Nitoflor FC130 & Nitoflor FC140

FM 610

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Nitoflor FC130 & FC140
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High performance epoxy resin floor coatings

Uses

Nitoflor FC130

To provide a dust-proof easily cleaned surface which is resistant to most oils and liquids. It is suitable for use on walls and floors in warehouses, garages, light industrial and food processing areas, kitchens and other areas of pedestrian and light vehicular traffic.

Nitoflor FC140

To provide a hard wearing, easily cleaned, attractive floor coating in industrial areas where high resistance to chemical attack is required. It is suitable for use in production assembly areas, workshops, dairies, soft drinks production and bottling plants, breweries, kitchens, showrooms, etc. It is particularly suitable in wet working areas and where chemical spillage is likely, e.g. plating shops, processing plants, dye works, etc.

Nitoflor FC130 and Nitoflor FC140 can also be used as a coating and sealer for Cemtop industrial and commercial cementitious flooring systems. Refer to Cemtop data sheet for details.

Advantages

- Hard wearing — durable, low maintenance costs
- High resistance to a wide range of industrial chemicals
- Hygienic — impervious finish provides easily cleaned surface
- Attractive — available in a range of colours to improve the working environment

Standards compliance

Nitoflor FC140 has been tested according to BS 4247, Part 1 — Nuclear Decontamination parts A and B. In both instances a ‘good’ classification was obtained.

Nitoflor FC130 and Nitoflor FC140 comply with BS 476, Part 7 : 1971 — Class 1 spread of flame.

Description

Nitoflor FC130

Nitoflor FC130 is a two-component water dispersed epoxy resin coating system supplied in pre-weighed packs ready for on-site mixing and use. The cured film forms a hard, flexible, semi-matt seal to concrete and other substrates.

Nitoflor FC140

Nitoflor FC140 is a two-component solvent based, epoxy resin coating system supplied in pre-weighed packs ready for on-site mixing and use. The cured film forms a hard but flexible coating with excellent adhesion to clean concrete, sand/cement and granolithic screeds, and certain metal surfaces. It cures to a semi-gloss, impervious finish which is easily cleaned.

Nitoflor FC130 and Nitoflor FC140 are available in a wide range of standard colours and are also available in a clear grade.

Design criteria

Nitoflor FC130 and Nitoflor FC140 are designed for application in two coats to achieve an approximate total dry film thickness of 100 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 not have a relative humidity greater than 75% at the time of installation.

Properties

The values given below are average figures achieved in laboratory tests at 20°C and 35°C. Actual values obtained on site may show minor variations from those quoted.

Physical properties

Nitoflor FC130	**@ 20°C**	**@ 35°C**
Pot life*:	2 hours	1 hour
Time between coats:	6 to 24 hours	4 to 16 hours
Initial hardness:	24 hours	16 hours
Full cure:	7 days	7 days
Dry film thickness (2 coats):	100 microns (approximate)	

Nitoflor FC140	@ 20°C	@ 35°C
Pot life*:	4 hours	1.5 hours
Tack-free time:	4 to 6 hours	2 to 4 hours
Time between coats:	6 to 24 hours	4 to 16 hours
Initial hardness:	24 hours	18 hours
Full cure:	7 days	5 days
Dry film thickness (2 coats):	100 microns (approximate)	

* Note that after the pot life has expired, the material, although not hardened, increases in viscosity and the characteristics of the product change. Excess material should be discarded after this point.

Chemical properties

Nitoflor FC130 and Nitoflor FC140 are resistant to a wide range of chemicals. Specific data is available on request.

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.

Maintenance

The service life of a floor can be considerably extended by good housekeeping practices. Regular cleaning of Nitoflor FC130 and Nitoflor FC140 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.

Application instructions

Surface preparation

It is essential that Nitoflor FC130 and Nitoflor FC140 are applied to sound, clean, dry substrates in order to achieve maximum adhesion between the floor coating and substrate.

Because Nitoflor FC130 and Nitoflor FC140 are relatively thin coatings, 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.

New concrete floors

Unless specially water-reduced, the floor should be at least 28 days old and give a hygrometer reading not exceeding 80% RH for Nitoflor FC 130 or 75% RH for Nitoflor FC140 when tested in accordance with BS 8203 Appendix A. Dry removal of laitance by light grit-blasting is preferable but, where this is not feasible, treat with Fosroc Acid Etch, followed by thorough rinsing with water and complete drying. 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 acid etching should be carried out as for new concrete floors. Oil and grease penetration should be removed using a water miscible chemical cleaner.

