



Fosroc® Nitoflor SL

(Previously known as Duraflor SL)

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

Uses

Nitoflor SL is designed for use in a wide range of industrial environments where a lasting solution to floor maintenance problems is required. 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 - 4 mm thickness
- High flow characteristics combined with an attractive self smoothing finish
- Fast application - minimises downtime
- 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 - available in a wide range of colours to enhance the working environment
- Nitoflor SL is suitable for use in food processing areas, where non-taint is important
- Complies with BCA, for building material fire hazard properties specification C1.10a for critical radiant flux and smoke development rate values.

Description

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

When laid, it provides a smooth, durable surface. It is available in a wide range of standard colours, and if required, can be overcoated with Nitoflor FC150 HP to provide anti-slip finishes.

Technical Support

Parchem 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.

Design Criteria

Nitoflor SL is designed for application at a nominal thickness of 2 - 4 mm. 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 section).

Specification Clause

Flow-applied epoxy floor toppings

The designated floor areas shall be surfaced with Fosroc Nitoflor SL, a 2-4 mm thick flow applied epoxy resin floor topping. The topping shall achieve a compressive strength of 90MPa and a flexural strength of 30 MPa at 7 days. At 23°C, it shall be capable of accepting foot traffic at 24 hours and vehicular traffic at 48 hours.

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: 90 MPa

Flexural strength: 30 MPa

VOC content: 9g / litre

Cure time -

foot traffic:	24 hours
vehicular traffic:	48 hours
chemical:	7 days

Chemical properties

Nitoflor SL has excellent resistance at ambient temperatures to a wide range of industrial chemicals.

Note: It is very important that all chemical spills are cleaned up immediately. Leaving chemical spills on the floor may result in higher concentrations of chemicals pooling, causing damage to the Nitoflor SL.

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 50°C (refer to Parchem'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 Parchem for further advice in these circumstances.

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Application Instructions

Preparation

Nitoflor SL should be applied by specialist contractors recognised by Parchem 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.

All existing expansion or movement joints should be continued through the new floor surface.

Repair

Faults / defects in the base concrete floor will reflect through the Nitoflor SL so it is important to “make good” the concrete before application of the Nitoflor SL. These repairs 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 SL.

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

Mixing

Scrape entire contents of the 2 x 500 g 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).

After 1 minute mixing, slowly add one bag of the Nitoflor SL Fillers.

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 SL topping. The material is poured on to the primed surface and spread with a steel trowel to achieve a 2 - 4 mm seamless topping.

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

If a slip-resistant finish is required this can be achieved by application of Nitoflor FC150 HP incorporating suitable anti-slip aggregates. Refer to the Nitoflor FC150 HP Technical Data Sheet.

Cleaning

Nitoflor 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.

Limitations

Nitoflor SL does not produce a ‘mirror finish’. Some imperfections in the finish are often present.

Nitoflor 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 Parchem 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 Parchem for advice.

Nitoflor 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 Hygrometer to check the moisture level before proceeding.

Nitoflor SL is not a ‘floor levelling’ product and will follow the contours of the sub-floor. If the floor requires levelling, consult your local Parchem sales office for further advice.

In certain conditions a light oily film may appear on the surface of the floor during curing. Where overcoating is to occur, remove this film by solvent wiping or cleaning with a recognised reactivating solution. This film can also be removed once the Nitoflor SL is fully cured by cleaning the surface with a mild detergent in water.

Nitoflor SL is designed as a rapid installation, seamless floor. Some floor areas, especially the darker coloured Nitoflor 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.

In areas where significant thermal shock is likely to occur, consult your local Parchem sales office.

Nitoflor 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 your local Parchem sales office.

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

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

Nitoflor SL must not come into contact with moisture / water until the product has attained full cure otherwise a white blooming effect can occur. This effect can be substantially reduced using Nitoflor SLX; refer to separate data sheet.

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Estimating

Supply

Nitoflor SL is supplied in pre-weighed components consisting of a base, hardener, 2 x colour pots and bag of fillers which, when combined produce 16 litres of mixed product.

Nitoflor SL 16 litre kit components:

Nitoflor SL Base of 16L kit:	FC605125-6.4L
Nitoflor SL Hardener of 16L kit:	FC605127-3.1L
Nitoflor SL Fillers 14kg:	FC605126-14KG
Nitoflor Colour Pots:	2 x 500g (various colours)

Primer/Accessories:

Nitomortar 903:	6 and 30 litre packs
Fosroc Solvent 10:	4 and 20 litre drums

Coverage

Each Nitoflor SL 16 litre pack covers 8m² @ 2 mm thickness or 4m² @ 4 mm thickness.

Nitomortar 903 as a primer: 5 m²/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.

Shelf life

All products have a shelf life of 36 months if kept in a dry store in the original, unopened packs. Refer to the Use by Date indicated on the packaging.

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.

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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