



**BRANZ Appraised**  
Appraisal No. 1301 [2026]

## FOSROC NITOPROOF 410 EXTERNAL WATERPROOFING MEMBRANE

Appraisal No. 1301 [2026]



### BRANZ Appraisals

Technical Assessments of  
products for building and  
construction.



#### Parchem Construction Supplies Pty Ltd t/a Fosroc

1956 Dandenong Road  
Clayton  
VIC 3168  
Australia  
Web: [www.fosroc.co.nz](http://www.fosroc.co.nz)



#### BRANZ

1222 Moonshine Rd,  
RD1, Porirua 5381  
Private Bag 50 908  
Porirua 5240,  
New Zealand  
Tel: 04 237 1170  
[branz.co.nz](http://branz.co.nz)



## Product

- 1.1 Fosroc Nitoproof 410 External Waterproofing Membrane is a water-based, fast-drying, flexible, two-component, polymer-modified, cementitious waterproofing membrane for use under trafficable floor finishes on exterior decks and balconies.

## Scope

- 2.1 Nitoproof 410 has been appraised for use as a deck and balcony waterproofing membrane for buildings within the following scope:
  - the scope limitations of NZBC Acceptable Solution E2/AS1; or,
  - the scope limitations of NZBC Acceptable Solution E2/AS1 with regard to building height and floor plan area when subject to specific engineering design; and,
  - with substrates of plywood, fibre cement compressed sheet or suspended concrete slab; and,
  - with minimum falls for decks and balconies of 1:40; and,
  - with deck and balcony size limited to 40 m<sup>2</sup>; and,
  - situated in NZS 3604 Wind Zones up to, and including, Extra High.
- 2.2 Decks and balconies must be designed and constructed in accordance with the following limitations:
  - with the membrane continually protected from exposure to ultraviolet (UV) light and from physical damage by trafficable floor finishes; and,
  - with no steps within the deck level and no downpipes discharging directly onto the deck.
- 2.3 Movement and control joints in the substrate must be carried through the membrane and trafficable floor finish. The design and construction of the substrate and movement and control joints is specific to each building, and is therefore the responsibility of the building designer and building contractor and is outside the scope of this Appraisal.
- 2.4 The trafficable floor finishes are outside the scope of this Appraisal.
- 2.5 The membrane must be applied by Fosroc trained and approved applicators.



## Building Regulations

### New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, Fosroc Nitoproof 410 External Waterproofing Membrane, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet or contribute to meeting the following provisions of the NZBC:

**Clause B2 DURABILITY:** Performance B2.3.1 [b] 15 years and B2.3.2. Fosroc Nitoproof 410 External Waterproofing Membrane meets these requirements. See Paragraph 9.1.

**Clause E2 EXTERNAL MOISTURE:** Performance E2.3.1 and E2.3.2. Decks and balconies incorporating Fosroc Nitoproof 410 External Waterproofing Membrane meet these requirements. See Paragraphs 12.1-12.9.

**Clause F2 HAZARDOUS BUILDING MATERIALS:** Performance F2.3.1. Fosroc Nitoproof 410 External Waterproofing Membrane meets this requirement.

## Technical Specification

4.1 Materials supplied by Fosroc are as follows:

### General

- **Nitoproof 410 Part A** - the liquid component of the flexible, two-component, polymer-modified cementitious waterproofing membrane. It is a white liquid supplied in 12.5 L pails.
- **Nitoproof 410 Part B** - the powder component of the flexible, two-component, polymer-modified cementitious waterproofing membrane. It is a grey powder supplied in 12.5 kg bags.

### Primers

- **Nitoprime 115** - a single-component water-based primer for non-porous surfaces. It is a green liquid supplied in 4 L pails.
- **Nitoprime 120** - a single-component fast-drying primer for concrete and masonry surfaces. It is a milky white liquid supplied in 15 L pails.

### Accessories

- **Nitoband SA80** - a grey non-woven polypropylene coated with a highly elastic self-adhesive butyl rubber for use as a bond-breaker and sealing tape. It is 80 mm wide and supplied in a 10 m roll.

