

Fosroc® Nitoflor FC150 HP



constructive solutions

(Previously known as Duraflor HP)

High performance, solvent free epoxy floor coating

Uses

A heavy duty, industrial / commercial coating for concrete floors that is attractive and easily cleaned. Highly resistant to chemical attack and the action of forklift vehicular and commercial type traffic.

When used in conjunction with the appropriate slip resistant medium, Nitoflor FC150 HP is 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, high traffic applications and many other installations.

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

Nitoflor FC150 HP may be used without anti-slip grit as a sealer on concrete floors, epoxy floor screeds or as a high quality protective coating for bunds, coves and drains within production areas.

Nitoflor FC150 HP can also be used as a slip resistant finish over Nitoflor SL / SLX.

Advantages

- Long lasting and easily maintained with good resistance to many industrial chemicals
- Slip resistance improves safety for plant and personnel
- Certified 'non-taint' around food stuffs during and after installation
- Provides an attractive satin finish
- Available in a wide range of light reflective colours to provide a brighter work area
- Complies with BCA, for building material fire hazard properties specification C1.10a for critical radiant flux and smoke development rate values.

Description

Nitoflor FC150 HP is a multi-component solvent-free epoxy resin high build coating. The formulation allows the incorporation of anti-slip grits and provides good chemical and abrasion resistance.

Nitoflor FC150 HP is available in a range of colours by adding Nitoflor Colour Pots.

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

Technical Support

Parchem offers a technical support package to specifiers, end-users and contractors, as well as on-site technical assistance.

Design Criteria

Nitoflor FC150 HP is designed for application on floors in two coats to achieve an approximate total dry film thickness of 400 - 500 microns (200 - 250 microns per coat).

For applications on vertical surfaces, the application rate is reduced to avoid sagging and curtaining. Achievable film thickness will vary depending on environmental conditions. Typically 100 - 150 microns per coat.

Substrates should be dry and not suffer, or be likely to suffer, from rising damp. Substrates should not have a relative humidity greater than 80% at the time of installation (refer Limitations section).

Specification Clause

Epoxy Floor Coating

The designated area shall be surfaced with Nitoflor FC150 HP, a skid resistant, solvent free, epoxy floor coating. The coating shall be applied in a two coat application to a nominal thickness of 400 microns, strictly in accordance with the manufacturers instructions

Properties

Typical physical properties (at 23°C)

Solids content:	100% w/w
VOC content:	17 g / litre
Pot life:	8 litre - 40 minutes
Tack free time:	15 hours
Recoat time @23°C:	10 - 48 hours
Recoat time @10°C:	20 - 48 hours
Initial hardening:	24 hours
Full cure:	7 Days
Dry film thickness - on floors (2 coats):	400 - 500 microns
Line-marking paint adhesion to coating:	
Dulux Roadmaster A1	Excellent
Dulux Roadmaster A2	Excellent

Note: Pot life will be reduced if product is mixed and left in original container. To extend pot life pour product into flat trays such as roller trays.

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Chemical resistance

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

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

Surface staining may result from exposure to some aggressive chemicals.

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

Slip resistance test results

System Used	AS/NZS 4586:2013 Appendix A Wet Pendulum Test	AS/NZS 4586:2013 Appendix B Dry Floor Friction Test
Nitoflor FC150 HP (no additional grit)	P1	D1
Nitoflor FC150 HP with Nitoflor Anti-slip Grains at 20g/m ²	P5	D1
Nitoflor FC150 HP saturated with Nitoflor Grit Medium	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.

Maintenance

The service life of a floor can be considerably extended by good housekeeping practices. Regular cleaning of Nitoflor FC150 HP may be carried out using a rotary scrubbing machine with a water miscible cleaning agent. Refer to Parchem's 'Guide to Industrial Floor Maintenance'.

Application Instructions

Surface preparation

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

Because Nitoflor FC150 HP is a relatively thin coating, the substrate must be fine textured. Any surface irregularities may show through causing excessive wear on high spots.

If surface preparation produces an excessively deep profile on the substrate, advice should be sought from Parchem regarding suitable methods to produce a smooth and level substrate. A 'scratch coat' of Nitomortar 903 and fillers is often used to smooth out irregularities.

Steel should be grit-blasted or abraded to remove all scale, rust, grease, etc.

