



# Nitoflor FC140

## High performance epoxy resin floor coating

### Uses

To provide a hard wearing, easily cleaned, attractive floor coating in areas where high resistance to chemical attack is required. It is suitable for use in production assembly areas, workshops, dairies, soft drinks production and bottling plants, breweries, kitchens, showrooms etc. It is particularly suitable in wet working areas and where chemical spillage is likely, e.g. plating shops, processing plants, dye works etc

It can also be used as a decorative final coating and sealer for Nitoflor TF5000FG heavy duty epoxy floor screed to provide a more decorative and easily cleaned surface.

### Advantages

- Hard wearing - durable, low maintenance costs
- High resistance to a wide range of industrial chemicals
- Hygienic - impervious finish provides easily cleaned surface
- Attractive - available in a range of colours to improve the working environment

### Standards compliance

Nitoflor FC140 has been tested according to BS 4247, Part 1 - Nuclear Decontamination parts A and B. In both instances a "good" classification was obtained.

Nitoflor FC140 complies with BS 476, Part 7:1971 - Class 1 spread of flame.

### Description

Nitoflor FC140 is a two-component solvent based, epoxy resin coating system supplied in pre-weighed packs ready for on-site mixing and use.

The cured film forms a hard but flexible coating with excellent adhesion to clean concrete, sand/cement and granolithic screeds, and certain metal surfaces. It cures to a semi-gloss, impervious finish which is easily cleaned.

The product is available in a wide range of standard colours and is also available in a clear grade.





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## 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.

## Design criteria

Nitoflor FC140 is designed for application in two coats to achieve an approximate total dry film thickness of 100 microns.

Substrates should be dry and not suffer, or be likely to suffer, from rising damp. If necessary, suitable damp-proof membranes should be installed to prevent this. Substrates should not have a relative humidity greater than 75% at the time of installation.

## Properties

The values given below are average figures achieved in laboratory tests at 20°C and 35°C. Actual values obtained on site may show minor variations from those quoted.

	@20°C	@35°C
Pot life*:	4 hrs	1.5 hrs
Tack free time:	4-6 hrs	2-4 hrs
Time between coats:	6-24 hrs	4-16 hrs
Initial hardness:	24 hrs	18 hrs
Full cure:	7 hrs	5 hrs
Dry film thickness (2 coats):	100 microns (approx)	

\*Note that after the pot life has expired, the material, although not hardened, increases in viscosity and the characteristics of the product change. Excess material should be discarded after this point.

## Chemical properties

Nitoflor FC140 is resistant to a wide range of chemicals. Specific data is available on request.

Good housekeeping is essential in areas where chemical spillage is likely to occur. It is especially important that such spillage should not be allowed to dry since very much higher concentrations of chemicals will then result.

## Maintenance

The service life of a floor can be considerably extended by good housekeeping practices. Regular cleaning of Nitoflor FC140 may be carried out using a rotary scrubbing machine with a water miscible cleaning agent or by hot water washing at temperatures up to 50°C.

## Specification clauses

### Epoxy floor coating

The floor coating shall be Nitoflor FC140, a two-component solvent based epoxy suitable for application by brush or lambswool roller. The coating shall be applied in two coats to achieve a total dry film thickness of approximately 100 microns.

## Application instructions

### Surface preparation

It is essential that Nitoflor FC140 is applied to sound, clean, dry substrates in order to achieve maximum adhesion between the floor coating and substrate.

Because Nitoflor FC140 is a relatively thin coating, the substrate must be fine textured. Any surface irregularities may show through causing excessive wear on high spots and changing the perceived colour of the coating.

### New concrete floors

Unless specially water-reduced, the 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. Dry removal of laitance by light grit-blasting is preferable but, where this is not feasible, treat with Fosroc Acid Etch, followed by thorough rinsing with water and complete drying. Dust and other debris should then be removed by vacuum brush.

### Old concrete floors

A sound, clean substrate is essential to achieve maximum adhesion. Light grit blasting or acid etching should be carried out as for new concrete floors. Oil and grease penetration should be removed by hot compressed air treatment.