## Handling and Storage

5.1 All materials must be stored inside, away from direct sunlight, heat, and flame in a dry space at temperatures between 5 and 30°C. Materials must not be removed from their containers until ready to use. The membrane products have a shelf life of 24 months for Nitoproof 410 Part A and 36 months for Nitoproof 410 Part B, if kept in the original, unopened packaging.

## Technical Literature

6.1 This Appraisal must be read in conjunction with:

- Fosroc® Nitoproof® 410 [NZ] Technical Data Sheet, v2, Mar 2026.
- Fosroc® Nitoprime® 115 Technical Data Sheet, Mar 2024.
- Fosroc® Nitoprime® 120 Technical Data Sheet, Jul 2019.
- Fosroc® Nitoband® SA80 Technical Data Sheet, Jan 2024.

6.2 All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

## Design Information

### General

7.1 Nitoproof 410 is for use on decks and balconies where an impervious waterproof membrane is required to prevent damage to building elements and adjoining areas.



- 7.2 The membrane must be protected from exposure to UV light and from physical damage by trafficable floor finishes.
- 7.3 The effective control of internal moisture must be considered at the design stage due to the impermeability of the membrane. Refer to the BRANZ Good Practice Guide: Membrane Roofing.
- 7.4 Movement and control joints may be required depending on the shape and size of the deck, and the finish specified.
- 7.5 Timber framing must comply with NZS 3604, or where specific engineering design is used, the framing shall be of at least equivalent stiffness to the framing provisions of NZS 3604, or comply with the serviceability criteria of AS/NZS 1170. In all cases, framing must be provided so that the maximum span of the substrate as specified by the substrate manufacturer is met and that all sheet edges are fully supported.
- 7.6 Timber framing supporting the substrates must be constructed such that deflections do not exceed 1/360<sup>th</sup> of the span. Where NZS 3604 is used, the allowable joist spans given in Table 7.1 shall be reduced by 20%.

## Substrates

### Plywood

- 8.1 Plywood must be treated to H3.2 [CCA treated]. LOSP treated plywood must not be used. Plywood must comply with NZBC Acceptable Solution E2/AS1. Where specific design is used [i.e. outside the scope of NZBC Acceptable Solution E2/AS1] the plywood thickness and fixing size may increase and centres may decrease to meet specific wind loadings.

### Fibre Cement Compressed Sheet

- 8.2 Fibre cement compressed sheet must be manufactured to comply with the requirements of AS/NZS 2908.2 and must be specified by the manufacturer as being suitable for use as an external decking substrate. The fibre cement sheet must be of a thickness to meet specific structural design requirements and must be secured to the structure to resist wind uplift and all other forces acting on the deck or balcony, such as deflection from gravity and live loads. Installation must be in accordance with instructions of the manufacturer.

### Concrete

- 8.3 Concrete substrates must be to a specific engineering design meeting the requirements of the NZBC, such as concrete construction to NZS 3101.

## Durability

### Serviceable Life

- 9.1 Nitoproof 410, when subjected to normal conditions of environment and use, is expected to have a serviceable life of at least 15 years and be compatible with ceramic or stone tiling finishes with a design service life of 15-25 years.

## Maintenance

- 10.1 No maintenance of the membrane will be required provided significant substrate movement does not occur and the trafficable floor finish remains intact. Regular checks must be made of trafficable finishes to ensure they are sound and will not allow moisture to penetrate. Any cracks or damage must be repaired immediately.
- 10.2 In the event of damage to the membrane, the trafficable finish must be removed and the membrane repaired by removing the damaged portion and applying a patch as for new work.
- 10.3 Drainage outlets must be maintained to operate effectively, and trafficable floor finishes must be kept clean.
- 10.4 Cleaning materials that may affect polymer-based membranes must not be used.

## Prevention of Fire Occurring

- 11.1 Separation or protection must be provided to Fosroc Nitoproof 410 External Waterproofing Membrane from heat sources such as fireplaces, heating appliances and chimneys. NZBC Acceptable Solutions C/AS1 and C/AS2 provide methods for separation and protection of combustible materials from heat sources.

