

Nitoflor TF 6000 UW

(Formerly Nitoflor Uragard HD)



constructive solutions

Heavy duty polyurethane based floor screed, 6 mm - 8mm thick, and topping

Uses

Nitoflor TF 6000 UW 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, dairies, cold stores, freezer rooms, commercial kitchens and restaurants. It is particularly useful in areas when steam or hot water is required for cleaning.

Advantages

- Fast curing/single application - minimises down time
- Excellent mechanical strength - high abrasion and impact resistance
- Low modulus - resistant to thermal shock
- Excellent chemical resistance - including organic acids
- Resistant to steam and hot water cleaning
- Seamless - prevents ingress of dirt/bacteria

Description

Nitoflor TF 6000 UW is polyurethane based floor screeds designed for use at thickness between 6 mm to 8 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-weighted for on-site mixing.

They consist of mineral aggregates bound together with pigmented polyurethane resin. The full system comprises:-

Nitoprime 31
Nitoflor TF 6000 UW Hardener
Nitoflor TF 6000 UW Base
Nitoflor TF 6000 UW Aggregate

A coving mortar is available to enable integral coves to be constructed if required.

Technical support

Fosroc offers a comprehensive range of high performance, high quality, construction products. In addition to the wide range of quality products, Fosroc offers a technical support package to specifiers and contractors which includes assistance with product selection and technical advice from staff with unrivalled experience in the industry.

Typical properties

The values given below for typical properties are average figures achieved in laboratory tests at 20°C. As such, actual values obtained on site may show minor variations from those quoted.

Physical properties

Compressive strength : >70 N/mm²
(BS 6319) part 2

Flexural strength : >20 N/mm²
(BS 6319) part 2

Tensile strength : >12 N/mm²
(BS 6319) part 2

Temperature resistance : -45 °C to 120 °C

Bond strength : >Cohesive strength of concrete

Impact resistance : < 0.5 mm
(BRE Screed Tester)

Abrasion resistance by Taber
(Loss per 1,000 cycles in mg/1,000 gm load)

H22 wheel to ASTM D 4060 : 30

Pot life @ 28°C : 15 minutes

Water absorption to Campden Test
(ASTM D 4060) : Nil

Coefficient of thermal Expansion (ASTM C 531) : 1.7 X 10⁻⁵/°C

Anti-Microbial Growth Campden Test (ISO 846)

P. aeruginosa : negative growth

S. aureus : negative growth

S. cerevisiae : negative growth

A. niger : negative growth

Specification clauses

Floor areas so designated should be surfaced with Nitoflor TF 6000 UW as manufactured by Fosroc Ltd. The product should be applied in accordance with the manufacturer's instructions.

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Chemical properties

Nitoflor TF 6000 UW will resist spillage of following chemicals at 25°C

Organic chemicals

Nicotinic acid (10%)

Lactic acid (20%)

Acetic acid (10%)

Tartaric acid (20%)

Citric acid (10%)

Urine

Fats and cooking oil

Sugar solution

Glucose syrup

Sodium benzonate

Solution

Starch solution

Inorganic chemical

Hydrochloric acid (15%)

Nitric acid (15%)

Sodium hypo chlorite (5%)

Sodium hydroxide (sat.)

Potassium hydroxide (sat.)

Sulphuric acid (25%)

Detergent solution

Ammonia solution (pure)

Table salts solution (sat.)

Note: Full chemical resistance is achieved after seven days at 23°C.

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

Bay edges

Where bay edges are likely to suffer particularly heavy wear or impact and where saw-cut transverse control joints are to be located, it is desirable to give these areas additional protection, by one of the following methods prior to full treatment of the entire surface.

Application instruction

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

The new concrete floor should be at least 28 days old and give a hygrometer reading not exceeding 75% RH when tested in accordance with BS 8203 Appendix A. They should be free from contamination such as oil and grease, mortar and paint splashes or curing compound residues. Laitance should be removed by light mechanical scrubbing/grinding or grit blasting. Light laitance can be removed by acid etching with Fosroc Acid Etch followed by thorough neutralization with clean water (check with indicator paper). Vacuum cleaning and then allowing the surface to dry.

If movement or cracking of the substrate takes place after application then reflective cracking of the topping may occur. All known expansion joints should be maintained in the topping.