Priming

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

New concrete floors

Unless water-reduced, the floor should be at least 28 days old and give a hygrometer reading not exceeding 80% RH. Dry removal of laitance is required via light grit-blasting or grinding. 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 grinding should be carried out as for new concrete floors. Depending on extent of the contamination, oil and grease penetration may be removed by hot compressed air treatment and primed with Nitomortar 903. Adhesion tests must be carried out to confirm sufficient preparation.

Epoxy screeds

Nitoflor FC150 HP may be applied to Parchem's epoxy resin screeds. High spots or trowel marks should be rubbed down and dust and other debris removed by vacuum cleaning. Overcoating times may be applicable - consult Parchem for advice.

Mixing

Stir the base and hardener components prior to mixing. Add 2 x 500g Nitoflor Colour Pots to the base component and mix thoroughly using a low speed heavy duty electric drill and suitable spiral mixer for 1 minute.

Solvent addition

For improved penetration into dense concrete and/or to assist application of the first coat it is acceptable to add 800ml of Fosroc Solvent 10 to the base component of an 8 litre kit for the first coat application. This addition of solvent must be taken into consideration for each situation such as when solvents are prohibited.

Add hardener component and mix for a further 3 minutes.

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.



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Application

1st Coat

Following the required preparation, apply Nitoflor FC150 HP by brush or roller at a rate of 4 - 5 m²/litre.

When a slip resistant finish is required, the appropriate grit should be applied as soon as sufficient area has been coated. The Nitoflor Medium Grit should be lightly and uniformly broadcast over the wet Nitoflor FC150 HP. 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, re coat lightly before applying grit.

When the first coat is hard (usually the next morning - refer re-coat times in "Properties" section) sweep or vacuum off all excess grit. For good appearance and easier cleaning, it is important that all loose grit be removed at this time.

2nd Coat

Mix the components as before and using a paint roller (deflocked 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 easily cleanable floor but a fairly light coat will give the best slip resistance in wet conditions.

Brushes / rollers to be washed thoroughly at least once each hour, using Fosroc Solvent 10. Ensure all solvent is removed before reusing. Brushes / rollers to be discarded after use.

At temperatures of 20 - 30°C foot traffic may be permitted after 24 hours, and light vehicular traffic after 72 hours; however, in cold weather a longer period before use may be required. Do not apply below 10°C. Allow 5 - 7 days before subjecting to chemical attack or abrasion.

Application on vertical surfaces

Application rate of Nitoflor FC150 HP to vertical surfaces needs to be reduced to 8 to 10m² litre / coat minimise runs / sagging.

Limitations

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

Nitoflor FC150 HP should not be applied to any surface subject to back water pressure; otherwise failure of the bond is likely to occur.

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

- Porous or poor quality concrete causing excessive use and absorbency of the product
- Unusually cold condition during curing (<10°C)
- Elevated temperatures of service (>40°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

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 colours it is less noticeable.

Nitoflor FC150 HP is not recommended for exterior use where it is subject to sunlight or in applications involving prolonged chlorinated water immersion. Contact Parchem for detailed information.

Nitoflor FC150 HP should not be applied on to surfaces known to suffer from rising damp or having a relative humidity reading greater than 80%. Refer to Parchem for further advice.

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

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

Only Fosroc Solvent 10 may be added to the first coat as detailed in this data sheet unless agreed in writing by Parchem's Technical Department for specific applications. Some solvents, including acetone and methylated spirits will significantly affect the curing and intercoat adhesion of epoxies.

Cleaning

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

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Supply

Nitoflor FC150 HP:

Available in 8 litre 2 component kits (colour pots additional)

Nitoflor FC150 HP Base of 8L Pack: FC605117-5.5L

Nitoflor FC150 HP Hardener of 8L Pack: FC605118-2.3L

16 litre pre-tinted kits can also be made to order subject to a minimum order quantity.

Nitoflor FC150 HP Special Colour Base of 16L Pack: FC605115-11.4L

Nitoflor FC150 HP Hardener of 16L Pack: FC605116-4.6L

Coverage

Floors: 4 - 5 m²/litre on concrete / coat
Vertical surfaces: 8 - 10 m²/litre on concrete / 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

Shelf life

Nitoflor FC150 HP has a shelf life of 24 months if kept in a dry place in the original, unopened packs. Refer to the Use by Date indicated on the packaging.

Storage conditions

Store in dry conditions between 10°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. Nitoflor FC150 HP should be protected from frost.

Important notice

A Safety Data Sheet (SDS) and Technical Data Sheet (TDS) are available from the Parchem website or upon request from the nearest Parchem sales office. 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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