



# Nitoflor Lithurin

## Permanent hardening and dustproofing compound for concrete surfaces

### Uses

- As a surface hardener for new and old concrete floors to prevent dusting and to increase durability
- Suitable for use on concrete and granolithic surfaces
- Typical applications include industrial floors, light engineering works, warehouses, animal feed and milk parlours, abattoirs, car parks, dams, reservoirs, tanks, silos and flues
- As a case hardener for pre-cast products

### Advantages

- Highly durable, improves abrasion resistance and reduces chemical attack from oils and greases
- Easy to apply, no special equipment or skills required
- Eliminates dust formation from within the treated surface
- Economical and low cost method of floor protection

### Description

Nitoflor Lithurin is a white, soluble, crystalline powder based on metallic fluorosilicates and wetting agents.

When Nitoflor Lithurin is mixed with water and applied to the floor, the solution penetrates the concrete reacting with lime and other soluble particles to form granite hard crystals, leaving a permanent, hard wearing and dust free surface.

### Properties

**Penetration:** Specially selected wetting agents in Nitoflor Lithurin improve the depth of penetration resulting in a more durable finish better than that of other surface treatments which merely form a superficial skin

**Hardness:** The surface hardness is achieved through a chemical reaction within the cementitious material. This gives in-depth protection against heavy traffic and other forms of abrasion

**Anti-dust:** The chemical elimination of free lime and other soluble particles creates a tightly bound surface resistant to dusting

**Chemical resistance:** The inert crystalline compounds formed by Nitoflor Lithurin application reduce the absorbency of the surface and improve resistance to solvents, greases and commonly used chemicals

Consult the Fosroc Customer Service Department for details on resistance to specific chemicals.

### Maintenance

Nitoflor Lithurin, when applied in accordance with the technical data sheet, will last the life of the floor and therefore re-treatment should not be required.

### Application instructions

#### Preparation

Surfaces to be treated with Nitoflor Lithurin must be structurally sound and free from loose materials. Cracks and holes should be repaired with Nitomortar PE resin mortar (see separate data sheet).

Oil and grease contamination should be treated with a suitable chemical de-greaser and washed with clean water and allowed to dry. Any laitance or existing coating must be removed prior to application as these will prevent penetration.

New concrete floors must be allowed to cure for 14 days prior to treatment. Coloured floors should be allowed to cure for 28 days prior to treatment and a small area tested with Nitoflor Lithurin to assess the effect on the colour.

Nitoflor Lithurin must only be applied to dry surfaces to maximise penetration.

#### Mixing

Dissolve 15 kg of Nitoflor Lithurin with 45 litres (10 gallons) of water in plastic containers and stir until completely dissolved. Metal containers may be used provided the solution is used within 24 hours.

#### Application

Ensure that the surface to be treated is dry and apply the mixed Nitoflor Lithurin at a rate of approximately 1 litre to every 4.5 m<sup>2</sup> using a soft broom or brush. Ensure that the surface is thoroughly saturated with the solution and well brushed out to prevent ponding.

Allow the solution to be absorbed into the floor for a period of up to 2 hours. Do not allow the floor to dry out and whilst the floor is still damp wash the surface thoroughly with clean water. Remove all surplus solution and water as stated in disposal instructions.

Failure to do so will result in a white dusty deposit left on drying.



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Two coat application is recommended for complete treatment, but very dense, well trowelled surfaces such as granolithic toppings, power floated or vacuum dewatered concrete will generally require only a single coat.

If required, re-apply the solution after 24 hours ensuring that the floor is dry. All surplus solution must be removed.

### Limitations

Nitoflor Lithurin solution is toxic and cannot be discharged into drains and storm tanks. Nitoflor Lithurin must be disposed of in accordance with the Environmental Protection Act 1990.

Metal, glass or paintwork must be protected against Nitoflor Lithurin. Should any splashes occur these must be removed immediately and disposed of by following the disposal instructions.

### Estimating

Nitoflor Lithurin is supplied in 15 kg bags. One coat applications require approximately one bag to cover approximately 200 m<sup>2</sup>. Two coat applications require approximately one bag per 150 m<sup>2</sup>. The degree of porosity will affect the coverage rate achieved.

### Storage

Nitoflor Lithurin has a shelf life of 12 months if stored in cool dry conditions in original, unopened bags.

### Precautions

#### Health and safety

Nitoflor Lithurin is toxic and should not come into contact with skin or eyes or be swallowed. Dust inhalation during

mixing must be avoided. Wear suitable protective clothing, gloves, boots and eye/face protection.

After contact with skin, wash immediately with plenty of soap and water. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical attention. If swallowed, **do not** induce vomiting, seek medical attention immediately.

Ensure that Nitoflor Lithurin does not come into contact with food, food containers and animal feeding stuffs.

#### Fire

Nitoflor Lithurin is non-flammable.

#### Disposal

Due to the Environmental Protection Act 1990 soluble fluorosilicates i.e. Nitoflor Lithurin cannot be discharged into drains or storm tanks and the given guidelines should be followed.

After treatment, the surplus solution and subsequent washings must be vacuumed up to remove all traces of the solution from the surface. The storage and transportation of this solution must be in polythene, plastic or stainless steel containers that can be lidded for transport.

The residual liquid should be treated with builders lime i.e. calcium hydroxide, in order to neutralise the solution. The lime should be thoroughly mixed with the solution, left to stand for 24 hours and pH checked with litmus paper until a pH7 or above is achieved. Both lime and litmus paper can be obtained from any chemical laboratory equipment supplier such as BDH of Poole, Dorset. Builders lime can be obtained from any good builders merchant. As a guideline, 10 litres of solution will require 2 kg of lime for neutralisation. The pH of the solution must always be checked to ensure that complete neutralisation has occurred.

The reaction with the lime produces a white precipitate of calcium fluorosilicate which may be disposed of on a landfill site. The remaining liquid can be washed away down drains with excess water.

All health and safety procedures and precautions must be adhered to whilst handling and disposing of the solution.

Nitoflor is the trade mark of Fosroc International Limited



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