

(Previously known as Duraflor SL)

## Floor topping, industrial, self smoothing epoxy resin system (2 to 4mm 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 to 4mm 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 gloss finish - 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
- 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 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 gloss 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.

### Design Criteria

Nitoflor 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 section).

### 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

<b>Compressive strength:</b>	90 MPa
<b>Flexural strength:</b>	30 MPa
<b>VOC content:</b>	9g / litre
<b>Pot life:</b>	30 minutes @ 20°C
<b>Cure time -</b>	
Foot traffic:	24 hours
Vehicular traffic:	48 hours
Full cure:	7 days
<b>Service temperature:</b>	Up to 60°C

#### Chemical resistance

Nitoflor SL has excellent resistance at ambient temperatures to a wide range of industrial chemicals. Contact Fosroc for specific advice.

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.

#### Light Reflectance Value (LRV): BS 8493:2008

Nitoflor SL Black:	4.75%
Nitoflor SL Fern Green:	17.51%
Nitoflor SL Harbour Blue:	17.35%
Nitoflor SL Koala Grey:	31.26%
Nitoflor SL Light Grey Blue:	41.34%
Nitoflor SL Pastel Grey:	62.97%
Nitoflor SL Raspberry:	9.70%
Nitoflor SL Safety Yellow:	48.78%
Nitoflor SL Sand:	54.11%
Nitoflor SL Silver Grey:	64.46%
Nitoflor SL Curtain Call:	13.33%

# Fosroc®

## Nitoflor® SL

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### Application Instructions

#### Preparation

Nitoflor 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 SL has cured sufficiently.

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

#### 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 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 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 500g 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).

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 2mm to 4mm thick seamless topping.

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

If a slip-resistant finish is required this can be achieved after the initial curing of Nitoflor SL 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.

#### 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 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 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 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 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 Fosroc 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. When not overcoating, 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 Fosroc.



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 Fosroc.

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.

## Supply

Nitoflor SL is supplied in pre-weighed components consisting of a base, hardener, 2 x 500g colour pots and one 14kg 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 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 Curtain Call 500g:	FC605147-0.5KG
Nitoflor Colour Pot Spec Col (MTO) 500g:	FC605148-0.5KG



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## Ancillaries:

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 SL 16 litre pack covers 8m<sup>2</sup> @ 2mm thickness or 4m<sup>2</sup> @ 4mm thickness.

Nitomortar 903 as a primer: 5m<sup>2</sup>/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 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.