

Fosroc® Nitoproof 410



constructive solutions

(Replaces Emer-Proof Aqua Barrier Quick Dry)

Fast drying flexible two component polymer modified cementitious waterproofing membrane

Uses

Nitoproof 410 is suitable for a wide range of waterproofing applications such as:

- Podiums, terraces, balconies, and deck areas – undertoppings, tiles and other protected environments
- Wet areas and showers – Class III Membrane System
- Foot trafficable exposed roof top membrane, exposed balcony decks and walkways subject to regular foot traffic when overcoated with Nitoproof Top Coat UV.
- Water tanks, water storage areas (sand / cement slurry priming with Nitobond SBR is essential when applying in submerged applications)
- Tiled pools & water features (sand / cement slurry priming with Nitobond SBR is essential when applying in submerged applications)
- Foundation waterproofing applications
- Suitable for subterranean areas such as retaining walls

Advantages

- Low VOC
- Solvent free, non hazardous
- Handles ponding and permanently wet conditions
- Tough and flexible with excellent elongation properties
- Compatible bonding properties for Nitotile Flex adhesive
- Suitable for internal and external applications
- Exhibits a high hardness
- Australian made
- It is fully compatible with polymer modified cement based tiles adhesives, screeds and renders.

Standards Compliance (certificates pending)

Nitoproof 410 meets the requirements of:

- AS/NZS 4858:2004 Wet Area Membrane as a Class III membrane
- AS 3740:2010 Waterproofing of Wet Areas Within Residential Buildings
- AS/NZS 4020:2005 Products in Contact with Potable Water

Nitoproof 410 has been 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.

Description

Nitoproof 410 is a water based, fast drying, flexible two component, polymer modified cementitious waterproofing membrane designed for podiums, terraces, balconies, and deck areas – under toppings, tiles and other protected environments.

It may also be used for foot trafficable exposed roof top membranes and foot trafficable exposed balcony decks when overcoated with Nitoproof Top Coat UV.

Nitoproof 410 offers excellent adhesion properties over many primed building surfaces once correctly primed and prepared.

Design Criteria

Nitoproof 410 is designed to be applied by thick brush or roller. Nitoproof 410 should be applied as two (2) coats with a minimum Wet Film Thickness of 1.5mm (coverage of 1.5 litres/m²) resulting in a minimum Dry Film Thickness of 1.2mm.

For permanently wet or submersed conditions Nitoproof 410 is to be applied as three (3) coats with a minimum with a minimum WFT of 2.0mm (coverage of 2.0 litres/m²) resulting in a minimum DFT of 1.6mm.

Properties

Wet form

Specific Gravity of mixed product:	1.3 kg/litre
Appearance:	
Liquid	White liquid
Powder	Grey powder
Mixed	Grey slurry
Mixing ratio:	1:1 by weight

Cured membrane

Elongation:	320%
Tensile strength:	1.3 MPa
Shore A hardness:	65
Colour:	Grey

Drying times @ 23°C

Recoat:	2 to 4 hours
Dry film:	5 to 7 hours
Immersion:	7 days
Flood testing:	36 hours

Based on normal ambient conditions of 23°C @ 50% RH. Allow a further minimum 24 hours of drying time @ 10°C

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Specification Clauses

Where so designated on the drawings, surfaces shall have a low VOC, liquid applied, water based, fast drying, flexible two component, polymer modified cementitious waterproofing membrane applied. The membrane shall be Nitoproof 410.

Areas shall be prepared and the membrane applied in accordance with the current Nitoproof 410 Technical Data Sheet.

Application Instructions

Coverage

Nitoproof 410 is designed to be applied by brush, roller or suitable airless spray equipment.

In general wet area applications, Nitoproof 410 is applied as two (2) coats with a minimum total coverage of 1.5 ltr / m².

For permanently immersed conditions/applications, Nitoproof 410 is applied as a three (3) coat membrane system, with a minimum total coverage of 2.0 ltr / m².

This system will need to be applied to a 'slurry' prime coat of Nitobond SBR mixed with sand and cement – see Nitobond SBR Technical Datasheet

Non immersed applications	
Approximate total coverage:	1.5L/m ²
Wet Film Thickness:	1.5mm
Dry Film Thickness:	1.2mm
Immersed applications	
Approximate total coverage:	2L/m ²
Wet Film Thickness:	2mm
Dry Film Thickness:	1.7mm

Surface preparation

All new concrete surfaces must be allowed to cure for at least 7 days, with a moisture content <5% and have a wood float finish. Steel trowelled finished slabs must be chemically or mechanically abraded prior to commencing waterproofing.

Rendered surfaces must be allowed to cure for at least 16 hours in normal ambient conditions prior to commencing waterproofing. Ensure all rendered surfaces have a wood float finish.

All screw / nail heads must be sealed with Nitoseal SC100 and all sheet joints must be covered with Nitoband Tape. See Nitoband System technical data sheet.

Ensure all surfaces are sound, dry and free from excessive movement, oil, dust, grease, wax, curing compounds, release agents, paint and any other loose contaminants. Also remove any protrusions from the surface that may pierce the membrane.

