

Fosroc® Nitoflor® FC150 HP-FC



constructive solutions

(NOTE: this new formulation; is NOT compatible with the previous base & hardeners)

Fast cure, solvent free epoxy floor coating

Uses

A heavy duty, 100% solids, epoxy coating for concrete and steel floors that is attractive and easily cleaned. Highly resistant to chemical attack and the action of vehicular and foot traffic.

Suitable for use in wet areas where strict levels of hygiene and cleanliness are required or where chemicals are manufactured, spilled or are an integral part of the process.

Used in the food and chemical industry, hospitals, schools, kitchens and many other installations.

Specially selected and processed grades of quartz sand slip resistant grits are available to make safe all types of working areas for both personnel and plant.

Nitoflor FC150 HP-FC may be used without slip resistant grit as a coating on epoxy floor screeds or as a high quality protective coating for bunds, coves, drains, etc.

Advantages

- 100% solids - high-build, solvent free floor coating suitable for application in confined areas or where volatile emissions are of concern
- Special fast cure - allowing rapid plant turnaround
- Chemically resistant - good resistance to a wide range of industrial chemicals
- Slip resistant - provides safety for plant and personnel
- Economical - long lasting, easily maintained, saves on cleaning and maintenance costs
- Attractive - available in a wide range of colours to enhance the working environment
- HACCP certified for use in food handling areas.

Standards compliance

HACCP certification for SSZ (Splash or Spill Zone) - items are suitable for use in food handling areas such as kitchens, production areas.



Copies of the certification are available from the Fosroc website.

Description

Nitoflor FC150 HP-FC is a three-component solvent-free epoxy resin treatment consisting of base, hardener and colour pots. The system also allows the incorporation of slip resistant grits and provides a high degree of chemical and abrasion resistance.

The finished floor is a gloss textured surface coloured to individual requirements. It has excellent adhesion qualities, is impervious and easily cleaned.

Nitoflor FC150 HP-FC is available in a range of colours using Nitoflor Colour Pots.

NB: Care has been taken to ensure that colours manufactured under modern process are as close as possible to samples available. However, it should be noted that no guarantee can be given of exact colour matching.

An on-site trial should be carried out to ensure that the correct grade of grit is chosen so that the required degree of slip resistance and aesthetic appearance is obtained. Consult Fosroc when alternative specialised grits are required.

Design Criteria

Nitoflor FC150 HP-FC is designed for application on floors in two coats to achieve an approximate total dry film thickness of 400-450 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 have a moisture content less than 5% at the time of installation.

Properties

The values given below are average figures achieved in laboratory tests. Actual values obtained on-site may show minor variations from those quoted.

Physical properties

	@ 20°C	@ 35°C
Pot life:	25 - 30 mins	10 - 15 mins
Time between coats:	3 - 12 hours	2 - 12 hours
Cure time* -		
foot traffic:	6 hours	4 hours
vehicular traffic:	12 hours	10 hours
chemical:	4 days	4 days
Dry film thickness (2 coats):	400 microns (approx)	
VOC content:	45g / litre	
Service temperature range:	<50°C	
Line-marking paint adhesion to coating:	Excellent	
Dulux Roadmaster A1		

* Cure times will be application conditons dependant.

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Chemical resistance

Nitoflor FC150 HP-FC is resistant to a wide range of chemicals. Resistance to spillages (examples only)

- Toluene
- Acetic Acid 5%
- Sodium Hydroxide 30%
- Ammonia 20%
- Vegetable oils
- Hydrochloric acid
- Sulphuric Acid 30%
- Skydrol
- Sodium chloride
- Kerosene
- Petrol
- Lactic acid 5%

Surface staining may result from exposure to some aggressive chemicals. 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.

Light Reflectance Value (LRV): BS 8493:2008

Nitoflor FC150 HP-FC Black:	4.28%
Nitoflor FC150 HP-FC Fern Green:	18.09%
Nitoflor FC150 HP-FC Harbour Blue:	17.70%
Nitoflor FC150 HP-FC Koala Grey:	33.77%
Nitoflor FC150 HP-FC Light Grey Blue:	44.09%
Nitoflor FC150 HP-FC Pastel Grey:	66.01%
Nitoflor FC150 HP-FC Raspberry:	10.43%
Nitoflor FC150 HP-FC Safety Yellow:	52.50%
Nitoflor FC150 HP-FC Sand:	57.50%
Nitoflor FC150 HP-FC Silver Grey:	63.53%
Nitoflor FC150 HP-FC Curtain Call:	13.85%
Nitoflor FC150 HP-FC Off White:	86.21%

