Fosroc®
Nitoflor® FC150 HP/SL (self leveller application)

(NOTE: this new formulation is NOT compatible with the previous base, hardener or colour pots)

Floor topping, industrial, self smoothing epoxy resin system (2 to 4mm thickness)

Uses

Nitoflor FC150 HP/SL is designed for use in a wide range of industrial environments where a lasting solution to floor maintenance problems is required. When applied as a 2 to 4mm thick self levelling screed, it provides a dense, impervious, coloured and chemically resistant floor surface which is hygienic and easy to clean. Typical applications include hospital clean rooms, laboratories, food processing plants, film studio floors, prisons, supermarkets and light industrial plants.

Advantages

- Applied from 2 to 4mm thickness
- High flow characteristics combined with an attractive self smoothing finish
- Fast application - minimises downtime
- Resistant to “epoxy bloom”
- Chemically resistant - good resistance to a wide range of chemicals
- Durable - good abrasion resistance
- Hygienic - provides a dense, impervious, seamless floor surface which is easily cleaned
- Attractive gloss finish - available in a wide range of colours to enhance the working environment
- Suitable for use in food processing areas, where non-taint is important
- HACCP certified for use in food handling areas.

Standards compliance

APAS 0209 V3 - Class 1 Conformity

AS/ISO 9239.1-2003 Reaction to Fire Tests for Floorings - AWTA Test Report 24-003048 (@ 2mm):

Critical Heat Flux (CHF): 8.0 kW/m²

Smoke Value: 228 %.min

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/SL utilises the base, hardener and colour pot components common to the application as a roll coat or self levelling screed.

Nitoflor FC150 HP/SL is a self smoothing, epoxy screed. It is supplied pre-measured, multi-component system ready for on-site mixing.

When laid, it provides a smooth, durable gloss surface. It is available in a wide range of standard colours, and if required, can be overcoated to provide anti-slip finishes.

Properties

The values given below are typical figures achieved in laboratory tests at 23°C. Actual values obtained on-site may show minor variations from those quoted.

Physical properties

Compressive strength:	52 MPa @ 24 hours 65 MPa @ 7 days
Flexural strength:	26 MPa @ 7 days
Hardness - Shore D:	75
VOC content:	14g / litre
Pot life:	8 litre - 40 minutes @ 23°C
Cure time -	
Foot traffic:	24 hours
Vehicular traffic:	48 hours
Full cure:	4 days
Service temperature:	Up to 55°C

Chemical resistance

Resistant to a wide range of chemicals. Resistance to spillages (examples only).

- Toluene
- Acetic Acid 5%
- Sodium Hydroxide 30%
- Ammonia 20%
- Used sump oil
- Hydrochloric Acid
- Vegetable oils
- Sulphuric Acid 30%
- Skydrol
- Sodium Chloride
- Kerosene
- Petrol
- Lactic Acid 5%

Surface staining may result from exposure to some aggressive chemicals.

Good housekeeping practice requires spills to be quickly removed and washed.

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Light Reflectance Value (LRV): BS 8493:2008

Nitoflor FC150 HP/SL Black:	5.75%
Nitoflor FC150 HP/SL Fern Green:	19.82%
Nitoflor FC150 HP/SL Harbour Blue:	20.46%
Nitoflor FC150 HP/SL Koala Grey:	33.15%
Nitoflor FC150 HP/SL Light Grey Blue:	48.26%
Nitoflor FC150 HP/SL Pastel Grey:	70.15%
Nitoflor FC150 HP/SL Raspberry:	11.45%
Nitoflor FC150 HP/SL Safety Yellow:	51.78%
Nitoflor FC150 HP/SL Sand:	58.51%
Nitoflor FC150 HP/SL Silver Grey:	64.07%
Nitoflor FC150 HP/SL Curtain Call:	14.67%
Nitoflor FC150 HP/SL Off White:	84.20%
Nitoflor FC150 HP/SL Pipeline Grey	36.43%

Slip resistance test results: AS/NZS 4586:2013

System Used	Appendix A Wet Pendulum Test	Appendix B Dry Floor Friction Test
Nitoflor FC150 HP/SL* (no additional grit)	P0	D1
Nitoflor FC150 HP/SL* saturated with Nitoflor Anti-Slip Grains 01	P5	D1
Nitoflor FC150 HP/SL* saturated with Nitoflor Anti-Slip Grains 02	P5	D1
Nitoflor FC150 HP/SL* saturated with Nitoflor Anti-Slip Grains 21	P5	D1

**Applied as a 3mm self-leveller, grit applied, then overcoated with 200 microns roll coat.*

Certificates of 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.