## External Moisture

- 12.1 Decks and balconies must be designed and constructed to shed precipitated moisture. They must also take account of snowfalls in snow prone areas. A means of meeting code compliance with NZBC Clause E2.3.1 is provided by the Technical Literature which gives details aligned with NZBC Acceptable Solution E2/AS1.
- 12.2 When installed in accordance with this Appraisal and the Technical Literature, Nitoproof 410 will prevent the penetration of water and will therefore meet code compliance with NZBC E2.3.2. The membrane is impervious to water and will give a weathertight deck or balcony.
- 12.3 Nitoproof 410 is impermeable, therefore a means of dissipating construction moisture must be provided in the building design and construction to meet code compliance with NZBC Clause E2.3.6.
- 12.4 The minimum fall to decks and balconies is 1 in 40. The minimum fall to gutters is 1 in 60 and all falls must slope to an outlet. Inadequate falls will allow moisture to collect and increase the risk of deterioration of the membrane and the trafficable floor finish.
- 12.5 Deck and balcony falls must be built into the substrate and not created with mortar screeds applied over the membrane.
- 12.6 Allowance for deflection and settlement of the substrate must be made in the design of the deck or balcony to ensure falls are maintained and no ponding of water can occur.
- 12.7 Drainage flanges must be used for any outlet and must be fitted with a grate or cage to reduce potential sources of blockages. An overflow must be provided where the deck or balcony does not drain to an external gutter or spouting.
- 12.8 Penetrations and upstands of the membrane must be raised above the level of any possible flooding caused by blockage of deck and balcony drainage.
- 12.9 The design of details not covered by the Technical Literature is subject to specific weathertightness design and is outside the scope of this Appraisal.

## Installation Information

### Installation Skill Level Requirement

- 13.1 Installation of substrates must always be carried out in accordance with the Nitoproof 410 Technical Literature and this Appraisal by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant Licence Class.
- 13.2 Installation and finishing of components and accessories supplied by Fosroc and its approved applicators must be completed by trained applicators, approved by Fosroc.

### Preparation of Substrates

- 14.1 Substrates must be dry, clean and stable before installation commences. Surfaces must be smooth and free from nibs, sharp edges, dust, dirt or other materials such as oil, grease or concrete formwork release agents. All surface defects must be filled to achieve an even and uniform surface.
- 14.2 The relative humidity of the concrete must be 75% or less before membrane application. Concrete substrates can be checked for dryness by using a hygrometer, as set out in BRANZ Bulletin No. 585.
- 14.3 The moisture content of the timber substructure must be a maximum of 20% and fibre cement or plywood sheets must be dry with no ponding water at the time of membrane application. This will generally require the plywood or fibre cement sheets to be covered until just before the membrane is laid, to prevent rain wetting.
- 14.4 All substrates must be primed and the primer allowed to cure before the membrane is installed. Refer to the membrane supplier for primer specification.



## Membrane Installation

- 15.1 Installation must not be undertaken where the substrate surface temperature is below 5°C or above 35°C.
- 15.2 Nitoproof 410 must be thoroughly mixed in accordance with the Technical Data Sheet before application.
- 15.3 The membrane must be applied in a minimum of two coats at the rates set out in the Technical Literature to give a total dry film thickness of 1.3 mm. Subsequent coats must be applied in an opposite direction to the previous coat.
- 15.4 Application can be made by roller (medium/long nap), brush (long bristle), or rubber or plastic floats.
- 15.5 The installation and use of a reinforcement or bond breaker must comply with the instructions in the Technical Literature.
- 15.6 It is strongly recommended that the membrane is protected with temporary covers until it is fully cured in case of mechanical damage or rain wetting.
- 15.7 Clean up may be undertaken with water.

