



# Nitoflor® Uragard TF

(Formerly Uragard TF)

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

## Uses

Nitoflor Uragard TF 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 Uragard TF 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.

<b>Compressive strength</b>	
<b>(BS 6319) part 2, 1983</b>	: 100 N/mm <sup>2</sup>
<b>Flexural strength</b>	
<b>(BS 6319) part 3, 1990</b>	: 25 N/mm <sup>2</sup>
<b>Tensile strength</b>	
<b>(BS 6319) part 7, 1985</b>	: 15 N/mm <sup>2</sup>
<b>Impact resistance</b>	: No damage or deterioration
<b>Resistance to fungal growth</b>	
<b>(ASTM G21)</b>	: Passes
<b>Resistance to elevated temperatures (115°C)</b>	
<b>MIL-D-3134</b>	: No flow, softening, chalking or cracking

## Abrasion resistance

**(ASTM D4060 @ 1000 cycles) :** 0.05 grams loss

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

## Chemical resistance

Nitoflor Uragard TF 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

### 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

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## Cleaning aids

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Dishwashing liquid, Clorox, Jiff, Commercial detergents

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## Electrochemical solutions

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Copper Sulphate 1M, Zinc Sulphate 1M

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**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 housekeeping practices.

## Instructions for use

### Surface Preparation

It is essential that Nitoflor Uragard TF 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 Uragard TF.

## Priming

All surfaces treated with Nitoflor Uragard TF 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 Uragard TF. Ensure that the primer is touch dry prior to the application of Nitoflor Uragard TF.

## Mixing

It is important that Nitoflor Uragard TF 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 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 Uragard TF 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.



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## Expansion joints

Expansion joints in the existing substrate should be continued through the Nitoflor Uragard TF 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 Uragard TF 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 Uragard TF. This binder consists of base, hardener and colour pack (excluding filler). The preliminary application of Nitoflor Uragard TF must have reached initial cure and high spots such as trowel marks rubbed down prior to the application of the Nitoflor Uragard TF binder.

## Cleaning

Nitocote Primer Sealer and Nitoflor Uragard TF should be removed from tools and equipment with Nitoflor Sol 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 Uragard TF 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 Uragard TF 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 Thermohygrometer.
- Nitoflor Uragard TF 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 Uragard TF is subjected to colour change when in contact with oxidising acids.

## 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

<b>Nitoflor Uragard TF</b>	:	12 litre packs
<b>Antislip Grain No. 3</b>	:	20 Kg bags
<b>Nitocote Primer Sealer</b>	:	1 and 4 litre packs
<b>Nitoflor Sol</b>	:	5 litre can

### Coverage

<b>Nitoflor Uragard TF</b>	:	1.2m <sup>2</sup> /pack @ 10 mm thickness
<b>Nitocote Primer Sealer</b>	:	4 - 5 m <sup>2</sup> /litre

**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

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.



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## Precautions

### Health and safety

Nitoflor Uragard TF, Nitocote Primer Sealer and Nitoflor Sol 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 Uragard TF and Nitocote Primer Sealer are non-flammable.

Nitoflor Sol is flammable. Keep away from sources of ignition. No smoking. In the event of fire extinguish with CO<sub>2</sub> or foam. Do not use a water jet.

### Flash points

Nitoflor Sol	:	33°C
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### 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.

† See separate data sheet

® Denotes the trademark of Fosroc International Limited

### Important note :

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation specification or 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 or information given by it.

#### telephone

++91 80-22240018/120

#### fax

++91 80-22233474

#### e-mail

india@fosroc.com

### Regional Offices



### Fosroc Chemicals (India) Pvt. Ltd.

#### Head Office

111/3, Hafeeza Chamber II Floor,  
K H Road, PBNo. 2744, Bangalore 560027

[www.fosroc.com](http://www.fosroc.com)

#### Bangalore

Shankar House, IV Floor  
1 & 18, RMV Extension  
Bangalore 560 080  
Ph:080-2361 3161/2361 2004  
Fax : 080-2361 7454  
email: Bangalore@fosroc.com

#### Mumbai

208/209, Persepolis  
Sector 17, Vashi  
Navi Mumbai 400 703  
Ph:022-2789 6412/14  
Fax: 022 - 2789 6413  
email:Mumbai@fosroc.com

#### Delhi

First floor,1/2 East Patel Nagar  
Opp: Vivek Cinema, Main Patel Rd  
New Delhi 110 008  
Ph:011-25884903/4  
Fax: 011- 25884422  
email:Delhi@fosroc.com

#### Kolkata

30/B Jodhpur Park  
Ground Floor  
Kolkata 700 068  
Ph: 033 2472 5482  
Fax: 033-2472 9921  
email:Kolkata@fosroc.com

●Ahmedabad : (079) 26762799 ●Ankleshwar :(02646) 220704/224687 ●Bhubaneshwar : (0674) 2521176 ● Chennai (044) 24899949/24853383  
●Chandigarh : (0172) 2639360 ● Cochin : (0484) 2356668 ●Coimbatore : (0422) 2472966 ●Goa : (0832) 2542465 ●Guwahati (0361) 2548793  
●Hyderabad : (040) 27662324/27662425 ● Hubli (0836) 3402597 ●Indore : (0731) 504339/5061477 ● Jaipur : (0141) 2235349 ● Lucknow :(0522) 22239044 ● Nagercoil (04652) 2224849 ● Mangalore: (0824) 22272234 ● Visakhapatnam : (0891) 2564850

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