

Nitocote PUW100

Water dispersed polyurethane coating and sealer

Uses

Nitocote PUW100 provides a pigmented sealing coat onto cementitious and concrete surfaces providing dustproof, easily cleanable and resistant to penetration of oils and liquids. The cured film is resistant 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 substrate to many industrial chemicals.
- Hygienic - easily cleaned due to impervious finish.
- Water based - environmental friendly.
- Co-solvent free - low VOC/low odour
- Abrasion (resistant) and easy to apply.
- Attractive - available in limited range of colours
- Antifungal - resistant to fungal attack.
- Weather & UV resistant

Description

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

The cured film forms a hard, flexible, matt seal to concrete and other 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 Nitocote PUW100 have been subjected to constant immersion at 300C for 3 months in the following chemicals and have been found to be unaffected.

Dilute Sulphuric acid 20%

Dilute Citric acid

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 especially important that such spillage should not be allowed to dry as higher concentrations of chemicals are involved.

Where chemicals at higher temperatures are involved , Fosroc shall be contacted.

Properties

	@300C
Usable life	3 hrs
Time between coats Within	16 hrs
Initial hardness	24 hrs
Full cure	7 days
Volume solids	45%
Specific gravity	1.20
Pencil hardness ASTM D3363	> 2H
Impact resistance (ASTM 2794) (cm.kg)	> 50
Abrasion resistant (ASTM D 4060) (1000g, 1000 cycles)(CS10 wheel)	< 50mg
Alcohol(100%) double rub, 350g load	>200
MEK double rub, 350g load	>200
Adhesion Strength (ASTM D4541) (concrete failure)	>3N/mm ²

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Application instructions

Instructions for use

Surface preparation

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

New concrete substrate

These should normally have been placed for at least 20 days and have a moisture content of less than 5%. However when required to be used on wet concrete of minimum 3 days old, please contact Fosroc Technical Service. Substrate 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 substrate

A sound, clean substrate is essential to achieve maximum adhesion. As for new concrete substrate 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.

Any damaged areas or surface irregularities should be repaired using Nitomortar 30.

Priming

Priming is not normally required provided the substrate is sound, untreated and good quality nonporous concrete. If any doubts exist of the quality of the concrete, or if it is porous it should be primed with Nitoprime XG. Contact the local Fosroc office for advice.

Nitoprime XG 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.

Mixing the coating

The base component of Nitocote 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 mix 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. 2-3% of water can be added, if required for ease of application.

Standard application

The mixed Nitocote PUW100 should be applied to the prepared surface by spray, 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 (12 hours @ 20°C or 5 hours at 35°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

Nitocote PUW100 is supplied in 4 litre packs.

The coverage of Nitocote 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.

Storage

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

Shelf life

6 months in unopened containers.



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Precautions

Health & 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 but should accidental eye contamination occur, washing thoroughly with plenty of water and seeking immediate medical treatment is suggested.

Fire

Nitocote 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 data sheets are available on these products



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