Nitoflor ET Slurry

constructive solutions

Heavy duty, flow applied, lightweight anti-skid surface dressing

Uses

Nitoflor ET Slurry system provides a lightweight, yet extremely hardwearing anti-skid surface to a variety of substrates including steel, concrete, and timber.

Ideally suited for foot and road bridges, RO linkspans, helicopter decks, work platforms, ships decks, car parks, walkways, wet work industrial areas etc.

Special non-spark formulations and low flame spread make Nitoflor ET Slurry system especially suitable for offshore oil platforms.

Advantages

- Lightweight - important in design consideration of bridges and while overlaying on old structures.
- Hard-wearing - proven ability to withstand the heaviest wear in locations around the world.
- Durable - excellent tensile, flexural strengths and good impact resistance.
- Excellent adhesion - to prepared steel surfaces and primed concrete substrates
- Resilient - reduces wear and tear to vehicle tyres and enhances riding comfort
- Non-slip - Excellent grip even when wet.
- Non reactive - Chemically resistant to oils, greases, hydraulic fluids and many other chemicals.
- Waterproof - Excellent corrosion protection to steel and concrete substrates
- Spark resistant - Zero spread of flame

Description

Nitoflor ET Slurry, a three component system is based on coal tar modified epoxy resins, amine curing agents and chemically inert, graded silica fillers which when mixed forms a fluid, homogenous slurry.

The components of Nitoflor ET Slurry system are supplied in preweighed quantities ready to use on site.

The thickness of the Nitoflor ET Slurry system is varied to suit traffic conditions :

Traffic density

Light	Medium	Heavy
3.0 - 3.5mm	3.5 - 4.0mm	4.0 - 5.0mm

Specially selected, hardwearing aggregates are broadcast onto this slurry whilst it is still wet to provide a lightweight, durable, anti-skid dressing.

Choice of dressing aggregates is determined by the type and density of traffic expected.

The thickness of the finished surface with dressing will be between 5- 8mm, depending upon the exact system chosen to meet the expected end use.

Technical support

Fosroc is represented worldwide by technically trained personnel providing help and advice on material selection and application.

Properties

Pot life at 30^{0}C	30 min.
Density	1.78 - 1.85 g/cc
Curing time at 30^{0}C	Foot traffic after 24 hours, vehicular traffic after 48 hours.
Chemical resistance	Fully cured Nitoflor ET Slurry system has been shown to be resistant to the following chemicals after continuous immersion for 3 months at 30^{0}C.

Petrol
Kerosene
Diesel
Hydraulic fluids
Dilute mineral acids and alkalis
De-icing salts
Aircraft fuel
10% urea in water

Mechanical properties

Compressive strength (N/mm^2)	35
(BS 6319 Part 2)	
Tensile strength (N/mm^2)	8
(BS 6319 Part 7)	
Flexural strength (N/mm^2)	15
(BS 6319 Part 3)	

Nitoflor ET Slurry

Specification clauses

High performance topping

All surfaces as detailed shall be treated to provide a hardwearing, waterproof, light weight, anti-skid surface suitable for the intended end use at a thickness of 3 mm for light duty traffic, 4mm for medium duty traffic and 5mm for heavy duty traffic at a coverage rate of 3.5 -3m^2/pack, 3.0 - 2.5m^2/pack, 2.5 - 2.0m^2/pack respectively.

It shall give a minimum compressive strength of 35N/mm^2 when tested as per BS 6319 part 2, a minimum tensile strength of 8N/mm^2 when tested as per BS 6319 part 7, and a minimum flexural strength of 15N/mm^2 when tested as per BS 6319 part 3.

Nitoflor ET Slurry system is resistant to spread of flame when tested as per BS 476 part 7, clause 2, 1971. It shall be resistant to spillage of kerosene, petrol, diesel, hydraulic fluids, dil. mineral acids and alkalis, aircraft fuels and 10% urea in water.

Application instructions

Surface preparation

Nitoflor ET Slurry system can be applied to a variety of substrates. As with all flooring materials or protective coatings, correct surface preparation is essential.

