Nitoflor ® LH

constructive solutions

High performance lithium based hardener, strengthener and densifier for concrete floors

Uses

Nitoflor LH is used for surface hardening of new and old concrete to prevent dust generation and to reduce wear, particularly on exposed concrete. Typical areas of application include warehouses, factories, platforms, car parks, corridors etc., on both new and existing concrete surfaces.

Advantages

- Superior in performance over Sodium based systems
- ASR Protection - contains Lithium, the chemical element known to mitigate damaging ASR (Alkali-silica reactivity)
- Seals micro-channels in concrete against water penetration and chemical attack
- Hardens - making concrete stronger and abrasion resistant
- Dust proofs - creating a cleaner, healthier environment
- Permanent - One penetrating application
- Easy maintenance. Makes cleaning easier. Reduces staining.
- Satin sheen to concrete
- Zero VOC. Environment friendly material.

Description

Nitoflor LH is a lithium silicate based system which when applied on concrete surfaces penetrates into the micro channels and seals against water and chemical attack and improves abrasion resistance.

Technical support

Fosroc offers a comprehensive range of floor toppings and coatings. In addition, Fosroc offers technical support service to specifiers, end users and contractors, as well as on-site technical assistance in locations all over the country

Compatibility with cement types

Nitoflor LH is suitable for use on concrete made with all normal OPC and PPC cements. However, where high pozzolonic content cement is employed, free lime may be low and the use of other Nitoflor toppings may be preferable. Fosroc shall be consulted for advice in case of doubt.

Properties

pH value	Between 11.0 - 12.0
Total Solid Content	Between 17 $\pm$ 1%
Specific Gravity @ 25°C	1.1 - 1.3
pH	Alkaline
VOC content	Nil
Appearance	Clear water like liquid
Abrasion Resistance (As per ASTM C779)	0.313 mm thickness loss in 30 mins 0.562 mm thickness loss in 60 mins
Impact Resistance	37 (By Rebound Hammer Test as per ASTM C 805)
Penetration of material	18mm in to the concrete surface.
Curing efficiency test (By Petrographic Analysis) as per ASTM C856	No cement particle found, hence cured properly.
Dilution with water	1:1 - 1:3

Anti-dust

The main source of dust, from otherwise sound concrete floors, is the liberation of free lime which has not been converted fully in the hydration process. By converting this free lime into a hard crystalline material, this source of dust is eliminated. At the same time, the resistance of the concrete surface to penetration of oil and grease is considerably increased.

Specification Clauses

Performance specification

The liquid liquid floor hardener used shall be a lithium silicate based system. When tested according to ASTM C779, the concrete treated with the system shall show an improvement in the abrasion resistance of atleast 31% over control.

Supplier specification

The surface hardening of new and old concrete (specify details and areas of application) must be carried out using Nitoflor LH marketed by Fosroc, applied strictly in accordance with the technical datasheets

Application instructions

Preparation

The substrate shall be thoroughly cleaned of all foreign materials such as bond breakers, curing agents, form release oils, dust, construction laitance by light mechanical grinding if

Nitoflor ® LH

If applying by hand, spread the sprayed material with a lamb-swool roller once or twice and then stop spreading. If spread excessively, it tends to dry in streaks. After 20 minutes, the excess material shall be removed and the surface shall be allowed to dry overnight. The floor is ready to use after the surface is dry. A light lithium residue may form on the surface after the floor is dry. This is the excess Nitoflor LH iquid floor hardener which was not absorbed and can be removed by a stiff broom or power sweeper. For an immediate shine, Nitoflor LH shall be allowed to dry overnight and then polished with a high speed buffer equipped with a black pad, followed by a red pad.

Sealing / overcoating / striping

Concrete floors treated with Nitoflor LH can be sealed / over-coated with Nitoflor epoxy floor coatings after 24 hours. The treated surface can also be painted for striping as there will be no chemical incompatibility between Nitoflor LH treated surface and these paints.

Maintenance

Floors treated with Nitoflor LH benefit from good routine maintenance. Regular scrubbing with a high pH detergent is recommended and can increase the shine. Tyre marks can be removed with a citrus type of cleaner. Oils and acids should be removed properly to prevent damage.

Estimating

Packaging

Nitoflor LH is supplied in 20 & 200 kg containers.

Coverage

Spray applied 5-8 sq.m/Kg depending on the concrete poros-ity. On textured surfaces, the coverage will be much lower.

Storage

Shelf life

6 months if stored in a cool dry place in unopened packages.

Precautions

Health & Safety instructions

Nitoflor LH is non flammable, non toxic water based formu-lation. It contains no solvents, or harmful levels of VOCs. It is not carcinogenic or mutagenic and may be used in food preparation areas. Nitoflor LH is odorless during and after application and also allows concrete to breathe.

Fire

Nitoflor LH is non-flammable.

Additional information

Technical data and guidance can be provided on a wide range of concrete admixtures, concreting aids, waterproofing and other materials including floor sealers/toppings, repair systems and industrial machinery grouts.

Separate datasheets are available on these products

Important note :
Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products whether or not in accordance with any advice, specification, recommendation or information given by it.

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