Water based, epoxy resin floor and wall coating

Uses

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.

Advantages

- Durable - good resistance to abrasion
- Economical - easy to apply, minimises costs
- Water based - safe in use, low odour
- Attractive - available in a range of colours.
- Good resistance to a wide range of chemicals

Standard compliance

Nitoflor FC130 complies with BS 476, Part 7: 1987- Class 1 spread of flame.

Description

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.

The product is available in a range of 10 standard colours and is also available in a clear grade.

Technical support

Fosroc offers a comprehensive range of a 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 in location all over the world.

Design Criteria

Nitoflor FC130 is designed for application in two coats to achieve a minimum 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 80% at the time of installation.

Properties

The values given below are average figures achieved in laboratory tests. Actual values obtained on site may show minor variations from those quoted.

Physical properties

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

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

Chemical properties

Nitoflor FC130 is 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 chemical will then result.

Maintenance

The service life of a floor can be considerably extended by good housekeeping practices. Regular cleaning of Nitoflor FC 130 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.

Specification clauses

Epoxy floor coating

The floor coating shall be Nitoflor FC130, a two-component water dispersed epoxy suitable for application by brush or lambs wool roller. The coating shall be applied in two coats to achieve a total dry film thickness of not less than 100 microns.

Application instructions

Surface preparation

It is essential that Nitoflor FC130 is applied to sound, clean, dry substrates in order to achieve maximum adhesion between the floor coating and substrate. Because Nitoflor FC130 is a relatively thin coating, 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 water-reduced, the floor should be at least 28 days old and give a hygrometer reading not exceeding 80% RH 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 through rinsing with water and completed 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 by hot compressed air treatment and primed with a single coat of Nitoprime 31.

New wall

The wall should be 28 days old and give a hygrometer reading not exceeding 80% RH when tested according to BS8203 Appendix A. Dissipating type curing membrane and other surface contamination should be removed by water jetting or acid etching and primed with a single coat of Nitoprime 31 traffic white primer.

Old wall

The wall should be cleaned, sound and free of blow holes or surface imperfection in order to achieve maximum adhesion. Old paint should be removed by water jet or light grit blasting and primed with a single coat of Nitoprime 31 traffic white primer.

Note: White and Clear Colours are not recommended for wall application. Please consult Fosroc Technical Department for further clarification.

Epoxy screeds

Nitoflor FC130 may be applied to Fosroc epoxy resins screeds. High spots or trowel marks should be rubbed down and dust and other debris removed by vacuum cleaning.

Asphalt floors

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

Mixing

The individual components of Nitoflor FC130 should be thoroughly stirred before the two are mixed together. The entire contents of the base container should be poured into the hardener container and two materials mixed thoroughly for at least 3 minutes. The use of a heavy duty slow speed drill fitted with a mixing paddle is desirable.

Coating

The mixed Nitoflor FC130 should be applied to the prepared surface using a brush or lambs wool roller. Ensure that the area is completely coated and that 'ponding' of the materials does not occur since water may be trapped within the product, thus preventing complete cure. The second coat may be applied as soon as the first coat has initially dried (typically 12-18 hours). The time will be dependent on the type of surface and the ambient conditions.

Care must be taken to ensure that a dry film thickness greater than 100 microns is achieved. 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

Nitoflor FC130 can be used to overcoat Cemtop to provide a more easily cleaned, chemically resistant surface. Apply two coats of Nitoflor FC130 as described above, generally 24 hours after the installation of Cemtop HD.

Cleaning

Nitoflor FC 130 should be removed from tools and equipment with clean water immediately after use. Nitoprime 30 should be removed from tools and

equipment using Fosroc Solvent 102. Hardened material can only be removed mechanically.

Limitations

Nitoflor FC130 should not be applied on to surfaces known to suffer from rising damp or having a relative humidity reading greater than 80% when tested in accordance with BS 8203 Appendix A or by a Vaisala thermohygrometer Type HMI 31. The durability of Nitoflor FC130 in foot traffic areas is reduced in areas of very heavy traffic such as around work benches, drinks machines etc. It is advisable to either :-

a) specify additional coasts in such areas or

b) specify a higher build system such as Nitoflor SL2000 in such areas (see separate data sheet)

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

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

Coating at a dry film thickness of less than 100 microns may lead to opacity of coating particularly with lighter colours.

Estimating

Supply

Nitoflor FC 130	:	4.5 litre packs
Fosroc Acid Etch	:	25 and 210 litre drums
Nitoprime 25	:	5 kg packs
Fosroc Solvent 102	:	5 litre drums

Coverage

Nitoflor FC130	:	10.0 m² / litre @ 100 microns wft / coat
Nitoprime 25	:	4-5 m^2/kg

The coverage figures given are theoretical - due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced. The lighter colours in the range will tend towards the lesser area per kg in order to achieve proper opacity.

Storage

Storage conditions and shelf life

Store in dry conditions between 10°C and 30oC, away from sources of heat and naked frames in the original, unopened packs. If stored at high temperatures the shelf life may be reduced. Nitoflor FC130 should be protected from frost. All products have a shelf life of 12 months if kept in a dry store in the original, unopened packs.

Flash points

Fosroc Solvent 102	:	33°C

Disposal

Spillages of component products should be absorbed on to 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 regulations. For further information, refer to the Product Material Safety Data Sheet.

Additional Information

Fosroc manufactures a wide range of products specifically designed for the specialist flooring industry. Contact Fosroc office for more information. For further information, refer to the Product Safety Data Sheet.

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