



## BRANZ Appraised

Appraisal No. 973 [2022]

## BONDALL UNDER TILE MEMBRANES

Appraisal No. 973 [2022]

This Appraisal replaces BRANZ  
Appraisal No. 973 [2017]

Amended 13 November 2024



### BRANZ Appraisals

Technical Assessments of  
products for building and  
construction.



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### Product

- 1.1 Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofer and Bondall Aquatite Under Tile Membrane are liquid-applied waterproofing membranes for use under ceramic or stone tile finishes in internal wet areas.

### Scope

- 2.1 Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofer and Bondall Aquatite Under Tile Membrane have been appraised for use as waterproofing membranes for internal wet areas of buildings, within the following scope:
- on floor substrates of concrete, flooring grade particle board, plywood, fibre cement compressed sheet and fibre cement sheet tile underlay, and on wall substrates of concrete, concrete masonry, cement render, wet area fibre cement sheet lining systems and wet area plasterboard lining systems; and,
  - when protected from physical damage by ceramic or stone tiles; and,
  - where floors are designed and constructed such that deflections do not exceed  $1/360^{\text{th}}$  of the span.
- 2.2 The use of Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofer and Bondall Aquatite Under Tile Membrane on concrete slabs where a hydrostatic or vapour pressure is present is outside the scope of this Appraisal.
- 2.3 Movement and control joints in the substrate must be carried through to the tile finish. The design and construction of the movement and control joints is specific to the building and therefore is the responsibility of the building designer and building contractor and is outside the scope of this Appraisal.
- 2.4 Tiling finishes are outside the scope of this Appraisal.
- 2.5 Installation of the Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofer and Bondall Aquatite Under Tile Membrane must be carried out by certified applicators, approved by Bondall Pty Ltd.

## Building Regulations

### National Construction Code (NCC)

- 3.1 In the opinion of BRANZ, Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofing and Bondall Aquatite Under Tile 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 NCC:

#### NCC 2022 Volume One - Building Code of Australia

**Part F2 WET AREAS AND OVERFLOW PROTECTION:** Performance Requirements F2P1 and F2P2. Interior wet area floors and walls incorporating Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofing and Bondall Aquatite Under Tile Membrane meet this requirement. See Paragraphs 13.1-13.6.

#### NCC 2022 Volume Two - Building Code of Australia

**Part H4 HEALTH AND AMENITY:** Performance Requirement H4P1. Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofing and Bondall Aquatite Under Tile Membrane meet this requirement. See Paragraphs 13.1-13.6.

## Technical Specification

- 4.1 Materials supplied by Bondall Pty Ltd are as follows:
- **Gripset Betta Under Tile Membrane** - is a Class III, higher elastomeric, one-part SBR waterproofing membrane. It is supplied as a blue liquid in 1, 4 and 15 L containers.
  - **Betta Tilecare Rapid Dry Waterproofing** - is a Class III, higher elastomeric, one-part SBR waterproofing membrane. It is supplied as a blue liquid in 1 and 4 L containers.
  - **Bondall Aquatite Under Tile Membrane** - is a Class III, higher elastomeric, one-part SBR waterproofing membrane. It is supplied as a grey liquid in 4 and 15 L containers.
  - **Gripset Betta Super Primer** - is a specially formulated primer for enhancing adhesion to smooth or dense surfaces. It is supplied as a violet coloured liquid in 1 and 4 L containers.
  - **Gripset Betta Prep Coat Primer** - is a water-based penetrating primer designed to enhance adhesion to porous surfaces. It is supplied as a milky white coloured liquid in 1, 4 and 15 L containers.
  - **Gripset Betta Elastic Joint Band** - is a waterproof sealing band used at wall/floor junctions. It is supplied in rolls 100 mm wide and 0.6-0.8 mm thick.
  - **Gripset Betta Easy Seal Bond Breaker** - is a waterproof sealing band used at wall/floor junctions. It is supplied in rolls 100 mm wide and 0.6-0.8 mm thick.