Old concrete floors

Where deep-seated contamination has occurred mechanical methods such as blasting, grinding or scrubbing should be used to provide a suitable clean surface. Nitoflor TF 6000 UW should not be applied to the following substrates:-

Asphalt

**Unmodified sand cement screeds.
P.V.C tiles or sheet.**

For information on the suitability of other substrates consult Fosroc. Nitoflor TF 6000 UW should not be installed at temperatures below 5°C.

Mixing

In a separate mixing vessel, use a slow speed drill and jiffy mixer to mix the base and hardener for at least 3 minutes. Mix these components in the quantities supplied taking care to ensure all containers are scraped clean. Do not add solvent thinners at any time and should not part mix.

Priming

Only surfaces which are very porous and those subjected to acid attack should be primed with Nitoprime 31.

Nitoprime 31 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 Jiffy mixer, 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 puddling or over application.

Laying



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Nitoflor TF 6000 UW should immediately be spread over the primed substrate to the required thickness using a steel trowel light roll over the finish surface with Mohair Roller.

Nitoflor TF 6000 UW should only be applied by specialist contractors who must follow the product application guide. Fosroc works with a network of such specialist applicator who have been fully trained in the application procedures involved.

Installation time will vary with site conditions, the area involved and the system chosen.

Limitations

Nitoflor TF 6000 UW should not be applied on to surfaces known to suffer from rising damp conditions or having a relative humidity of greater than 75% as measured in accordance with BS8203 Appendix A or by a Vaisala Thermo hygrometer type HMI 31.

Storage

All elements of the Nitoflor TF 6000 UW system should be stored in sealed containers in warehouse conditions at temperatures between 10°C and 30°C. Under these conditions they have a shelf life of 12 months.

Estimating

Nitoflor TF 6000 UW are supplied in kit format as follows:-

Pigmented resin	5.4 kg
Aggregate	26.6 kg
Total net weight of kit is	32.0 kg
Nitoprime 31	is supplied as a two part mix
Total net weight	5.0 kg

The following figures are based upon coverage rates on a smooth surface. Typically an additional 10% should be allowed for surface irregularities and waste. These factors will vary with site conditions.

Material consumption per pack for stated thickness.

Nitoprime 31	25 m ²
6 mm TF 6000 UW	2.66 m ²
8 mm TF 6000 UW	2.00 m ²

Precautions

Health and safety

Nitoflor TF 6000 UW Binder and Nitoprime 31 should not come into contact with the skin and eyes or be swallowed. Avoid inhalation. Harmful effects may be caused during application and cure. See product Material Safety Data Sheet for operator precautions.

Some people are sensitive to polyurethane resins and hardeners. Gloves, goggles and barrier cream such as Kerodex Antisolvent or Hozalex Anti-paint should therefore be used. Ensure adequate ventilation.

If mixed resin comes into contact with 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. Contamination of skin with any of the above component products should be removed immediately with soap and water.

Should accidental eye contact 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.

Maintenance

The service life of a floor can be considerably extended by good housekeeping and regular cleaning. Nitoflor TF 6000 UW may be cleaned by a rotary scrubbing machine with a water miscible cleaning agent or by hot water washing at temperatures up to 100°C or cleaned by steam.

Fire

Do not expose to naked flames or other sources of ignition. No smoking. Containers should be lightly sealed when not in use. In the event of fire, extinguish with CO₂ or foam.

Flash points

Nitoflor TF 6000 UW Binder :	48°C
Nitoprime 31:	38°C
Solvent 102:	33°C

Refer to the relevant products Material Safety Data Sheet for additional information.

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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
- specialized flooring materials

Fosroc additionally offers a comprehensive package of products specifically designed for the repair and refurbishment of damaged concrete. Fosroc 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.



Fosroc (Thailand) Limited

40/14 Moo.12 Bangna Towers C,
16th Floor, Unit A.,
Bangna-Trad Rd., km.6.5
Bangkaew, Bangplee,
Samutprakarn 10540 Thailand

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 Services, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification of information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation of information given by it.

telephone:
+66 (0) 2751 9300-2

fax:
+66 (0) 2751 9303

email:
thailand@fosroc.com