Design Criteria

Nitoflor FC150 HP/SL can be applied as a roll coat or a self levelling screed.

When applied as a self leveller, Nitoflor FC150 HP/SL is designed for application at a nominal thickness of 2 to 4mm. Thickness will generally depend on the impact resistance requirements of the finished floor - thicker floor being capable of withstanding greater impact.

Substrates should be dry and not suffer, or be likely to suffer, from rising damp. Substrates should not have a relative humidity greater than 75% at the time of installation (refer to Limitations).

Application Instructions

Preparation

Nitoflor FC150 HP/SL should be applied by specialist contractors recognised by Fosroc who have been trained in the correct installation procedures.

Thoroughly prepare the floor surface. Correct surface preparation helps to achieve the necessary adhesive bond between the substrate and the new floor. Grinding or captive blasting is the normal suggested method. Employ adequate vacuum systems to minimise dust. Ensure surrounding areas are protected from any potential dust generated during this preparation.

All existing expansion or movement joints should be continued through the new floor surface. This can be achieved using removable forms or by cutting in joints after the Nitoflor FC150 HP/SL has cured sufficiently.

These joints can then be sealed at the top using Nitoseal PU400, Nitoseal MS400 or similar joint sealant.

Repair

Faults / defects in the base concrete floor will reflect through the Nitoflor FC150 HP/SL so it is important to “make good” the concrete before application of the Nitoflor FC150 HP/SL. These repair are generally carried out using Nitomortar 903 and fillers or a suitable epoxy fairing mortar.

Priming

Apply 1 - 2 coats of Nitomortar 903 and allow to cure. Touch dry between prime coats and 12 - 24 hours prior to the application of Nitoflor FC150 HP/SL.

Efficient sealing of the concrete surface is essential to minimise surface defects in the final finish.

Mixing

Scrape entire contents of the 1 x 700g Nitoflor Colour Pots into the base component. Add the entire contents of the hardener to the base and colour pot mixture and mix for 1 minute using a slow speed mixer fitted with a large spiral type mixing attachment (only use Nitoflor Colour Pots).

For 16 litre kits, 2 x 700g Nitoflor Colour Pots must be added.

Continue mixing entire mix for a minimum of 3 minutes at 350 - 500 rpm once all components have been added.

Note: Mix in an efficient manner to ensure no colour pigment streaking is visible and scrape the side walls of the mixing vessel with a long bladed spatula to dislodge any unmixed material.

Placing

Apply the Nitoflor FC150 HP/SL topping. The material is poured on to the primed surface and spread with a steel trowel to achieve a 2mm to 4mm thick seamless topping.

Using a spiked roller, remove air entrainment and allow to cure.

When a slip resistant finish is required, the appropriate grit should be applied as soon as sufficient area has been coated. The selected Nitoflor Anti-Slip Grains should be uniformly broadcast over to fully blind the wet Nitoflor FC150 HP/SL. The size and distribution rate of the grit should be in accordance with that prior agreed to by the client or their representative. After 24 hours curing time, the floor should be swept clean of any loose anti-slip aggregate then overcoated with 200 micron roll coat of Nitoflor FC150 HP/SL.

A slip-resistant finish can also be achieved after the initial curing of Nitoflor FC150 HP/SL by application of a roll coat of Nitoflor FC150 HP incorporating suitable anti-slip aggregates. Refer to the Nitoflor FC150 HP/SL (roll coat application) Technical Data Sheet.

Cleaning

Uncured Nitoflor FC150 HP/SL and associated primer should be removed from tools and equipment with Fosroc Solvent 10 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 may be carried out using a rotary scrubbing machine with a water miscible cleaning agent at temperatures up to 55°C (refer to Fosroc's "Guide to Industrial Floor Maintenance"). In some applications where long term appearance of the floor is important, clear sealers / polishes may be necessary to protect the epoxy and provide a renewable top coat. Consult Fosroc for further advice.

Limitations

Nitoflor FC150 HP/SL does not produce a 'mirror finish'. Some imperfections in the finish are often present.

Nitoflor FC150 HP/SL is not totally resistant to scratching and marking from mechanical damage and abrasion. In some applications where long term appearance of the floor is important, clear sealers / polishes may be necessary to protect the epoxy and provide a renewable top coat. Consult Fosroc for further advice in these circumstances.

