxy resin floor coating shall be Nitoflor FC150T from Fosroc. The total dry film thickness of the coating shall be a minimum of 500 microns and shall have a compressive strength of 70 N/mm<sup>2</sup> at 7 days, flexural strength of 36 N/mm<sup>2</sup> and a tensile strength of 18.5 N/mm<sup>2</sup>. The floor shall be prepared and the coating mixed and applied in accordance with the manufacturer's current data sheet.

### Design criteria

Nitoflor FC150T is applied as a floor coating system comprising of one coat over the primed surface to a total thickness of 500 microns thick to provide a slip resistance textured finish system.

### Properties

The following values were obtained when tested at 20°C and 30°C.

Pot life @28°C :	20 mins
Mixed density :	1.45g/cc
Compressive strength:	3 days 60 Mpa 7 days 70 Mpa
Tensile strength:	18.5 N/mm <sup>2</sup>
Flexural strength:	36 Mpa
Bond strength to concrete:	1.5 N/mm <sup>2</sup>
Abrasion resistance 1000 cycles, 1kg load CS10 wheel:	<100mg loss.

### Chemical resistance

Fully cured Nitoflor FC150T samples have been tested in a wide range of aggressive chemicals commonly found in industrial environments. Tests were performed in accordance to ASTM D 543 standards over 168 hours (7 days) at 23°C±2

#### Acids

Lactic acid 10%	: Resistant
Citric acid 10%	: Resistant
Acetic acid 10%	: Resistant
Hydrochloric acid 50%	: Resistant
Sulphuric acid 50%	: Resistant
Nitric acid 25%	: Resistant

#### Alkalis

Sodium hydroxide 50%	: Resistant
Ammonia (0.880) 10%	: Resistant

#### Solvents

Petrol	: Resistant
Oil	: Resistant
Kerosene	: Resistant
Butanol	: Resistant
Skydrol	: Resistant
Industrial Methylated spirits	: Resistant

#### Others

Saturated sugar solution	: Resistant
Urea (saturated)	: Resistant
Bleach 5%	: Resistant

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.

## Instructions for use

### Surface preparation

The long term durability of any resin floor system is determined by the adhesive bond achieved between the flooring material and the substrate. It is most important therefore that substrates are correctly prepared prior to application.

### New concrete floors

These should normally have been placed for at least 28 days and have a moisture content of less than 5%. Floors should be sound and free from contamination such as oil and grease, mortar and paint splashes or curing compound residues. Excessive laitance can be removed by the use of mechanical methods. Dust and other debris should then be removed by vacuum cleaning.

### Old concrete floors

A sound, clean substrate is essential to achieve maximum adhesion. As for new concrete floors dry removal of laitance by use of mechanical methods is preferable. Oil and grease penetration should be removed by the use of a proprietary chemical degreaser or by hot compressed air treatment.

Any damaged areas or surface irregularities should be repaired using Nitomortar 25 or Nitofl or EU5.

### Priming

Priming is not normally required provided the substrate is sound, untreated and good quality nonporous concrete. If any doubts exist of the quality of the concrete, or if it is porous it should be primed with Nitoprime 25. Contact the local Fosroc office for advice.

Nitoprime 25 should be mixed in the proportions supplied. Add the entire contents of the hardener can to the base can. When thoroughly mixed, preferably using a slow speed drill and paddle, the primer should be applied in a thin continuous film, using rollers or stiff brushes. Work the primer well into the surface of the concrete taking care to avoid ponding or over application.

The primer should be left to achieve a tack-free condition before applying the top coat. A second coat of primer may be required if the substrate is excessively porous.

### Mixing the coating

The base and hardener components of Nitoflor FC150 should be thoroughly stirred before the two are mixed together. The entire contents of the hardener container should be poured into the base container and the two materials mixed thoroughly, then add the colour pot and mix for at least 3 minutes. The use of a heavy-duty slow speed, flameproof or air driven drill fitted with a Mixing Paddle is desirable. Mix these components in the quantities supplied taking care to ensure all container is scraped clean. Do not add solvent thinners at any time.

### Standard application

The mixed material must be used within its specified pot life.

The mixed material should be poured on to the primed surface and is spread evenly with a notch trowel as per the coverage mentioned and rolled with a texture roller and allowed to dry. Ensure that loose hairs on the roller are removed before use. A minimum film thickness of 500 microns should be applied. This can be increased where specifications demand

### Expansion joints

Expansion joints in the existing substrate must be retained and continued through the Nitoflor FC150T topping. Fosroc has a range of joint sealants specifically designed for flooring, contact local Fosroc office for advice.

### Cleaning

Tools and equipment should be cleaned with Nitoflor Sol\* immediately after use. Spillages should be absorbed with sand or sawdust and disposed of in accordance with local regulations.

### Limitations

- Nitoflor FC150T should not be applied on to surfaces known to, or likely to suffer from, rising dampness, potential osmosis problems or have a relative humidity greater than 75% as measured in accordance with BS 8203 Appendix A, or Protimeter thermo hygrometer.
- Fosroc does not recommend acid etching as a method of floor preparation. If used, the method should be approved by the project consultant.
- In common with all epoxy materials, some slight shade changes may be experienced over the long term when placed in adverse exposure conditions. Any such change in shade is not regarded as being detrimental to performance.
- In case product is applied in areas of extreme temperature and high humidity, glossiness of product may be affected.

## 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

Nitoprime 25	:	1 & 4 litre packs
Nitoflor FC150T (Including colour pack)	:	4.8 litre packs
Nitoflor Sol	:	5 & 20 litre cans

### Standard coverage

Nitoprime 25	:	5.5 - 6.5 m <sup>2</sup> /litre
Nitoflor FC150T	:	9.0 - 9.5 m <sup>2</sup> /pack

\* Depending on the type of texture required.

Note: Coverage figures given are theoretical - due to wastage factors and the variety and nature of substrates, practical coverage figures may be reduced, this will vary with site and application conditions.

## Storage

### Shelf life

Nitoflor FC150T 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.

## Precautions

### Health and safety

Nitoflor FC150T, Nitoprime 25 and Nitoflor Sol 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 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 followed by washing with soap.

Should accidental eye contamination occur, wash well with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately. Do not induce vomiting.

## Fire

Nitoprime 25 and Nitoflor Sol are flammable. Do not expose to naked flames or other source of ignition. No smoking during use. Containers should be tightly sealed when not in use. In the event of a fire, extinguish with CO<sub>2</sub> or foam.

## Flash points

Nitoprime 25	:	57°C
Nitoflor Sol	:	33°C

# Nitoflor FC150T

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**FRANKLIN FLOOR TECH**  
**OFFICE ADDRESS ADDRESS:**  
**HOUSE# 553, SHAHINBAG, TEJGAON, DHAKA 1215, BANGLADESH.**  
**PHONE: 01715-289292 E-MAIL:CHASHIMASUM@GMAIL.COM,**  
**WEBSITE : WWW.FRANKLIN.COM.BD**