Fosroc®
Nitoproof® 810

constructive solutions

Highly flexible Class III, water based polyurethane waterproofing membrane.

Uses

Nitoproof 810 is suitable for a wide range of waterproofing applications such as:

- Wet areas and shower alcoves – Class III Membrane System
- Podiums, terraces, balconies and deck areas – under toppings, tiles and other finishes
- Foot trafficable exposed roof top membrane and balcony decks (when over coated with Nitoproof Top Coat UV)
- Sandwich membrane between existing and new substrates e.g. old to new concrete; cement screeds over concrete and CFC surfaces
- General areas exposed to moisture and damp conditions

Advantages

- Can be flood tested after 48 hours @ 23°C/50% RH
- Low VOC
- Elastomeric and flexible with excellent elastic recovery
- Will not re-emulsify, once cured. Handles permanently wet conditions
- Low water absorption
- Low water vapour transmission properties
- Excellent adhesion to primed surfaces
- Compatible bonding properties for modified cement based tile adhesives, screeds and renders
- Non-flammable and non-hazardous
- Excellent chemical resistance
- Australian made

Standards Compliance

Nitoproof 810 has been independently tested to the requirements of AS/NZ 4654.1 2012 Waterproofing membranes for external above-ground use Part 1: Materials: XTecGen test report 397-23.

Nitoproof 810 has been independently tested to the requirements of AS/NZS 4858:2004 Wet Area Membrane as a Class III membrane against AS 3740:2021 Waterproofing of Wet Areas Within Residential Buildings; XTecGen test report 397-25.

Nitoproof 810 has been independently tested to AS 4586-2013 for slip resistance when overcoated with Nitoproof Top Coat UV and Nitoproof Top Coat EW. Refer to the relevant data sheets on those products for results.

Copies of these reports are available from the Fosroc website.

Description

Nitoproof 810 is a non-flammable polyurethane membrane designed for a wide range of waterproofing applications in the built environment.

This single component membrane offers high performance elastomeric and tensile strength properties, along with excellent elastic recovery.

Nitoproof 810 is an alternative to solvent based and moisture curing polyurethane membranes for areas exposed to permanently wet conditions and offers outstanding low water vapour transmission properties.

Suitable for internal and external wet areas, enabling the direct fix of ceramic tiles, screeds, and renders over the dried membrane without bonding issues that solvent based polyurethane membranes present.

Nitoproof 810 offers excellent adhesion properties over most primed building substrates.

Properties

Specific gravity of mixed product:	1.25kg/litre
Solids content:	>60%
VOC content:	<2g / litre
Appearance:	High viscous
Colour:	Green

Cured membrane properties to AS 4654.1 Table 2.1

Abrasion resistance (AS 1580.403.2):	Maintenance Access
Bond strength (ASTM C794):	Concrete 45.97 N
Cyclic movement (AS 4654.1 Appendix B):	Pass
Durability - Elongation at break (AS 1145.3):	426% 0.68 MPa (Class III)
Heat ageing (AS 4654.1 Table 4):	285% Pass
UV resistance (AS 4654.1 Table 4):	235% 1.19 MPa (Pass)
Water vapour transmission (ASTM E96):	4.34 g/m²/24 hours
Shore A hardness*:	68

** Shore A hardness is not tested as part of AS4654.1 or AS4858*

Design Criteria

Nitoproof 810 is designed to be applied by thick brush or roller. Nitoproof 810 should be applied as two (2) coats with a total minimum WFT of 1.5mm (coverage of 1.5 litres/m²) resulting in a minimum DFT of 1.0mm.

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Application Instructions

Surface preparation

Surfaces must be clean, sound, stable and free of: loose foreign material; existing coatings; laitance; release agents; curing compounds and oil/grease residues.

Concrete and masonry substrates should have a moisture content reading not exceeding 5% when tested using a Tramex CMEX5 moisture meter.

All screw / nail heads must be sealed with either Nitoseal PU250 or Nitoseal PU400 sealant. All sheet joints must be covered with Nitoband Tape and associated detailing accessories if required (e.g.internal or external corners and pipe detailing collars) or Nitoseal PU250 / PU400 as mentioned under cracks below. See Nitoband system or Nitoseal PU250 / Nitoseal PU400 Technical Data Sheets.

Also remove any protrusions from the surface that may pierce the membrane.

Priming

Substrates must be primed, prior to the application of Nitoproof 810 membrane.

For porous masonry surfaces, Nitoprime 120 should be applied at approx. 7m²/L or for a more robust primer, apply one coat of Nitoproof 510 at 5m²/L (see TDS for further details on each).

For non-porous substrates, such as CFC, wet area timber, ceramic tile, metals and plastics, Nitoprime 115 should be applied at approx. 12m²/L (see TDS for further details).

*When applying over CFC, it is advisable to conduct a water droplet test to determine the porosity of the particular grade of CFC which can vary. If the water is absorbed quickly into the CFC then it should be considered “porous” and primed with Nitoprime 120.

Damp surfaces - entrapped moisture

Seek technical advice from Fosroc.

Cracks

Cracks larger than 2mm or structural shrinkage cracks must be firstly filled with a flexable polyurethane type sealant such as Nitoseal PU250 or Nitoseal PU400 and then a 50mm wide polyethylene tape placed over the crack prior to the application of Nitoproof 810.

Alternatively the cracks can simply be covered with the Nitoband Tape system. See Nitoband Tape system Technical Data Sheet.