## Tiling

- 16.1 The membrane must be fully cured before tiling. The cured membrane must be protected at all times to prevent mechanical damage, so may require temporary covers until the finishing is completed.
- 16.2 Tiling must be undertaken in accordance with AS 3958.1. The compatibility of the tile adhesive must be confirmed with the adhesive manufacturer and Fosroc.

## Inspections

- 17.1 Critical areas of inspection for waterproofing systems are:
  - Construction of substrates, including crack control and installation of bond breakers and movement control joints.
  - Moisture content of the substrate prior to the application of the membrane.
  - Acceptance of the substrate by the membrane installer prior to application of the membrane.
  - Installation of the membrane to the manufacturer's instructions, particularly installation to the correct thickness.
  - Membrane curing and integrity prior to the installation of tiles, including protection from moisture, frost and mechanical damage during curing.

## Health and Safety

- 18.1 Safe use and handling procedures for the membrane system are provided in the Technical Literature. The products must be used in conjunction with the relevant Materials Safety Data Sheet.

## Basis of Appraisal

The following is a summary of the technical investigations carried out:

### Tests

- 19.1 The following testing of Nitoproof 410 has been undertaken by BRANZ: testing to AS 4654 including bond strength, cyclic movement, elongation at break, heat ageing, temperature resistance, tensile strength and durability, water vapour transmission rate.

### Other Investigations

- 20.1 An assessment was made of the durability of Nitoproof 410 by BRANZ technical experts.
- 20.2 Site inspections have been carried out by BRANZ to assess the practicability of installation, and to examine completed installations.
- 20.3 The Technical Literature has been examined by BRANZ and found to be satisfactory.



## Quality

- 21.1 The manufacture of the membrane has been examined by BRANZ, and details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.
- 21.2 The quality management system of the membrane's manufacturer has been assessed by BRANZ and found to be satisfactory.
- 21.3 The quality of supply of the membrane system materials to the market is the responsibility of Fosroc.
- 21.4 The quality of installation on-site is the responsibility of the Fosroc trained and approved applicators.
- 21.5 Designers are responsible for the substrate design, and building contractors are responsible for the quality of construction of substrate systems in accordance with the instructions of the substrate manufacturer, Fosroc and this Appraisal.
- 21.6 Building owners are responsible for the maintenance of the trafficable floor finish systems in accordance with the instructions of Fosroc.

## Sources of Information

- AS 3958.1:2007 Guide to the installation of ceramic tiles.
- AS 4654.1:2012 Waterproofing membranes for external above-ground use.
- AS/NZS 1170:2002 Structural design actions.
- AS/NZS 2269:2012 Plywood - Structural.
- AS/NZS 2908.2:2000 Cellulose-cement products - Flat sheet.
- BRANZ Bulletin 585 - Measuring moisture in timber and concrete.
- BRANZ Good Practice Guide: Membrane Roofing (Second Edition), October 2015.
- NZS 3101:2006 The design of concrete structures.
- NZS 3604:2011 Timber-framed buildings.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.



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23 June 2026

FOSROC NITOPROOF 410  
EXTERNAL WATERPROOFING  
MEMBRANE



In the opinion of BRANZ, **Fosroc Nitoproof 410 External Waterproofing Membrane** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Parchem Construction Supplies Pty Ltd t/a Fosroc**, and is valid until further notice, subject to the Conditions of Appraisal.

### Conditions of Appraisal

1. This Appraisal:
  - a) relates only to the product as described herein;
  - b) must be read, considered and used in full together with the Technical Literature;
  - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
  - d) is copyright of BRANZ.
2. **Parchem Construction Supplies Pty Ltd t/a Fosroc**:
  - a) continues to have the product reviewed by BRANZ;
  - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
  - c) abides by the BRANZ Appraisals Services Terms and Conditions;
  - d) warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
  - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and quality of work;
  - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
  - c) any guarantee or warranty offered by **Parchem Construction Supplies Pty Ltd t/a Fosroc**.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to **Parchem Construction Supplies Pty Ltd t/a Fosroc** or any third party.

For BRANZ

**Claire Falck**  
Chief Executive  
Date of Issue:  
23 June 2026