## Handling and Storage

- 5.1 All ancillary products must be stored inside, up off concrete floors, in dry conditions, out of direct sunlight and out of freezing conditions. The ancillary products have a shelf life of 24 months from the date of manufacture in the original unopened packaging. Once opened, the products must be used within 3 months.
- 5.2 The Gripset Betta Undertile Membrane has a shelf life of 12 months from the date of manufacture in the original unopened packaging. Once opened, the Gripset Betta Undertile Membrane must be stored with the lid of the pail resealed, out of direct sunlight, in a cool place and must be used within 12 months.

## Technical Literature

- 6.1 This Appraisal must be read in conjunction with:
- Bondall Under Tile Membrane Installation Guide, Version 1.0, February 2017.
- 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 Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproof and Bondall Aquatite Under Tile Membrane are for use where an impervious waterproof membrane is required to floors to prevent damage to building elements and adjoining areas.
- 7.2 The membranes must be covered with ceramic or stone tiles. The tiling finish must protect the membranes from exposure to ultraviolet (UV) light and physical damage.
- 7.3 Movement and control joints may be required depending on the shape and size of the floor and the tiling finish. Design guidance can be found in the BRANZ Good Practice Guide: Tiling.

### Substrates

#### Plywood

- 8.1 Structural plywood must be a minimum of 17 mm thick complying with AS/NZS 2269. LOSP treated plywood must not be used. The structural plywood must be supported with joists at a maximum spacing as detailed in AS 1684.3, Table 3.2, fixed with nails either 2.8 mm diameter flat head or bullet head or 2.5 mm diameter gun-driven and of a length not less than 2.5 times the thickness of the sheet, at 150 mm centres on the sheet ends and 300 mm centres at intermediate joists and along noggings.

#### Particleboard Sheet Flooring

- 8.2 Particleboard flooring shall be selected and installed in accordance with AS 1860.

#### Fibre Cement Compressed Sheet/Fibre Cement Sheet Tile Underlay

- 8.3 Fibre cement compressed sheet and tile underlay must be manufactured to comply with the requirements of AS 2908.2 and must be specified by the manufacturer as being suitable for use as a wet area substrate.

#### Concrete and Concrete Masonry

- 8.4 Concrete and concrete masonry substrates must be to a specific engineering design meeting the requirements of the NCC.

#### Wet Area Wall Linings

- 8.5 Plasterboard wall linings must be manufactured to comply with AS/NZS 2588.
- 8.6 The fibre cement sheet must be of a thickness to meet specific structural design requirements.

## Durability

### Serviceable Life

- 9.1 Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproof and Bondall Aquatite Under Tile Membrane, when subjected to normal conditions of environment and use, are expected to have a serviceable life of at least 15 years and be compatible with tiling finishes with a design service life of 15–25 years.

## Maintenance

- 10.1 No maintenance of the membranes will be required provided significant substrate movement does not occur and the vinyl or tile finish remains intact. Regular checks must be made of vinyl and tiled areas to ensure they are sound and will not allow moisture to penetrate. Any cracks or damage must be repaired immediately by repairing the vinyl or tiles, grouts and sealants.
- 10.2 In the event of damage to the membranes, the vinyl or tiling 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 vinyl, ceramic or stone tile finishes must be kept clean.

## Outbreak of Fire

- 11.1 Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofing and Bondall Aquatite Under Tile Membrane must be protected or separated from fireplaces, heating appliances, chimneys and flues in accordance with the requirements of NCC Volume One, Part G2, Performance Requirement G2P1 and NCC Volume Two, Performance Requirement H7P3.

## Spread of Fire

- 12.1 Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofing and Bondall Aquatite Under Tile Membrane are considered an exempt building material, in accordance with NCC Volume One, Deemed-to-Satisfy Provision C2D11 [3].