Slip resistance test results: AS/NZS 4586:2013

System Used	Appendix A Wet Pendulum Test	Appendix B Dry Floor Friction Test
Nitoflor FC150 HP-FC with no additional Anti-Slip grit	P1	D1
Nitoflor FC150 HP-FC saturated with Nitoflor Anti-Slip Grains 01	P5	D1
Nitoflor FC150 HP-FC saturated with Nitoflor Anti-Slip Grains 02	P5	D1

The slip test results shown are available on request. The results were achieved in controlled laboratory conditions; reasonable variations are to be expected on site, due to site-specific conditions and variances in application. Application of the proposed system on a small test area on site, prior to commencement of works is highly recommended, to confirm actual slip resistance.

Application Instructions

Surface preparation

It is essential that Nitoflor FC150 HP-FC is applied to sound, clean, dry substrates in order to achieve maximum adhesion between the floor coating and substrate.

The substrate should be free from all loose materials, old coatings, curing compounds, release agents, laitance, oil and grease) either via light grit blasting or grinding to achieve CSP profile of 2-3 (As per ICRI guidelines). Dust and other debris removed by vacuum cleaning. Substrate moisture content should be <5% as measured by using Tramex CMEX11 moisture meter.

Because Nitoflor FC150 HP-FC is a 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. If surface preparation produces an excessively deep profile on the substrate, advice should be sought from Fosroc regarding suitable methods to produce a smooth and level substrate.

Steel should be sandblasted or abraded to remove all scale, rust, grease, etc.

Priming

On very porous concrete an additional (3rd) coat of Nitoflor FC150 HP-FC may be required or the area may need to be primed with Nitomortar 903.

New concrete floors

Unless water-reduced, floor should be at least 28 days old and give a moisture content reading not exceeding 5% using a Tramex CMEX11 moisture meter. If substrate moisture reading is >5% consult Fosroc for advice

Old concrete floors

A sound, clean substrate is essential to achieve maximum adhesion. Light grit blasting or grinding should be carried out as for new concrete floors.

Epoxy screeds

Nitoflor FC150 HP-FC may be applied to Fosroc epoxy resin screeds. High spots or trowel marks should be ground / sanded down and dust and other debris removed by vacuum cleaning. Unless the epoxy screed is less than 2 days old, the entire surface should be sanded and solvent wiped before applying the Nitoflor FC150 HP-FC.

Mixing

Stir the base and hardener components prior to mixing. Into the base container add one 500g Nitoflor Colour Pot and mix the material for 1 minute using a slow speed heavy duty drill fitted with a spiral mixing paddle. Add the hardener component and continue to mix for a further 3 minutes. Apply mixed product to floor immediately.

Do not add solvent to the mix. Adding solvent can affect the cure and intercoat adhesion and is not required with this new formulation.

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Note: ensure only “new formula” base and hardeners are used together. Check material codes for each with those stated in the Supply section of this TDS.

IMPORTANT: Once mixed the product should be poured into flat, open paint trays to maximise pot life working time. Holding the product in the original mixing can will lead to an exothermic reaction which will significantly reduce the pot life.

Application

First coat

Apply Nitoflor FC150 HP-FC by brush or roller at a rate of 4 - 6 m²/litre or slightly heavier if slip resistant grit is to be used.

When a slip resistant finish is required, the appropriate grit should be applied as soon as sufficient area has been coated. Nitoflor Anti-Slip Grains should be lightly and uniformly broadcast over the wet Nitoflor FC150 HP-FC. The size and distribution rate of the grit should be in accordance with that prior agreed to by the client or their representative.

If any areas have lost their gloss, recoat lightly before applying grit.

When the first coat is hard (typically 3 hours after application, but not later than 24 hours after application), sweep off all excess grit. For good appearance and easier cleaning, it is important that all loose grit be removed at this time.

Second coat

Mix the liquids as before and using a paint roller (mohair is recommended) apply a coat over the grit. (See 'Coverage'). It is important that this final coat be uniform but the exact rate of application may be varied to suit the finish required. A heavy final coat will give an easier cleaned floor but a fairly light coat will give the best slip resistance in wet conditions.

Brushes and rollers must be washed thoroughly using Fosroc Solvent 10, at least once each hour and immediately after finishing. Rollers should be discarded after use.

At temperatures of 20°C - 30°C ordinary light traffic may be permitted after 12 hours; however, in cold weather a longer period before use may be required. For best results, do not apply below 7°C. Allow 4 days (at 20°C) before subjecting to chemical attack or severe abrasion.

