

BOSTIK DAMPFIX PS PEEL N STICK SHEET MEMBRANE SYSTEM



Appraisal No. 1210 (2022)

BRANZ Appraisals

Technical Assessments of products for building and construction.



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Product

1.1 Bostik Dampfix PS Peel N Stick Sheet Membrane System is an internal wet area waterproofing system for use under ceramic or stone tile finishes.

Scope

- 2.1 Bostik Dampfix PS Peel N Stick Sheet Membrane System has been appraised for use as a waterproofing membrane for the internal wet areas of buildings within the following scope:
 - on floor substrates of concrete, plywood, compressed fibre-cement sheet and fibre-cement sheet tile underlay and on wall substrates of concrete, concrete masonry, wet area fibre-cement sheet lining system and wet area plasterboard lining system; and,
 - when protected from physical damage by ceramic or stone tile finishes; and,
 - where floors are designed and constructed such that deflections do not exceed 1/360th of the span.
- 2.2 The use of Bostik Dampfix PS Peel N Stick Sheet Membrane System on concrete slabs where hydrostatic or vapour pressure is present from below is outside the scope of the Appraisal.
- 2.3 Movement and control joints in the substrate must be carried through the membrane and tile 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 ceramic or stone tile finishes are outside the scope of this Appraisal.
- 2.5 The membrane must be installed by trained installers approved by Bostik New Zealand Ltd.

Building Regulations

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, Bostik Dampfix PS Peel N Stick Sheet Membrane System, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet the following provisions of the NZBC:

Clause B2 DURABILITY: Performance B2.3.1 (b) 15 years. Bostik Dampfix PS Peel N Stick Sheet Membrane System meets this requirement. See Paragraph 9.1.

Clause E3 INTERNAL MOISTURE: Performance E3.3.6. Interior wet area floors and walls incorporating Bostik Dampfix PS Peel N Stick Sheet Membrane System will meet this requirement. See Paragraphs 11.1-11.6.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Bostik Dampfix PS Peel N Stick Sheet Membrane System meets this requirement.



Technical Specification

- 4.1 Materials supplied by Bostik New Zealand Ltd are as follows:
 - · Bostik Dampfix PS Peel N Stick Sheet Membrane is a butyl rubber-based, self-adhesive undertile sheet membrane with a release liner. It is supplied in rolls 1 m wide and 10 m long.
 - · Bostik Dampfix Peel N Stick Foil Tape is a polyethylene foil sealing tape coated on the underside with butyl rubber adhesive. It is supplied in 30 m long rolls.
 - · Bostik Dampfix Inside Corner is a propylene membrane, coated with butyl rubber adhesive and is used to waterproof inside corners. It is available 75 or 105 mm high and 130 mm long. Bostik Dampfix Outside Corner is a propylene membrane coated with butyl rubber adhesive. It is available 75 or 105 mm high and 135 mm long.
 - · Bostik Dampfix Foil Pipe Collar is a water pipe flexi-collar made from polyurethane foil, coated with butyl rubber adhesive. It is 140 x 140 mm in size and is 1 mm thick.
 - · Bostik Dampfix Foil Floor Collar is a floor collar made form polyurethane foil, coated with butyl rubber adhesive. It is 400 x 400 mm in size and is 0.55 mm thick.
 - · Bostik Multiprime is a general purpose primer used for priming porous surfaces before waterproofing. It is supplied in 1, 5 and 20 L plastic buckets.
 - · Sealants are specified by Bostik New Zealand Ltd and used to seal any gaps or are used as a component to repair defects.

Handling and Storage

All materials must be stored inside, up off floors, in dry conditions, out of direct sunlight, below 28°C and above freezing conditions.

Technical Literature

- This Appraisal must be read in conjunction with:
 - Bostik Dampfix PS Peel N Stick Sheet Membrane TDS, Version1, 2022.
 - Bostik Dampix PS Peel N Stick Foil Floor Collar TDS, Version 1, 2022.
 - Bostik Dampfix PS Peel N Stick Foil Pipe Collar TDS, Version 1, 2022.
 - Bostik Dampfix PS Peel N Stick Foil Tape TDS, Version 1, 2022.
 - Bostik Dampfix PS Peel N Stick Inside Corners TDS, Version 1, 2022.
 - Bostik Dampfix PS Peel N Stick Outside Corners TDS, Version 1, 2022.
 - Bostik ASA Multiprime General Purpose Primer TDS, Version 6, 7 June 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 Bostik Dampfix PS Peel N Stick Sheet Membrane System is for use in buildings where an impervious waterproof membrane is required for floors and walls to prevent damage to building elements and adjoining areas.
- 7.2 The membrane must be protected from physical damage by the application of ceramic or stone



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- 7.4 Timber framing systems 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 all sheet edges are fully supported. Timber framing systems supporting the substrates must be constructed such that deflections do not exceed 1/360th of the span. Where NZS 3604 is used, the allowable joist spans given in Table 7.1 shall be reduced by 20%.
- 7.5 Steel framing systems must comply with NZBC Acceptable Solution B1/AS1, Paragraph 9.1 (NASH Standard Part Two Light Steel Framed Buildings).