## Internal Moisture

- 13.1 Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofing and Bondall Aquatite Under Tile Membrane are impervious to water and when adequately sealed, will avoid the likelihood of water causing damage to building elements and adjoining areas and therefore meets NCC Volume One, Performance Requirements F2P1 and F2P2 and NCC Volume Two, Performance Requirement H4P1.
- 13.2 Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofing and Bondall Aquatite Under Tile Membrane are suitable for use to achieve constraint of accidental overflow to meet NCC Volume One, Performance Requirement F2P1 and F2P2 and NCC Volume Two, Performance Requirement H4P1.
- 13.3 Floor surfaces must be finished with ceramic tiles.
- 13.4 Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofing and Bondall Aquatite Under Tile Membrane can be used to prevent water splash from penetrating behind linings or to concealed spaces and therefore meets NCC Volume One, Performance Requirements F2P1 and F2P2 and NCC Volume Two, Performance Requirement H4P1.
- 13.5 Design guidance on waterproofing membranes can be obtained from AS 3740, the BRANZ Good Practice Guide: Tiling, and flooring and wallboard manufacturers.
- 13.6 Falls within shower areas must be between 1:60 and 1:80 and other wet areas between 1:80 to 1:100. In unenclosed showers, falls must extend 1,500 mm from the shower rose. Floor wastes and drainage flanges must be provided and must fall to an outlet.
- 13.7 The Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofing and Bondall Aquatite Under Tile Membrane must completely cover shower bases and extend 1,500 mm out from the shower rose for unenclosed showers. The membrane must extend a minimum of 150 mm above the shower floor and over any nib. Water-resistant wall finishes must flash over the membrane.
- 13.8 BRANZ recommends the entire floor be covered by Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofing and Bondall Aquatite Under Tile Membrane in bath, shower and spa rooms where timber or particleboard floors are used. This is also a requirement of particleboard manufacturers.

## Installation Information

### Installation Skill Level Requirement

- 14.1 Installation and finishing of materials supplied by Bondall Pty Ltd must be completed by certified applicators, approved by Bondall Pty Ltd
- 14.2 Installation of substrates must be completed by tradespeople with an understanding of internal wet area construction, in accordance with instructions given within the Bondall Pty Ltd Technical Data Sheet and this Appraisal.

### Preparation of Substrates

- 15.1 Substrates must be dry and sound before installation proceeds. Concrete slabs can be checked for dryness by using a hygrometer. The relative humidity of the concrete surface must be 75% or less, and the moisture content for plywood must be a maximum of 20% before laying the membrane.
- 15.2 The ambient and substrate temperatures must be between 5°C and 35°C before laying the membrane.
- 15.3 Surfaces must be smooth and free from sharp edges, dust, dirt or other materials such as oil, grease or concrete formwork release agents. All surface defects must be filled to achieve a smooth and uniform surface.
- 15.4 Sheet materials must be installed in accordance with the relevant manufacturer's instructions. All sheet edges must be supported by framing.
- 15.5 Plywood must be installed in accordance with NCC and the relevant manufacturer's instructions.
- 15.6 Porous substrates must be primed with the primer recommended by Bondall Pty Ltd and allowed to cure before the membrane is installed.

### Membrane Installation

- 16.1 Installation must not be undertaken where the substrate surface temperature is below 5°C or above 35°C.
- 16.2 Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofing and Bondall Aquatite Under Tile Membrane must be thoroughly stirred before application.
- 16.3 The membranes must be applied in a minimum of two coats at the rates set out in the Technical Literature to give a total minimum finished thickness of 1.2 mm. Subsequent coats must be applied in an opposite direction to the previous coat.
- 16.4 Application can be made by roller [medium/long nap] or brush [long bristle].
- 16.5 In all situations, reinforcement provisions as set out in this Appraisal and the Technical Literature apply.
- 16.6 Clean up may be undertaken with water.

### Tiling

- 17.1 The membranes 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.
- 17.2 Tiling must be undertaken in accordance with AS 3958.1 and the BRANZ Good Practice Guide: Tiling. The compatibility of the tile adhesive must be confirmed with the adhesive manufacturer or Bondall Pty Ltd.