Very porous surfaces or surfaces which are damp (RH 75-85%) should be primed with a single coat of Nitoprime 25.

### Steel substrates

Steel substrates should be grit blasted to surface quality SA 2 1/2 (BS 4232: Second Quality) and primed with a single coat of Nitoprime EP203.

### Epoxy screed

Nitoflor FC140 can be applied to Fosroc epoxy resin screeds. High spots or trowel marks should be rubbed down and dust and other debris removed by vacuum cleaning.

### Mixing

The individual components of Nitoflor FC140 should be thoroughly stirred before the two are mixed together. The entire contents of the hardener container should be poured





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into the base container and the two materials mixed thoroughly 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.

## Coating

The mixed Nitoflor FC140 should be applied to the prepared surface using a brush or lambswool roller. Ensure that the area is completely coated and that 'ponding' of the material does not occur.

The second coat may be applied as soon as the first coat has initially dried (typically 12 to 18 hours). The time will be dependent on the type of surface and the ambient conditions.

## Cleaning

Nitoflor FC140 should be removed from tools and equipment with Fosroc Solvent 102 immediately after use. Hardened material can only be removed mechanically.

## Limitations

Nitoflor FC140 should not be applied onto surfaces known to or are likely to suffer from rising damp or have a relative humidity greater than 75% as measured in accordance with BS 8202 Appendix A or by a Vaisala thermohygrometer type HMI 31.

The durability of Nitoflor FC140 in foot traffic areas is reduced in areas of very heavy traffic such as around work benches, drinks machines etc. It is advisable to either:-

- specify additional coats in such areas or,
- specify a higher build system such as Nitoflor FC150 in such areas (see separate data sheet).

Nitoflor FC140 should not be applied to asphalt floors or PVC tiles or sheet.

Nitoflor FC140 should not be installed at temperatures below 5°C.

## Estimating

### Supply

Nitoflor FC140:	5 kg packs
Fosroc Solvent 102:	5 litre jerrican
Nitoprime 25:	5 kg packs

### Coverage

Nitoflor FC140:	40 m <sup>2</sup> /pack (per coat)
Nitoprime 25:	5 m <sup>2</sup> /kg

## Storage

### Shelf life

Nitoflor FC140 and Fosroc Solvent 102 have a shelf life of 12 months if kept in a dry store between 5°C and 30°C in the original, unopened packs.

### Storage conditions

The product should be stored in accordance with the UK highly flammable liquids and liquified petroleum gas regulations.

## Precautions

### Health and safety

Nitoflor FC140, Nitoprime 25 and Fosroc Solvent 102 should not come into contact with 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 FC 140, Nitoprime 25 and Fosroc Solvent 102 are 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 FC140:	23°C
Fosroc Solvent 102:	33°C
Nitoprime 25:	59°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 authority regulations.

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



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## Additional information

Fosroc manufactures a wide range of products specifically designed for the specialist flooring industry. These include liquid-applied, chemically-resistant coatings, self-levelling epoxy toppings and trowel-applied, highly abrasion-resistant screeds. Among them, are products suitable for use in the food and drink industry, the pharmaceutical industry and in areas subjected to heavy industrial use. Where the control of static electricity is an important consideration, Fosroc have developed conductive and dissipative seamless floor system. In addition, a wide range of complementary products is available. This includes joint sealants, waterstops, waterproofing membranes and specialised products for the repair and refurbishment of damaged reinforced concrete.

For further information about products or publications, contact the local Fosroc office.

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**FOSROC**



**PT. Fosroc  
Indonesia**

Jl. Akasia II Blok A8 No. 1  
Delta Silicon Industrial Park  
Lippo Cikarang  
Bekasi 17550  
Indonesia

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

## Important note

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### telephone:

+ 62 21 897 2103  
+ 62 22 520 1308  
+ 62 31 502 9142

### fax:

+ 62 21 897 2107  
+ 62 22 522 2713  
+ 62 31 502 2711

### email:

[indonesia@fosroc.com](mailto:indonesia@fosroc.com)



Registered Office: Jl. Akasia II Blok A8 No. 1, Delta Silicon Industrial Park, Lippo Cikarang, Bekasi 17550, Indonesia

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