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/SL should not be applied on to surfaces known to or likely to suffer from rising damp conditions or have a relative humidity greater than 75%. Suspect concrete floor should be checked using a Hygometer to check the moisture level before proceeding.

Nitoflor FC150 HP/SL is not a 'floor levelling' product and will follow the contours of the sub-floor. If the floor requires levelling, consult Fosroc for further advice.

Nitoflor FC150 HP/SL is designed as a rapid installation, seamless floor. Some floor areas, especially the darker coloured Nitoflor FC150 HP/SL, may show slight 'dimpling'. This is common and should be expected. It has no effect on the end flooring project being seamless and hygienic.

Nitoflor FC150 HP/SL should not be applied in areas where significant thermal shock is likely to occur, consult Fosroc.

Nitoflor FC150 HP/SL should not be applied to asphalt, weak or friable concrete, unmodified sand cement screeds, PVC tiles or sheet or substrates known to move substantially e.g. steel walkways. For information on other substrates, consult Fosroc.

Nitoflor FC150 HP/SL should be applied only when the substrate temperature and the ambient temperature is above 10°C.

Nitoflor FC150 HP/SL is not UV stable - discolouration may occur even in internal environments including exposure through windows.

Nitoflor FC150 HP/SL must not come into contact with moisture / water until the product has attained full cure.

Supply

Nitoflor FC150 HP/SL is supplied in 8 litre and 16 litre 2 component kits (colour pots are additional).

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Nitoflor FC150 HP/SL Base of 8L Pack:	FC605121-5.6L
Nitoflor FC150 HP/SL Hardener of 8L Pack:	FC605122-2.15L
Nitoflor FC150 HP/SL Base of 16L Pack:	FC605121-11.2L
Nitoflor FC150 HP/SL Hardener of 16L Pack:	FC605122-4.3L

Nitoflor FC150 HP/SL Koala Grey is supplied as pre-tinted kits in 8 litre and 16 litre.

Nitoflor FC150 HP/SL Koala Grey Base of 8L kit: FC605123-5.85L

Nitoflor FC150 HP/SL Hardener of 8L Pack: FC605122-2.15L

Nitoflor FC150 HP/SL Koala Grey Base of 16L kit: FC605123-11.7L

Nitoflor FC150 HP/SL Hardener of 16L Pack: FC605122-4.3L

16 litre Special Colour kits can also be made to order subject to a minimum order quantity of 20 kits with a lead time of 14 to 21 days.

Nitoflor FC150 HP/SL Base Spec Colour:	FC605124-11.7L
Nitoflor FC150 HP/SL Hardener of 16L Pack:	FC605122-4.3L

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Ancillaries

Nitoflor Colour Pot Black 700g:	FC605135-0.7KG
Nitoflor Colour Pot Fern Green 700g:	FC605137-0.7KG
Nitoflor Colour Pot Harbour Blue 700g:	FC605138-0.7KG
Nitoflor Colour Pot Light Grey Blue 700g:	FC605140-0.7KG
Nitoflor Colour Pot Off White 700g:	FC605141-0.7KG
Nitoflor Colour Pot Pastel Grey 700g:	FC605142-0.7KG
Nitoflor Colour Pot Raspberry 700g:	FC605143-0.7KG
Nitoflor Colour Pot Safety Yellow 700g:	FC605144-0.7KG
Nitoflor Colour Pot Sand 700g:	FC605145-0.7KG
Nitoflor Colour Pot Silver Grey 700g:	FC605146-0.7KG
Nitoflor Colour Pot Curtain Call 700g:	FC605147-0.7KG
Nitoflor Colour Pot Pipeline Grey:	FC605149-0.7KG
Nitoflor Colour Pot Spec Col (MTO) 700g:	FC605148-0.7KG
Nitoflor Anti-Slip Grains 01 20kg:	FC611080-20KG
Nitoflor Anti-Slip Grains 02 20kg:	FC605185-20KG
Nitomortar 903 Base 20L:	FC381019-20L
Nitomortar 903 Hardener 10L:	FC381018-10L
Fosroc Solvent 10 4L:	FC600800-4L
Fosroc Solvent 10 20L:	FC600800-20L

Coverage

Each Nitoflor FC150 HP/SL 8 litre pack covers 4m² @ 2mm thickness or 2m² @ 4mm thickness.

Nitomortar 903 as a primer: 5m²/litre

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

Nitoflor FC150 HP/SL should be kept in a dry store in the original, unopened packs between 5°C and 30°C.

If stored at high temperatures the shelf life may be reduced.

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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