### Inspections

- 18.1 Critical areas of inspection are:
  - Construction of substrates, including crack control and installation of under flashings 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 and use of reinforcement.
  - Membrane curing and integrity prior to the installation of tiles including protection from mechanical damage during curing and prior to tile installation.

### Health and Safety

- 19.1 Safe use and handling procedures for the membranes are provided in the Technical Data Sheet. The materials must be used in conjunction with the relevant Material Safety Data Sheet.

## Basis of Appraisal

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

### Tests

- 20.1 The following testing of Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofing and Bondall Aquatite Under Tile Membrane have been undertaken by the following organisations:
- CSIRO, Australia – testing to the requirements of AS/NZS 4858 including Appendix A the effect of heat aging, bleach, detergent and water on tensile and elongation.
  - Amdel – heat aging, water absorption, tensile strength and elongation, water vapour transmission to ASTM E96-92, accelerated UV weathering, low temperature flexibility and adhesion to fibre cement, concrete and timber before and after heat aging.
- 20.2 The above test methods and results have been reviewed by BRANZ and found to be satisfactory.

### Other Investigations

- 21.1 An assessment was made of the durability of Gripset Betta Undertile Membrane, Betta Tilecare Rapid Dry Waterproofing and Bondall Aquatite Under Tile Membrane by BRANZ technical experts.
- 21.2 Site inspections were carried out by BRANZ to examine the practicability of installation.
- 21.3 The Technical Literature has been examined by BRANZ and found to be satisfactory.

### Quality

- 22.1 The manufacture of the membranes 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.
- 22.2 The quality of supply to the market is the responsibility of Bondall Pty Ltd.
- 22.3 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of the framing systems and the substrates.
- 22.4 Quality on-site is the responsibility of the certified applicators, approved by Bondall Pty Ltd.
- 22.5 Building owners are responsible for the maintenance of the ceramic tiles in accordance with the instructions of Bondall Pty Ltd.

## Sources of Information

- ANSI 118.10:1999 Load bearing, bonded, waterproof membranes for thin-set ceramic tile and dimension stone installations.
- AC 115 Interim criteria for waterproof membranes for flooring and shower liners.
- AS 1860.2:2006 Particleboard flooring installation.
- AS 3740:2021 Waterproofing of domestic wet areas.
- AS 3958.1:2007 Ceramic tiles guide to the installation of ceramic tiles.
- AS/NZS 2908.2:2000 Cellulose-cement products flat sheets.
- AS/NZS 2269:2012 Plywood – Structural.
- AS/NZS 4858:2004 Wet area membranes.
- BRANZ Good Practice Guide: Tiling (Third Edition), April 2015.
- National Construction Code 2022, Australian Building Codes Board.



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24 August 2022

BONDALL UNDER TILE  
MEMBRANES



**BRANZ**

## Amendments

### Amendment No. 1, dated 14 February 2023

This Appraisal has been amended to update references to NCC 2022.

### Amendment No. 2, dated 13 November 2024

This Appraisal has been amended to update handling and storage section, remove Gripset Prime All Primer and amended to certified applicators.



In the opinion of BRANZ, **Bondall Under Tile Membranes** are fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided they are used, designed, installed and maintained as set out in this Appraisal.

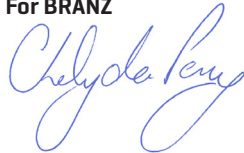
The Appraisal is issued only to **Bondall Pty Ltd**, and is valid until further notice, subject to the Conditions of Appraisal.

### 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 Data Sheet;
  - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
  - d) is copyright of BRANZ.
2. **Bondall Pty Ltd:**
  - 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 workmanship;
  - 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 **Bondall Pty Ltd**.
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 **Bondall Pty Ltd** or any third party.

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**For BRANZ**



**Chelydra Percy**

Chief Executive

Date of Issue:

24 August 2022