

Nitoflor[®] Metaltop NF



constructive solutions

Non-oxidising metallic floor hardener

Uses

NITOFLOOR METALTOP NF provides a monolithic concrete surface which is hard wearing, abrasion and impact resistant. Recommended for industrial areas subject to heavy traffic, including loading bays, repair workshop, machine shops, ramps, warehouse floors and factories.

Advantages

- Provide a hard wearing abrasion and impact resistant floor
- High impact resistance
- Metallic - non oxidising (non rusting)
- Reduces dusting
- Easy and economical to apply
- Reduces maintenance costs

Description

NITOFLOOR METALTOP NF is a quality controlled factory blended powder which is ready to use on site. It consists of specially selected and graded metallic aggregates, Portland cement and special additives to improved workability.

The formulation provides a flooring compound which is easy to trowel into the surface of a fresh wet concrete slab. When applied at the recommended application rate (3-7 kg/m² depending upon traffic) NITOFLOOR METALTOP NF provides a hard wearing, abrasion and impact resistant surface.

NITOFLOOR METALTOP NF is available in natural colour as standard. Special colours including Brick Red and Green will be produced on request for large orders.



Nitoflor® Metaltop NF

Technical Support

FOSROC offers a comprehensive range of high performance, high quality, construction products. In addition to the wide range of quality products, FOSROC offers a technical support package to specifiers and contractors which includes assistance with product selection and technical advice from staff with unrivalled experience in the industry.

Properties

Tests for wear resistance by comparative loss using a standard abrasive wheel show NITOFLOOR METALTOP NF to be several times more abrasion resistant than an ordinary concrete surface.

Typical compressive strength: 70/mm² at 28 days

Specification Clause

Floor areas so designated should be surfaced with 3-7 kg/m² of NITOFLOOR METALTOP NF as manufactured by FOSROC, and applied in accordance with manufacturers instructions.

Application Instructions

Base Concrete

The base concrete should have a minimum cement content of 300kg/m³. The concrete mix should be designed to minimise segregation and bleeding. Free water: cement ratios of less than 0.55 are required. The concrete should have a slump of 75-100mm.

Use of FOSROC water reducing admixtures is recommended.

The base concrete should be laid and compacted in accordance with good concrete practice. Accurate finished profile and minimum laitence build up should be ensured. Particular attention should be paid to bay edges and corners to ensure full compaction,

Vacuum dewalehng is not recommended when w/c ratios of less than 0.55 have been used,

Application

NITOFLOOR METALTOP NF is applied at different rates per m² to provide floor surfaces suitable for different grades of industrial use.

Application rate kg/m ²	Intended traffic use
7.0	Heavy
5.0	Moderate
3.0	Light

It is recommended that the floor is marked off into bays of known area. Sufficient material should be laid out to meet the required spread rates.

Application of NITOFLOOR METALTOP NF can only begin when the base concrete has stiffened to the point when light foot traffic leaves an imprint of about 3mm. Any bleed water should now have evaporated.

NITOFLOOR METALTOP NF is applied in two application stages.

- The first application is made using 1/2 to 2/3 of the material required for the eventual end use. NITOFLOOR METALTOP NF is evenly broadcast onto the concrete surface. When the material becomes uniformly dark by the absorption of moisture from the concrete this first application can be floated. Wooden floats, or, on large areas the disc of a power float may be used. It is important, however that the surface is not over worked.
- Immediately after floating the remaining NITOFLOOR METALTOP NF is thrown evenly over the surface. Again moisture is absorbed and the surface can be floated in the same way as before.

Final finishing of the floor using the blades of a power float can be carried out when the floor has stiffened sufficiently so that damage will not be caused.

Timing of Application

Timing of the application of the NITOFLOOR METALTOP NF is important. Too early and excess water will be absorbed and the resultant floor surface will be of lower strength and subject to dusting. Also the dense metallic aggregates of NITOFLOOR METALTOP NF could sink and be lost from the surface. Too late and insufficient moisture will be available to completely hydrate the NITOFLOOR METALTOP NF. Cracking and pitting of the surface are likely to result.

Bay Edges

Where bay edges are likely to suffer particularly heavy impact or wear these can be given additional protection. Immediately after the base concrete is levelled, sprinkle NITOFLOOR METALTOP NF on a strip 100-150mm wide along the bay edges. Steel trowel into the surface. Areas where saw-cut transverse control joints are located can also be pretreated in this manner.

Curing

Independent tests have shown that correct curing procedures must be followed to ensure the properties of the NITOFLOOR METALTOP NF floor. Immediately after finishing apply CONCURE CURING MEMBRANES at 5-9m²/litr.

Due to the property of static dissemination relies on surface contact onto the highly conductive metallic floor, residual traces of CONCURE CURING MEMBRANES should be removed by light abrasion prior to the floor being commissioned.

Alternative methods such as polythene sheeting can be used but the need for efficient curing is stressed.

Estimating

Pack Sizes

NITOFLOOR METALTOP NF 25 kg Pack

Coverage

The following coverage figures are based upon coverage rates on a smooth surface. Typically an additional 10%



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Limitations

Do not use NITOFLOOR METALTOP NF in areas exposed to acids and their salts or other materials known to rapidly attack or deteriorate concrete containing Ordinary Portland Cement.

Do not apply to concrete containing calcium chloride or concrete having greater than 3% air entrainment.

Where a coloured floor is required, it is strongly recommended that a site trial is undertaken to assess possible local variations caused by aggregates and sands used in the base concrete.

Estimating

Pack Sizes and Coverage

Product	Pack	Theoretical Coverage
NITOFLOOR METALTOP NF	25 kg	3-7kg/m ²
CONCURE MEMBRANES	210 litre 25 litre	5-9m ² /litre
NITOFLOOR METALTOP NF AGG	25 kg	

Applications should comply with the recommended rate to obtain the published performance characteristics. Any reduction may have a detrimental effect on the finish floor's electrical abrasion properties and, in the case of pigmented floors, the quality and consistency of the finish.

The average figures for liquid products are theoretical. Due to the variety and nature of possible substrates, and wastage factors, practical coverage figures will be reduced.

Storage

If protected from the environment in original undamaged packaging, the shelf life of NITOFLOOR METALTOP NF and CONCURE CURING MEMBRANES is 6 months.

Precautions

Health and Safety

NITOFLOOR METALTOP NF contains cement powders which during normal use have harmful effect on dry skin. However, when NITOFLOOR METALTOP NF is mixed or becomes damp, alkali is released which can be harmful to the skin.

Irritation to eyes, respiratory system and skin.

Avoid inhalation of dust.

Avoid contact with skin and eyes.

Wear suitable gloves and eye protection.

In case of contact with skin, wash with water.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Refer to the relevant products Material Safety Data Sheet for additional information.

Fire

NITOFLOOR METALTOP NF is non-flammable.