Steel substrate :

Nitoflor ET Slurry system is specially formulated to exhibit tenacious adhesion to unprimed steel. However, all steel substrates should be blast cleaned to a minimum SA 2½ standard of cleanliness. An angular profile amplitude of atleast 75 microns is recommended. The slurry should be applied as quickly as possible to the blasted steel surface. If the standard of the surface falls below SA 2½ then the steel must be reblasted.

Concrete substrates :

Nitoflor ETSlurry system is applied to clean, sound, dry concrete substrates which are free of any laitance, or loose particles. Mechanical scarifying or blasting methods are strongly recommended. Prepared concrete substrates should be primed with Nitoprime 25.

The primer is applied by brush or lambswool roller to provide a thin even coverage. Avoid over application and puddles. Nitoflor ET Slurry system is applied onto the primer whilst it is still tacky.

Mixing

Two liquid components shall be mixed thoroughly using a paddle attached to a heavy duty, slow speed drilling machine. The mineral fillers shall be added and mixed until a homogenous slurry consistency is formed. The total mixing operation should take about 3 minutes. The Nitoflor ET Slurry system is now ready for use. Thinners or solvent should not be added.

Laying

Once mixed the Nitoflor ET Slurry system must be used within the specified pot life.

The slurry shall be poured onto the prepared surface. Work in lanes of 2-3m width, masking off edges with tape. The slurry shall be spread using a steel trowel or squeegee taking particular care when joining up to previous day's work. Use of a wet film gauge is recommended to ensure the correct thickness and material usage. The chosen surface dressing aggregate must be applied immediately after laying Nitoflor ET Slurry system. The slurry coating is blinded to saturation by allowing the aggregate to fall vertically until no slurry is visible.

Throwing aggregates at an angle over the slurry may cause ridges. Masking tape must be removed before the coating has cured. The Nitoflor ET Slurry system must be allowed to cure for 24 hours at 30^{0}C before being subject to traffic. At lower temperatures this period will be increased.

Once it is clean and dry, excess dressing aggregate can be removed with a broom and reused after the initial curing period.

Cleaning

All tolls can be cleaned immediately after use with Nitoflor Sol, solvent.

Limitations

Temperature limitations

Recommended application range is 15^{0}C to 35^{0}C. Fosroc shall be contacted, if application or service temperatures are outside this range.

Application limitations

- Minimum ambient temperature : 15^{0}C
- Maximum humidity : 75% at 25^{0}C
  (Moisture content 5%)
- Substrate temperature : 15 ^{0}C minimum

Nitoflor ET Slurry

Estimating

Supply

Nitoflor ET Slurry system	:	11 Litres
Nitoprime 25	:	1&4 Litre
Nitoflor Sol	:	20 Litre

Coverage

Nitoflor ET Slurry	Thickness mm	Coverage m^2/litre
Light traffic	3.0	0.33
Medium traffic	4.0	0.25
Heavy traffic	5.0	0.20
Nitoprime 25	5.5 - 6.5 m^2/ltr	

The above coverages are for indication purpose only and vary depending on the nature and texture of surface of application.

Storage

Shelf life

Nitoflor ET Slurry system and Nitoprime 25 primer have a shelf life of 12 months when stored in warehouse conditions below 35^{0}C.

Precautions

Health & Safety instructions

Since some people are sensitive to epoxy resins and cleaning solvents, the use of protective clothing, gloves, proprietary barrier creams and eye goggles is recommended. If contact with resins or solvents occur, the affected area shall be cleaned with resin removing creams followed by washing with soap and water. Washing the resin with solvent is not suggested. In the case of eye contact, it shall be washed thoroughly with clean water and medical advice shall be sought immediately.

Fire

Nitoflor Sol, solvent is flammable. Ensure adequate ventilation. Use near naked flame is not suggested. Smoking is prohibited during application/ handling of the product.

Flash points (Abel closed cup)

Nitoflor Sol, solvent	:	33^{0}C
Nitoflor ET Slurry base	:	above 50^{0}C
Nitoflor ET Slurry hardener:		above 40^{0}C
Nitoprime 25, primer	:	25^{0}C

Additional information

In addition, the Nitoflor range of industrial flooring products include concrete hardeners, resin floor coatings, toppings and screeds designed to meet most requirements of modern industrial environments. For further information contact the local Fosroc office.

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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