Priming

Substrates must be primed, prior to the application of Nitoproof 410 membrane:

Primer choice is defined by substrate requirements:

- For porous masonry surfaces, Nitoprime 120 should be applied at approx. 7m²/L (see TDS for further details)
- 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).

For submerged applications such as ponds, pools and water retaining structures, a slurry primer made of sand, cement and Nitobond SBR 'must' be used

Please refer to Nitobond SBR technical datasheet for use, application and mixing ratios. When applying Nitoproof 410 over this slurry, optimum adhesion results are achieved as a "wet on wet" application.

Damp surfaces - entrapped moisture

Seek technical advice from Parchem.

Cracks

Cracks larger than 2 mm or structural shrinkage cracks must be firstly cleaned and any loose material removed then filled with Nitoseal SC100 or covered with Nitoband Tape. See Nitoband System technical data sheet.

Nitoband Tape, Corners and Detailing Accessories

The Nitoband System has been specifically developed by Parchem as a 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 tanking and waterproofing applications, the Nitoproof 410 requires a suitable bond breaker at all substrate junctions. Parchem nominates the Nitoband System which includes tape, corners and pipe penetration detailing squares or equivalent bond breaking methods compliant with local waterproofing standards and building recommendations.

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Mixing

Nitoproof 410 should thoroughly be mixed in equal parts by weight or the ratio of 1L Part A liquid to 0.8 L Part B dry powder.

Add approximately half of the powder while mixing and wet out well, then add the remaining powder and wet out well.

Scrape the sides of the pail and mixing paddle.

Mix at higher speed, avoiding aeration, for 3 minutes.

Cease mixing and 'allow the mixed material to stand for 3 minutes, and then lightly re-mix'. The Nitoproof 410 is then ready to apply.

Membrane Application

Ensure the surface has been appropriately prepared in accordance with this TDS.

The Nitoband System should be installed first. Mix an appropriate amount of the Nitoproof 410 waterproofing membrane that can be used within its working life as per the instructions in this TDS.

Apply the mixed Nitoproof 410 across the substrate joints extending approximately 70mm either side of the joint. Whilst the Nitoproof 410 is still in a wet state install the Nitoband tape, corners and accessories ensuring that all air voids are expelled. Nitoband Corners should be placed in first followed by the Nitoband tape.

The Nitoband tape, corners and pipe detailing squares can be joined via a 50mm overlap, sandwiching a small amount of Nitoproof 410 liquid membrane between the overlapping faces.

In general wet area applications Nitoproof 410 is applied as two (2) coats with a minimum total coverage of 1.5litres/m².

For permanently immersed conditions/applications

Nitoproof 410 is applied as three (3) coats with a minimum total coverage of 2.0 litres/m².

Each successive coat should be applied at 90 degrees to the previous coat. Allowing a drying time of 1-3 hours between coats.

Conduct a final inspection on the surface of the membrane prior to commencing tiling to ensure no pin holes exist. A further coat may be required if imperfections or pinholes are present in the membrane.

Once the waterproofing is completed, do not disturb the area for at least 24 hours. Tiling can commence approximately 24 hours after final Nitoproof 410 coat.

Polymer modified cement based tile adhesives, such as Nitotile Flex are recommended for tiling application.

Nitobond SBR used as a bonding agent is recommended for applications of cement based screeds or renders – as per TDS.

Nitoproof 410 must be installed in accordance with AS3740.

Curing and protection

Nitoproof 410 is not UV stable and must be cured for a minimum of 24 hours at 25°C before placing protection. Tiling should commence within 5 days.

Where damage to the membrane is possible (by traffic backfilling, etc.), it should be protected by a cementitious screed or protection board such as Proofex Protection Board PP or Proofex Sheetdrain 81 .

Nitoproof 410 can be over-coated with Nitoproof Top Coat UV to make the membrane foot trafficable and UV stable.

Cleaning

Prior to hardening Nitoproof 410 can be cleaned from tools and equipment using water. Hardened material will need to be removed via mechanical means.

Splashes of Nitoproof 410 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 better practice by wearing gloves and overalls.

Maintenance

No special requirements, any damage identified during normal inspections should be repaired or replaced as appropriate.

Limitations

Do not apply Nitoproof 410 in temperatures above 35°C or below 5°C.

Nitoproof 410 cannot be used in areas where negative hydrostatic pressure is evident.

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.

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

Nitotile Flex polymer modified cement based tile adhesive is recommended for direct adhesion to the membrane.

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

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Estimating

Supply

	Material Code
Nitoproof 410 Part A– 12.5L Pail	FC000603-12.5L
Nitoproof 410 Part B– 12.5L Pail	FC000604-12.5KG
Nitoprime 115 – 4L Pail Coverage: 10m ² / litre	FC000600-4L
Nitoprime 120 - 15 L Pail Coverage: 6-8m ² / litre	FC000601-15L
Nitoband Tape 120mm wide x 10m Roll	FC000612-UNIT
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/yield

Each 25kg kit of Nitoproof 410 will yield approximately 19.2 litres of mixed product.

Storage

Shelf Life is 24 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.

Refer to the Use by Date indicated on the packaging.

Important notice

A Safety Data Sheet (SDS) and Technical Data Sheet (TDS) are available from the Parchem website or upon request from the nearest Parchem sales office. 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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