Nitoband Tape system, corners and detailing accessories (Option 1)

The Nitoband Tape System is superior bond breaker system to traditional sealants and bond breaker tapes.

The Nitoband System includes tape (for change of direction – such as wall/wall and wall/floor joints etc.), both 270° external and 90° internal corners, an adjustable internal corner as well as three (3) size variations on pipe detailing squares (suitable from 6mm > 150mm pipe diameters).

If being used in waterproofing applications, the Nitoproof 810 membrane requires a suitable bond breaker at all substrate junctions.

Use the Nitoband Tape System which includes tape, corners and pipe penetration detailing squares or equivalent bond breaking methods compliant with local waterproofing standards and building recommendations.

Right angle bends (Option 2)

A coving detail can be formed by the application of a bead of Nitoseal SC100 (neutral cure silicone) which has been allowed to cure before general application of the membrane.

Right angle bends (Option 3)

A coving detail can be formed by the application of a bead of Nitoseal PU250 or Nitoseal PU400 (polyurethane sealant) which has been allowed to skin and subsequently covered with 15mm polyethene bond breaker tape before general application of the membrane.

Mixing

Nitoproof 810 membrane should be lightly stirred before use.

Membrane application

Install Nitoband tape / corners and accessories (as per separate Nitoband system Technical Data Sheet).

Apply the first coat of Nitoproof 810 to the primed surface using a thick brush or roller.

After waiting the required 4 hours (@23°C) re-coat time, re-apply a second coat of Nitoproof 810 at 90° to the first coat, ensuring complete coverage is achieved and no air bubbles exist. When applying a second coat over horizontal surfaces the membrane will need to be given enough time to develop a dry film to enable walking back onto it without damaging the membrane.

A third coat may be required if imperfections are present in the membrane.

A minimum of 2 coats is recommended to be applied.

A total minimum coverage of 1.5 litres/m² (2 coats @ 0.75 litres/m² per coat) is recommended.

Conduct a final inspection on the surface of the membrane prior to commencing tiling to ensure no pin holes exist.

Once the waterproofing is completed, do not disturb the area for at least 24 hours.

Tiling can commence approximately 24 hours after last coat, in which case polymer modified cement based tile adhesive should be used.

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Drying Times

	23°C, 50% RH	10°C, 50% RH
Recoat time	4 hours	6 hours
Dry film::	12 hours	24 hours
Flood test:	48 hours	72 hours
Tiling / toppings:	24 hours	48 hours

Cleaning

Nitoproof 810 while in a wet state will clean up with water. Once dried, product will need to be removed by Fosroc Solvent 10 or by mechanical means.

Splashes of Nitoproof water based membrane on paintwork etc. should be wiped off immediately using a cloth dampened with a strong detergent solution. Brushes and brooms etc. should be soaked in a strong detergent solution immediately after application has finished. Hands and skin may be cleaned using a proprietary waterless hand cleaner, but prevention of soiling is a better practice by wearing gloves and overalls.

Limitations

Nitoproof 810 is UV resistant but is not designed for use as a long term exposed membrane, stand alone product.

However, over coating Nitoproof 810 with Nitoproof Top Coat UV will not only protect the base membrane from UV degradation but will also provide a foot trafficable membrane system (please refer to Nitoproof Top Coat UV technical data sheet).

Please Note:

Application of all liquid applied membranes and primers should always refer to the surface temperature conditions before commencing and not just ambient temperatures. (There are limitations to how hot/cold the surface temperature can be, when applying a liquid based membrane or primer).

For example: ambient temperatures may be 10°C but the substrate could be 0°C and have frost issues. The same applies with higher temperatures: ambient temperature may be 26°C but have a substrate temperature of 36°C

Polymer modified cement based tile adhesive is recommended for direct adhesion to the membrane.

Nitoprime 120 is recommended within screeds and renders directly over the membrane as a waterproof and adhesion enhancer.

Supply

Nitoproof 810: 15L Pail	FC000608-15L
Nitoprime 115: 4L Pail	FC000600-4L
Nitoprime 120: 15 L Pail	FC000601-15L
Nitoproof 510 Part A: 10 litre	FC000625-10L
Nitoproof 510 Part B: 10 litre	FC000626-10L
Nitoband Corner Internal 90° 135mm x 135mm – Each	FC000614-UNIT
Nitoband Corner External 270° 135mm x 135mm – Each	FC000615-UNIT
Nitoband Corner Adjustable Internal 135mm x 135mm – Each	FC000613-UNIT
Nitoband Pipe Detailing Square Small <50mm - Each	FC000616-UNIT
Nitoband Pipe Detailing Square Medium < 110mm - Each	FC000617-UNIT
Nitoband Pipe Detailing Square Large < 150mm - Each	FC000618-UNIT

Coverage

Nitoproof 810:	1.5 litres/m² (Total 2 coats) 10 m² / 15 litre drum
Nitoprime 115:	10 - 12m²/litre
Nitoprime 120:	6 - 8m²/litre
Nitoproof 510:	5m²/litre (as a primer)

The coverage figures are theoretical – due to wastage factors and the variety and nature of possible substrates, practical coverage figures may be substantially reduced.

Storage

Shelf Life is 18 months in the original unopened containers stored in cool, dry conditions at temperatures between 5°C and 30°C. Storage above this temperature may reduce storage life.

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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