When using Nitoflor FC140 on very porous surfaces or surfaces which are damp prime with a single coat of Nitoprime 25.

Asphalt floors

Nitoflor FC130 can be applied to asphalt floors provided they are at least 6 months old.

Nitoflor FC140 should not be applied to asphalt floors, PVC tiles or sheet.

Mixing

The individual components of the Nitoflor FC coatings should be thoroughly stirred before the two are mixed together. The entire contents of the hardener container should be poured into the base container and the two materials mixed thoroughly for at least 3 minutes. The use of a heavy-duty slow speed, flameproof or air driven drill fitted with a mixing paddle is desirable.

Coating

The mixed Nitoflor FC130 and Nitoflor FC140 should be applied to the prepared surface using a brush or lambswool roller. Ensure that the area is completely coated and that ‘ponding’ of the material does not occur.

The second coat may be applied as soon as the first coat has initially dried (typically 12 to 18 hours). The time will be dependent on the type of surface and the ambient conditions.

Good drying conditions are required to allow complete evaporation of the water as the resin cures. Adequate ventilation and air movement is necessary.

Use with Cemtop XD

Nitoflor FC130 can be used to overcoat Cemtop XD to provide a more easily cleaned, chemically resistant surface. Apply two coats of Nitoflor FC130 as described, the first of which must be applied within 6 hours after the installation of Cemtop XD.

Anti-slip finish

A fine textured anti-slip finish for either Nitoflor FC130 or Nitoflor FC140 may be achieved by the addition of one 0.9 kg sachet of Nitoflor FC Anti-slip Grains stirred in towards the end of the mixing process. (Note: This will reduce overall coverag e rate.)

Cleaning

Nitoflor FC130 should be removed from tools and equipment with clean water immediately after use.

Nitoflor FC140 should be removed from tools and equipment with Fosroc Solvent 102 immediately after use. Hardened material can only be removed mechanically.

Limitations

Nitoflor coatings should not be applied onto surfaces known to or are likely to suffer from rising damp or have a relative humidity greater than 80% (Nitoflor FC130) or 75% (Nitoflor FC140) as measured in accordance with BS 8203 Appendix A or by a Vaisala thermohygrometer type HMI 31.

The durability of Nitoflor coatings in foot traffic areas is reduced in areas of very heavy traffic such as around work benches, drinks machines, etc. It is advisable to specify additional coats in such areas.

The low odour characteristics of Nitoflor FC130 is not necessarily an indication of non-tainting characteristics. Where tainting of foodstuffs during application is possible we recommend separate tests are carried out in this instance, please contact the local Fosroc office.

Nitoflor FC130 should not be applied at temperatures below 10°C or where ambient relative humidity exceeds 85%.

Nitoflor FC140 should not be installed at temperatures below 5°C.

Estimating

Supply

Nitoflor FC130:	5 kg packs
Nitoflor FC140:	5 kg packs
Nitoprime 25:	5 kg packs

Coverage

Nitoflor FC130 and FC140:	35 to 40 m²/pack (per coat)
Nitoflor FC130 and FC140 with Anti-slip Grains:	24 to 30 m²/pack (per coat)
Nitoprime 25:	25 m²/pack

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 FC130 and Nitoflor FC140 have a shelf life of 12 months if kept in a dry store between 5°C and 30°C in the original, unopened packs.

Storage conditions

Nitoflor FC130 should be stored 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 FC130 should be protected from frost.

Nitoflor FC140 should be stored in accordance with the UK Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972.

Precautions

Health and safety

Nitoflor FC130 and Nitoflor FC140 should not come into contact with skin and eyes or be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. Some people are sensitive to resins, hardeners and solvents. Wear suitable protective clothing, gloves, and eye protection. If working in confined areas, suitable respiratory protective equipment must be used. The use of barrier creams provide additional skin protection. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately — **do not** induce vomiting.

Fire

Nitoflor FC130 is non-flammable.

Nitoflor FC140 is flammable. Keep away from sources of ignition. No Smoking. In the event of fire, extinguish with CO_2 or foam. Do not use a water jet.

Flash points

Nitoflor FC140:	23°C
Fosroc Solvent 102	33°C

Disposal

Spillages of component products should be absorbed onto earth, sand or other inert material and transferred to a suitable vessel. Disposal of such spillages or empty packaging should be in accordance with local waste disposal authority regulations.

For further information, refer to the Product Safety Data Sheet.

Fosroc Limited

Coleshill Road
Tamworth
Staffordshire B78 3TL
Tel 01827 262222
Fax 01827 262444
www.fosrocuk.com