

Water dispersed polyurethane floor coating and sealer

Uses

Nitoflor PUW100 floor coating provides a pigmented sealing coat onto cementitious and concrete surfaces that are dustproof, easily cleanable and resistant to penetration of oils and liquids. The cured film also provides resistance to corrosion, chemicals and abrasion. Suitable for application in breweries, dairies, kitchens and food processing plants. The cured film forms a waterproof barrier and is non-toxic.

Advantages

- Excellent dirt pickup resistance.
- Improves the resistance of floors to many industrial chemicals.
- Hygienic - easily cleaned due to impervious finish.
- Water based - environmental friendly
- Cosolvent free - low VOC/low odour.
- Abrasion (resistant) and easy to apply.
- Antifungal - resistant to fungal attack.
- Weather & UV resistant

Description

Nitoflor PUW100 is a two component prepacked, water dispersed polyurethane resin system ready for onsite mixing and use.

The cured film forms a hard, flexible, matt surface on concrete and other cementitious substrates.

The total dry film thickness shall be of 90 microns in two coats.

Technical support

Fosroc offers technical support service to specifiers, end users and contractors, as well as onsite technical assistance in locations all over the country.

Note : After the usable life has expired, any excess material although not hardened & increased in viscosity should not be used for application.

Chemical resistance

Samples of Nitoflor PUW100 floor coating have been subjected to constant immersion at 30°C for 3 days in the following chemicals and have been found to be unaffected.

Dilute Sulphuric acid	20%
Dilute Citric acid	10%
Dilute Sodium Hydroxide	20%
Ammonia 10% solution	

Oil and grease
Petrol
Tap water
Sodium chloride

Good housekeeping is essential in areas where chemical spillage is likely to occur. It is important that such spillage should not be allowed to dry as higher concentrations of chemicals are involved. If chemicals at higher temperatures are involved, Fosroc shall be contacted.

Properties

Pot life @ 30°C	3 hrs
Time between coats @ 27°C	10 - 24 hrs
Initial hardness	24 hrs
Full cure	7 days
Volume solids	45%
Mixed density	1.20 ± 0.03
Pencil hardness (ASTM D3363)	≥ 2H
Impact resistance (ASTM D 2794) (cm.kg)	≥ 50
Abrasion resistance (ASTM D 4060) (1000g, 1000 cycles)(CS10 wheel)	< 35mg
Alcohol(100%) double rub, (ASTM D 5402)	>200
MEK double rub, (ASTM D 5402)	>200
Pull off Adhesion Strength (ASTM D4541)	>1.5N/mm ²

Application instructions

Instructions for use

Surface preparation

The long term durability of any resin floor system is determined by the adhesive bond achieved between the flooring material and the substrate. It is most important therefore that substrates are correctly prepared prior to application.

New concrete floors

These should normally have been placed for at least 28 days and have a moisture content of less than 5%. Floors should be sound and free from contamination such as oil and grease, mortar and paint splashes or curing compound residues. Excessive laitance can be removed by the use of mechanical methods. Dust and other debris should then be removed by vacuum cleaning.

Old concrete floors

A sound, clean substrate is essential to achieve maximum adhesion. As for new concrete floors dry removal of laitance by use of mechanical methods is preferable. Oil and grease penetration should be removed by the use of a proprietary chemical degreaser or by hot compressed air treatment.

Priming

Priming is not normally required for the good quality concrete substrate. If any doubt exists on the quality of the concrete, or if it is porous it should be primed with Nitoprime 31.

Nitoprime 31 should be mixed in the proportions supplied. Add the entire contents of the hardener can to the base can. When thoroughly mixed, preferably using a slow speed drill and paddle, the primer should be applied in a thin continuous film, using rollers or stiff brushes. Work the primer well into the surface of the concrete taking care to avoid ponding or over application.

The primer should be left to achieve a tack-free condition before applying the top coat. A second coat of primer may be required if the substrate is excessively porous.

Epoxy Screeds

Nitoflor PUW100 can be applied on Fosroc epoxy screeds, Nitoflor WEC 3000, Nitoflor EU5 and self levelling Nitoflor SL range. The coating should be applied within 48 hours from the application of the screed in order to achieve a better intercoat adhesion.

Mixing the coating

The base component of Nitoflor PUW 100 should be thoroughly stirred before it is mixed with hardener. The entire contents of the hardener container should be poured into the base container and mixed thoroughly, for at least 3 minutes using power mixing tools. Mix these components in the quantities supplied taking care to ensure all containers are scraped clean. Do not add solvent thinners at any time.

Standard application

It is recommended to apply Nitoflor PUW100 by spray. However it can be applied by brush or roller. Ensure the loose hair on the roller are removed before use. A minimum wet film thickness of 100 microns should be applied in 1 coat.

When the base coat has reached initial cure (10 hours @ 27°C), the second coat can be applied at minimum wet film thickness of 100 microns. Care should be taken to ensure that a continuous film is achieved.

Estimating

Nitoflor PUW100 is supplied in 4 litre packs.

The coverage of Nitoflor PUW100 coating depends to a large extent on the substrate & site conditions. For calculation purpose 10m²/litre/coat @ 100 microns WFT (45 microns DFT) can be taken as coverage. Nitoflor PUW 100 is available in limited colours.

Storage

Nitoflor PUW100 should be stored under normal warehouse conditions, and must be protected from frost.

Shelf life

6 months in unopened containers.

Nitoflor PUW100



Precautions

Health and Safety instructions

Since some people are sensitive to isocyanate resins, gloves, goggles and barrier creams should be used when handling these products. If contact with skin occurs, it must be removed, before it hardens, with resin removing creams followed by washing with soap and water. Solvent should not be used. The use of goggles is recommended. Direct contact with eyes will cause irritation and may cause serious damage if left untreated. Any eye contamination should be washed thoroughly with plenty of water and immediate medical treatment sought.

Fire

Nitoflor PUW100 coating is non-flammable.

Additional information

Fosroc manufactures a wide range of products specifically designed for the repair and refurbishment of damaged reinforced concrete. This includes repair mortars, fluid micro concretes, chemical resistant epoxy mortars in addition to comprehensive package of protective coatings. In addition, a wide range of complementary products are available. This includes admixtures, joint sealants, waterproofing membranes, grouts and anchors specialised flooring materials and bonding agents.

Separate datasheets are available on these products.



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