Fosroc®
Nitoproof® 510

constructive solutions

Water borne epoxy moisture barrier coating for porous surfaces

Uses

As a moisture barrier coating to restrict passage of dampness through concrete and masonry substrates.

Uses also include interior faces of walls, floors, basements, tunnels, cellars, retaining walls, lift wells and underground car parks to resist low pressure moisture ingress.

As an alternative, more robust primer for many of the Nitoproof waterproofing membranes.

Advantages

- Solvent Free
- Very Low VOC Emission
- Anti-microbial Formulation
- Very Low Odour
- Compatible with damp substrates
- Compatible bonding of most subsequently applied coatings, bonding agents, and water based adhesives
- Water based with no odour or volatile emissions
- Easy clean up using water
- Excellent adhesion to a variety of substrates including, concrete, brick, masonry, block, compressed fibre board, stone and timber
- Readily sanded if required
- Improved coverage rates

Description

Nitoproof 510 is a grey, two-component, matt to semi-gloss epoxy coating. When applied at 200 microns dry film thickness will provide a tenaciously bonded coating controlling the transmission of liquid moisture. Withstands a positive head of water pressure up to 25 metres / up to 250Kpa of hydrostatic pressure

Design Criteria

Nitoproof 510 is designed to be applied in two coats to achieve an appropriate uniform theoretical dry film thickness of 200 microns. A minimum of 3 hours (temperature dependent) should elapse between the two coats and application of further coats or any subsequesnt products must occur within 3 days of application of the last coat.

As a primer for Nitoproof waterproof membranes, Nitoproof 510 is applied as a single coat at 5m² / litre to achieve a dry film thickness of 100 microns.

Properties

The values and properties below are achieved under laboratory conditions. Actual on-site values may show minor variations from those quoted.

Colour	Base; white / Hardener; grey
Mixed Appearance	Grey viscous liquid
Volume Solids	49% approx
VOC content:	<5g / litre
Mixing Ratio	Equal parts, weight or volume
Pot Life	1 hour @ 35°C / 2 hours @ 25°C
Surface Appearance	Matt/Satin
Recoat time	3-4 hours @ 25°C/50% RH
Hard Cure	24 hours, 25°C
Complete Cure	7 days, 25°C
Minimum curing temp	5°C
Water Vapour Permeance	0.12g / 24 hrs/m².mmHg @ 32°C / 50% RH

Application Instructions

Surface preparation

It is essential that Nitoproof 510 be applied to a sound, clean substrate, free of previous coatings, grease, oil, dirt, adhesives, laitance and any other surface contamination.

A variety of methods can be used in the surface preparation, and is dependent on the state and type of contamination. This can range from high pressure water blasting to mechanical scarification. Any holes, non structural cracks etc should be repaired with the appropriate repair mortar.

Very dry and highly porous surfaces should be sprayed with a fine mist of water prior to the application of the first coat of Nitoproof 510.

When applying as a primer for Nitoproof waterproofing membranes, concrete and masonry substrates should have a moisture content reading not exceeding 5% when tested using a Tramex CMEX5 moisture meter.

Mixing

Individually mix each component Base and Hardener to homogenous state prior to combining. Ensure the mixing paddle is changed before mixing the second part.

Add equal parts 1:1 by volume of the Base and Hardener in a total volume suitable for application within the pot life of the product. Mix for another 3 minutes with a slow speed power stirrer, until a uniform mix is achieved, avoiding aeration of the material.

It is advisable to allow the mixed product to stand for five minutes before application.

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Application

Spread the material with a suitable squeegee or stiff nylon broom, working the Nitoproof 510 into the surface to ensure total absorption into any pin holes and voids. Finish off using a medium to long nap roller. Spray application is also acceptable. Care must be taken to ensure the required application rates are achieved to obtain the minimum wet film thickness per coat of 200 microns. This can be checked using a Wet Film Thickness gauge.

If the first coat is to be spray applied an addition of 10% water will assist spraying and penetration.

Subsequent coats can be applied after 3 to 4 hours cure at 25°C/50% RH.

Curing

Cured at room temperature Nitoproof 510 will be ready to accept foot traffic next day.

Nitoproof 510 has been formulated to show optimum curing and application characteristics in the temperature range from 15 - 25°C. At lower temperature the rate of cure will slow down considerably and at higher temperatures the working life of the mixed composition will be reduced.

Complete cure is normally achieved after 7 day @ 20°C.

In general, it is not advisable to use water-based coatings under conditions of low temperature and high humidity.

Clean Up

Clean up of brushes, roller sleeves and spraying equipment is by means of soapy water.

Limitations

Cure rates will be dramatically slowed if the relative humidity is above 85%.

Low temperature working: the minimum application temperature is 5˚C. In temperatures below 10˚C, the separate components should be stored in a temperature controlled environment for 12 hours before use.

High temperature working: at ambient temperatures above 30˚C, the material should be stored in the shade or in an air-conditioned environment for 12 hours before use.

Supply

Nitoproof 510 is supplied in 20 litre 2 component packs	
Nitoproof 510 Part A	FC000625-10L
Nitoproof 510 Part B	FC000626-10L

NOTE: this new formulation is NOT compatible with the previous Nitoproof 510 Part A (FC000610-10L) & Nitoproof 510 Part B (FC000611-10L).

Coverage

As a **moisture barrier,** 200 µm is the minimum theoretical dry film thickness to be achieved to ensure all the advertised performance properties of Nitoproof 510 are met. This is achieved by applying two coats at 5 m^2/litre each coat (undiluted) and is dependent upon substrate porosity as to the final dry film build achieved.

Total Coverage: 0.4 litre / m^2 (total 2 coats)

As a **primer** for Nitoproof waterproofing membranes, 100 µm is the minimum theoretical dry film thickness to be achieved. This is achieved by applying one coat at 5 m^2/litre (undiluted) and is dependent upon substrate porosity as to the final dry film build achieved.

Total Coverage: 0.2 litre / m^2 (single coat)

Storage

Nitoproof 510 has a shelf life of 24 months from date of manufacture if kept in a dry store in the original, unopened packaging. Nitoproof 510 should be protected from frost.

Important notice

A Safety Data Sheet (SDS) is available from the Fosroc website. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

Product disclaimer

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.

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