Fosroc Lithurin E

constructive solutions

Permanent hardening and dustproofing compound for concrete surfaces

Uses

Surface hardener for new and old concrete floor 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.

Advantages

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

Description

Fosroc Lithurin E is a clear liquid based on metallic silicates and wetting agents.

When Fosroc Lithurin E 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 surface. Surface dust levels are considerably reduced, as is the need for subsequent floor maintenance and cleaning.

Properties

Penetration:	Specially selected wetting agents in Fosroc Lithurin E 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 Fosroc Lithurin E reduce the absorbency of the surface and improve resistance to solvents, greases and commonly used chemicals

Test Data

Taber Abrasion (ASTM D4060)
H22 Wheel, 1kg weight, 100 cycles.

Untreated control: >100g abraded
Treated with Fosroc Lithurin E: <30g abraded

Note: Test results based on laboratory testing. Results from field samples may vary depending on original concrete condition.

Application instructions

Preparation

Surfaces to be treated with Fosroc Lithurin E must be structurally sound and free from loose materials. Cracks and holes should be repaired with Nitomortar PE or Renderoc ST05 (see separate datasheets).

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

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. Concrete pores should be opened by wire brushing. Dust should then be removed by a soft broom and vacuum.

Fosroc Lithurin E must only be applied to dry surfaces to maximise penetration. Immediately prior and during treatment the floor should not be subjected to excessive heat.

1st Saturation

Dilute at a ratio of 1 volume Fosroc Lithurin E to 4 - 8 volumes of water depending upon floor porosity. Highly porous floors will absorb the material diluted 1:4 whereas dense floors will require dilution of up to 1:8.

The diluted material should be poured liberally over the floor by means of a watering can or knap sack spray, ensuring the surface is thoroughly saturated (glistening) and absorption is no longer evident. Use a squeegee or soft broom to work the solution into the surface and prevent ponding.

For the next 3 - 4 hours, maintain the concrete in a saturated condition through further applications of diluted Fosroc Lithurin E.

After this period, allow the concrete to dry naturally. Ponding should be avoided at all times.

2nd Saturation

After the floor has thoroughly dried (typically 6 – 24 hours later depending on ambient conditions), a second saturation should be completed using the same procedure as above, however using a more dilute mixture of Fosroc Lithurin E (typically 1:6 to 1:8).

On very porous floors a third saturation may be required. This is evident when the floor will still absorb the dressing at a fast rate. Note: a greater number of more dilute saturations is preferable to a fewer number of more concentrated saturations.

Estimating

Fosroc Lithurin E is supplied in 210L drums or 25L bottles. Coverage rate will depend on the substrate porosity and level of dilution chosen, but on average, 6m^2 of concrete may be treated per litre of Fosroc Lithurin E supplied, per application.

Health and Safety

Whilst diluting and applying Fosroc Lithurin E, suitable chemical resistant gloves and protective clothing should be worn. Refer to the product safety datasheet for futher information.

The material should not come into contact with glass or with painted or polished surfaces.

If applying Nitoflor Lithurin by knap sack spray, ensure a wet fan spray pattern is achieved without mist formation.

Limitations

The performance improvement provided by Fosroc Lithurin E is substrate / case by case dependent.

If Fosroc Lithurin E solutions are allowed to prematurely dry, performance may be impaired, it is therefore recommended to mark out areas where saturation can easily be maintained by the available labour force during the 3 – 4 hours application windows.

Important note
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