



Nitoflor® SL901AS

High chemical resistant, self levelling, Novalac based antistatic floor topping

Uses

Nitoflor SL901AS is an epoxy Novolac floor topping designed to provide protection to concrete and steel structures in aggressive chemical conditions. The material is particularly suitable in wastewater treatment plants, desalination plants, food processing plants, pulp and paper mills, electric power plants, chemical manufacturing plants, fertiliser and insecticide plants and petroleum refineries.

Nitoflor SL901AS may be used in applications such as chemical processing and drum storage areas, loading docks and ramps. It may also be used in conjunction with glass fibre cloth to increase the thickness of the system or to reinforce structures subjected to aggressive chemicals.

Advantages

- Nitoflor SL901AS is 100% solids.
- Exhibits good chemical resistance in pH ranging from 1 - 14 at 25°C
- Excellent adhesion to properly prepared concrete, mild steel, and other substrates.
- Excellent abrasion resistance

Description

Nitoflor SL901AS is a solvent free, crosslinked, high build epoxy novolac based self levelling floor topping. Nitoflor SL901AS is a two part system consisting of a base and a hardener, which when mixed provides a 2mm thick floor topping with excellent laying properties. Nitoflor SL901AS is available only in grey colour.

Technical support

The company provides a technical advisory service supported by a team of specialists in the field.

Specification clauses

Chemical and abrasion resistant floor topping

The chemical and abrasion resistant shall be Nitoflor SL901AS, a high build, two pack epoxy novolac system specially designed to provide a tough and impermeable high chemical resistant self levelling topping.

Properties

Solid content	100%
Finish	Gloss
Colour	Grey
Specific gravity	1.35
Pot life	45 min at 23°C 20 min at 35°C
Tack free time	8 - 10 hours at 23°C 4 - 6 hours at 35°C
Tensile strength	30 MPa
Elongation	Approx. 3%
Flexural strength	45 MPa
Compressive strength	95 MPa
Hardness	85 ± 5 Shore D
Abrasion resistance	
1 kg, H 22 wheels	0.10 mg/cycle
Service temperature	< 60°C
Surface resistance (DINEN1081)	>10 ⁵ to 10 ⁸ Ohms

Chemical resistance

The fully cured topping is resistant to the splash / spillage of the following chemicals :

Acetic acid 25%	Hydrazine 35%
Ammonium hydroxide*	Hydrochloric acid 35%
Benzene	Hydrofluoric acid 25%
Benzoyl chloride	Hydrogen Peroxide 20% Vol
Benzyl alcohol	Isopropanol
Bleach	Jet fuel
(Sodium Hypochlorite 5%	
Boric acid*	Kerosene
Brake fluid	Lactic acid 20%
Brine 20%	Methyl isobutyl ketone
Car oil	Mineral spirit
Carbon Tetrachloride	Nicotinic acid*
Caster oil	Nitric acid 30%
Chromic acid 30%	Phenol 50% in IPA
Citric acid 50%	Phosphoric acid 85%

Nitoflor® SL901AS

Crude oil	Potassium hydroxide*
Deionised water	Propylene glycol
Diesel fuel	Sea water
Diethanolamine 88%	Skydrol
Ethylene glycol	Sodium hydroxide*
Ethylene glycol monoethyl ether	Sulfanilic acid*
Fatty acids	Sulphuric acid 98%
Formaldehyde 37%	Tartaric acid 50%
Gasoline	Toluene
Hexamine 25%	Vegetable oils
Hexane	Xylene

* Any concentration in water

The local Fosroc office should be consulted for resistance to specific chemicals and conditions or when long term exposure is required.

Application instructions

Preparation of concrete surfaces

All surfaces, which are to receive the topping, must be dry, sound and free from debris and loose material. The substrate must be free from contamination such as oil, grease, wax, dirt or any other form of foreign matter which might affect adhesion.

All blowholes and imperfections should be filled with suitable epoxy putty.

Priming

Nitoflor SL901AS is designed to be used without primer. However, if the condition of the concrete substrate requires priming, Nitoprime 25 can be used.

Mixing undercoat

Proper mixing of the undercoat components is essential. Mix the base and hardener in a mixing vessel. Do not add solvents. It is important that all components are intermixed thoroughly with a forced - action mixer or with a heavy duty slow speed drilling machine attached with a mixing paddle so that no traces of the components remain unmixed.

Application

Apply the mixed undercoat with a roller or brush on the primer at a material consumption rate of 7 m²/kg. Care should be taken to avoid over application or puddles. The undercoat provides a conductive / dissipative passage to earth and correct application and strict adherence to coverage rates are critical to the final electric properties of the completed floor.

For undercoat curing to be complete, adequate ventilation and air movement are necessary. Thorough covering of earthing connections is essential. The conductivity of the undercoat needs to be measured before applying the Topcoat.

Mixing of topcoat

It is imperative that the resin be thoroughly mixed with the hardener in the exact ratios to ensure optimum performance. Therefore, the entire contents of the hardener can should be added to the base container and mixed until a uniform colour and consistency are obtained, taking particular care to scrape the sides and bottom of the container. It is recommended that mechanical mixing be employed using a jiffy mixer on a slow speed electric drill.

Application

Once mixed, Nitoflor SL901AS should be immediately applied to the prepared surface ensuring a continuous topping of uniform thickness.

The mixed material should spread on the floor using a notched trowel at the recommended coverage. The spread material should be lightly rolled using spiked roller.

Cleaning

Nitoflor SL901AS should be removed from tools and equipment with Fosroc solvent Nitoflor Sol immediately after use. Cured material can only be removed mechanically.

Nitoflor® SL901AS

Limitations

Substrate, ambient and product temperature must remain above 15°C during application and curing. Minimum material/container temperature for spray application is 20°C. Avoid moisture contamination. Nitoflor SL901AS must be applied above dew point.

Nitoflor SL901AS may not be colour stable when in contact with some chemicals. The colour change will not affect the performance of the protective system either on concrete or steel.

Estimating

Packaging

Nitoflor SL901AS	15 L
Nitoflor Sol	5 L
Nitoprime 25	1 & 4 L
Undercoat	2.4 L

Coverage

Nitoflor SL901AS	4.5m ² /Pack/2mm thickness
Nitoprime 25	5.5 - 6.5 m ² /L
Undercoat	6.3 - 7.3 m ² /litre

The coverage figure is theoretical. Due to wastage factors practical coverage figures may be reduced.

Storage

Nitoflor SL901AS has a shelf life of 12 months if kept in a dry store at temperature between 15 - 30°C.

Precautions

Health & Safety instructions

Nitoflor SL901AS and Nitoflor Sol should not come in contact with skin and eyes, or be swallowed. Ensure adequate ventilation and avoid inhalation of vapour. Some people are sensitive to epoxy resin systems and may develop dermatitis on skin contact. Gloves and barrier creams should be used when handling primers and Nitoflor SL901AS. If contact with the skin occurs, wash with soap and plenty of water. Do not use solvent. Direct contact with the eyes will cause irritation and may cause serious damage if left untreated. Any eye contamination should be washed thoroughly with plenty of water and medical treatment sought immediately. The use of goggles when mixing is recommended. Smoking is prohibited during handling/application of the product.

Fire

Nitoflor SL901AS is flammable. Keep away from sources of ignition. No smoking. In the event of fire, extinguish with CO₂ or foam. Do not use a water jet.



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