Substrates

Plywood

Plywood must be a minimum of 17 mm thick complying with AS/NZS 2269, CD Grade Structural with sanded C face upwards and treated to H3 (CCA treated). LOSP treated plywood must not be used. The plywood must be supported with dwangs or framing with a maximum span of 400 mm in each direction, fixed with 10 g x 50 mm stainless steel countersunk head screws at 150 mm centres on the edges and 200 mm through the body of the sheets.

Fibre Cement Compressed Sheet/ Fibre Cement Sheet Tile Underlay

8.2 Fibre cement compressed sheet 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. Installation must be in accordance with the instructions of the manufacturer.

Concrete and Concrete Masonry

8.3 Concrete and concrete masonry substrates must be to a specific engineering design meeting the requirements of the NZBC, such as concrete construction to NZS 3101, and NZS 3604 concrete slab-on-ground floors and concrete masonry to NZS 4229 and NZS 4230.

Wet Area Wall Linings

- 8.4 Plasterboard wall linings must be manufactured to comply with AS/NZS 2588, and be covered by a valid BRANZ Appraisal for use in internal wet areas.
- 8.5 Fibre cement sheet 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 lining. Installation must be in accordance with the instructions of the manufacturer.

Durability

Serviceable Life

9.1 Bostik Dampfix PS Peel N Stick Sheet Membrane System, when subjected to normal conditions of environment and use and installed to the conditions and limitations of this Appraisal, is expected to have a serviceable life of at least 15 years and be compatible with ceramic or stone tile finishes with a design service life of at least 15 years.

Maintenance

- 10.1 No maintenance of the membrane will be required provided significant substrate movement does not occur and the tile finish remains intact. Regular checks must be made of the 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 tiles, grouts and sealants.
- 10.2 In the event of damage to the membrane, the 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 ceramic or stone tile finishes must be kept clean.





Internal Moisture

- 11.1 Bostik Dampfix PS Peel N Stick Sheet Membrane System is impervious to water and when appropriately designed and installed will avoid the likelihood of water penetrating behind linings or entering concealed spaces.
- 11.2 Bostik Dampfix PS Peel N Stick Sheet Membrane System is suitable for use to contain accidental overflow to meet NZBC Clause E3.3.2. A means of code compliance for overflow is given in NZBC Acceptable Solution E3/AS1, Paragraph 2.
- 11.3 Surfaces must be finished with ceramic or stone tile finishes. A means of code compliance to NZBC Clause E3.3.3 and E3.3.4 is given in NZBC Acceptable Solution E3/AS1, Paragraphs 3.1.1 b], 3.1.2 b] and 3.3.1 b].
- 11.4 Falls in showers and shower areas must be a minimum of 1 in 50. In unenclosed showers, falls must extend a minimum of 1,500 mm out from the shower rose. Floor wastes must be provided and the floor must fall to the outlet.
- 11.5 The waterproofing membrane must completely cover shower bases, and for unenclosed showers it must extend a minimum of 1,500 mm out from the shower rose. Further design guidance on waterproofing wet areas, including waterproofing walls and junctions can be obtained from AS 3740, the BRANZ Good Practice Guide: Tiling, flooring and wallboard manufacturers and NZBC Acceptable Solution E3/AS2.
- 11.6 Where water resistant wall finishes such as prefinished sheet materials are used, they must flash over the membrane a minimum of 30 mm.

Installation Information

Installation Skill Level Requirement

- 12.1 Installation of the membrane must be completed by Bostik New Zealand Ltd trained and approved installers.
- 12.2 Installation of substrates must be completed by tradespersons with an understanding of internal wet area construction, in accordance with instructions given within the Bostik New Zealand Ltd Technical Literature and this Appraisal.

Preparation of Substrates

- 13.1 All substrates must be dry and sound before installation proceeds. Concrete slabs can be checked for dryness by using a hygrometer as set out in BRANZ Bulletin Number 585. 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.
- 13.2 The ambient and substrate temperatures must be between 5°C and 28°C before laying the membrane.
- 13.3 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.
- 13.4 Sheet materials must be installed in accordance with the relevant manufacturers instructions. All sheet edges must be supported by framing.
- 13.5 Bostik Multiprime must be applied as a primer coat for concrete and other porous substrates. Primed surfaces must be covered with Dampfix PS Peel N Stick Sheet Membrane within 4 hours of the application of the primer, or they must be re-primed.