Intending users should always consult Fosroc if there is any doubt as to whether a proposed application may involve conditions other than 'ordinary'. Such extraordinary conditions include:

- Unusually cold condition during curing (<7°C)
- Above ambient temperatures of service (50°C) e.g. floors subject to hot water
- Severe, or unusual, chemical attack
- Severe or unusual conditions of service beyond the limiting physical and chemical properties of epoxies

Nitoflor FC150 HP-FC is not recommended for exterior use where it is subject to sunlight or in applications involving prolonged water immersion.

Care should be taken in selecting colours as some will darken or develop a brown tinge when exposed to sunlight or certain chemicals. This effect is noticeable on white, light coloured and grey systems; on brown, yellow and red epoxies it is less noticeable.

Cleaning

All tools and equipment should be cleaned immediately after use with Fosroc Solvent 10. Hardened material can only be removed mechanically.

Maintenance

The service life of a floor can be considerably extended by good housekeeping practices. Regular cleaning of Nitoflor FC150 HP-FC 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.

Limitations

Note: To ensure a uniform colour, use only components with identical batch numbers in the one application area or contact Fosroc for advice.

Nitoflor FC150 HP-FC should not be applied on to surfaces known to suffer from rising damp or having a moisture content reading greater than 5%. Refer to Fosroc for further advice.

Nitoflor FC150 HP-FC may be affected by moisture coming into contact with newly laid floors within the first 72 hours cure time. Epoxy bloom / water spotting may occur.

Low temperatures and high humidity will result in the epoxy reacting with moisture to produce a white powdery finish. This is a common occurrence at temperatures below 7°C .

Substrate temperature should be at least 3°C above the dew point during the curing phase.

Temperature and the surrounding atmosphere play a part in the curing process of epoxy coatings. Under conditions of lower temperatures and higher humidity the final finish can be adversely affected resulting in low gloss or in more severe instances a white film over the surface after contact with water during the curing process.

Nitoflor FC150 HP-FC is also not recommended for use where it is subject to high concentrations of hot chicken fat. Refer to Fosroc for further information on applications subject to these conditions.

Nitoflor FC150 HP-FC is not recommended as an application over tiles.

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Supply

Nitoflor FC150 HP-FC is supplied in 4 litre 2 component kits (colour pot additional).

Nitoflor FC150 HP-FC Base of 4L pack: FC605102-2.83L

Nitoflor FC150 HP-FC Hardener of 4L pack: FC605101-0.97L

NOTE: this new formulation is NOT compatible with the previous Nitoflor FC150 HP-FC Base (FC605100-2.9L) & Nitoflor FC150 HP-FC Hardener (FC605101-0.8L).

Nitoflor Colour Pot Black 500g:	FC605135-0.5KG
Nitoflor Colour Pot Fern Green 500g:	FC605137-0.5KG
Nitoflor Colour Pot Harbour Blue 500g:	FC605138-0.5KG
Nitoflor Colour Pot Koala Grey 500g:	FC605139-0.5KG
Nitoflor Colour Pot Light Grey Blue 500g:	FC605140-0.5KG
Nitoflor Colour Pot Off White 500g:	FC605141-0.5KG
Nitoflor Colour Pot Pastel Grey 500g:	FC605142-0.5KG
Nitoflor Colour Pot Raspberry 500g:	FC605143-0.5KG
Nitoflor Colour Pot Safety Yellow 500g:	FC605144-0.5KG
Nitoflor Colour Pot Sand 500g:	FC605145-0.5KG
Nitoflor Colour Pot Silver Grey 500g:	FC605146-0.5KG
Nitoflor Colour Pot Curtail Call 500g:	FC605147-0.5KG
Nitoflor Colour Pot Spec Col (MTO) 500g:	FC605148-0.5KG
Nitoflor Anti-Slip Grains 01 20kg	FC611080-20kg
Nitoflor Anti-Slip Grains 02 20kg	FC605185-20kg
Fosroc Solvent 10 4 litre:	FC600800-4L
Fosroc Solvent 10 20 litre	FC600800-20L

Coverage

On concrete: 4 - 6 m²/litre per coat

Over Nitoflor Anti-Slip Grains 02: 2 - 3 m²/litre per coat

The coverage figures given are theoretical - due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced.

Storage

Nitoflor FC150 HP-FC should be stored in a dry place in the original, unopened packs between 10°C and 30°C.

Important notice

A Safety Data Sheet (SDS) is available from the Fosroc website. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

Product disclaimer

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.



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