Membrane Installation

- 14.1 Dampfix Internal Corners, Dampfix External Corners, Dampfix Foil Pipe Collars and Dampfix Foil Floor Collars must be used to waterproof the relevant areas and penetrations. The accessories must be formed to fit tightly to the penetrations and the substrate.
- 14.2 Dampfix Foil Pipe Collars and Dampfix Foil Floor Collars must be applied to drain openings. The collars must extend at least 150 mm beyond the perimeter of the drain.
- 14.3 The membrane is cut to the length necessary for it to extend 150 mm in all directions beyond the area to be covered. The membrane is then aligned and pressed onto the primer.
- 14.4 For adjoining Dampfix PS Peel N Stick Sheet Membranes, tape is applied to the substrate in line with the joint of the membranes. The membrane is then applied to the top of the substrate and tape and butt-ended. Tape must cover the full underside of the joint. A gap of more than 2 mm between membrane sheets must also be sealed with a sealant specified by Bostik New Zealand Ltd.
- 14.5 After application, the membrane must be inspected, and any defects repaired. If the membrane is damaged or requires repair, the area must be cleaned to 150 mm beyond the damaged area. A patch of Bostik Dampfix PS Peel N Stick Sheet Membrane is cut and rolled firmly onto the existing membrane. A troweled bead of Bostik recommended sealant must be applied to the edges of the patch.

Tiling

- 15.1 Tiling directly to the Bostik Dampfix PS Peel N Stick Sheet Membrane System may be carried out immediately after the membrane has been laid.
- 15.2 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 Bostik New Zealand Ltd.

Inspections

- 16.1 Critical areas of inspection 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 and use of reinforcement.
 - Membrane integrity prior to the installation of tiles including protection from damage.

Health and Safety

17.1 Safe use and handling procedures for the membranes are provided in the Technical Literature. 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

- 18.1 Tests have been carried out by BRANZ in accordance with AS/NZS 4858. This covered tensile strength/elongation, water resistance, detergent, bleach, heat ageing, thickness, cyclic movement water vapour transmission and water absorption.
- 18.2 The above test methods and results have been reviewed and found to be satisfactory.



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Other Investigations

- 19.1 An assessment was made of the durability of the Bostik Dampfix PS Peel N Stick Sheet Membrane System by BRANZ technical experts.
- 19.2 Site inspections have been carried out by BRANZ to assess the practicability of installation and to examine completed installations.
- 19.3 The Technical Literature has been examined by BRANZ and found to be satisfactory.

Quality

- 20.1 The manufacture of the Bostik Dampfix PS Peel N Stick Sheet Membrane System has not been examined by BRANZ, but details of the quality and composition of the materials used were obtained and found to be satisfactory.
- 20.2 The quality of manufacture of the Bostik Dampfix PS Peel N Stick Sheet Membrane System is the responsibility of Bostik New Zealand Ltd
- 20.3 The quality of supply of the membrane system materials to the market is the responsibility of Bostik New Zealand Ltd.
- 20.4 Quality on-site is the responsibility of the Bostik New Zealand Ltd trained and approved installer.
- 20.5 Designers are responsible for the substrate design, and building contractors are responsible for the quality of construction of substrate system, in accordance with the instructions of the substrate manufacturer, Bostik New Zealand Ltd and this Appraisal.
- 20.6 Building owners are responsible for the maintenance of the ceramic or stone tile finishing system, in accordance with the instructions of Bostik New Zealand Ltd.

Sources of Information

- AC 115 Criteria for Waterproof Membranes for Flooring and Shower Liners.
- ANSI 118.10:1999 Load bearing, bonded, waterproof membranes for thin-set ceramic tile and dimension stone installations.
- AS 2908.2:2000 Cellulose-cement products flat sheet.
- · AS 3740:2010 Waterproofing of wet areas within residential buildings.
- AS 3958.1:1991 Guide to the installation of ceramic tiles.
- AS/NZS 1170:2002 Structural design actions.
- · AS/NZS 2269:2012 Plywood Structural.
- AS/NZS 4858:2004 Wet area membranes.
- BRANZ Bulletin No 585 Measuring moisture in timber and concrete.
- BRANZ Good Practice Guide: Tiling, April 2015.
- NASH Standard Part Two: May 2019 Light Steel Framed Buildings.
- NZS 3101:2006 Concrete Structures Standard.
- NZS 3602:2003 Timber and wood-based products for use in buildings.
- · NZS 3604:2011 Timber-framed buildings.
- NZS 4229:2013 Concrete masonry buildings not requiring specific engineering design.
- NZS 4230: 2004 Design of reinforced concrete masonry structures.
- Ministry of Business, Innovation and Employment Record of amendments Acceptable Solutions, Verification Methods and handbooks.
- · The Building Regulations 1992.





In the opinion of BRANZ, Bostik Dampfix PS Peel N Stick Sheet Membrane System 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 Bostik New Zealand 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 Literature;
 - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
 - d) is copyright of BRANZ.
- 2. Bostik New Zealand 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 Bostik New Zealand 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.
- BRANZ provides no certification, guarantee, indemnity or warranty, to Bostik New Zealand Ltd or any third party.

For BRANZ

Chelydra Percy Chief Executive Date of Issue:

01 July 2022