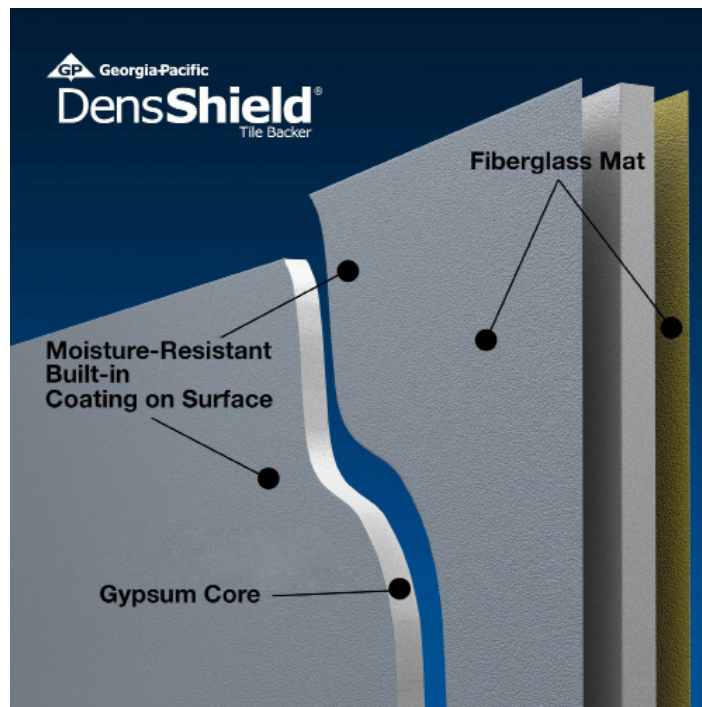




BRANZ Appraised
Appraisal No. 1066 [2019]

DENSSHIELD® TILE BACKER BOARD SYSTEM

Appraisal No. 1066 (2019)
Amended 12 March 2021



BRANZ Appraisals

Technical Assessments of
products for building and
construction.



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Product

- 1.1 The DensShield® Tile Backer Board System is a waterproof, wet area ceramic or stone tile backer board system for internal walls.

Scope

- 2.1 The DensShield® Tile Backer Board System has been appraised for use as a waterproof wet area tile backer board for internal wet areas of buildings, within the following scope:
 - On walls with timber or steel framing; and,
 - when protected from physical damage by ceramic or stone tile finishes.
- 2.2 Movement and control joints in the substrate must be carried through to the tile finish. The design and construction of the substrate and movement and control joints is specific to each building, and therefore the responsibility of the building designer and building contractor and are outside the scope of this Appraisal.
- 2.3 Tiling finishes are outside the scope of this Appraisal.
- 2.4 The DensShield® Tile Backer Board System must be installed by trained installers, approved by Wet Area Solutions [Aust] Pty Ltd.

Building Regulations

National Construction Code Series [NCC 2019] Building Code Of Australia [BCA]

- 3.1 In the opinion of BRANZ, the DensShield® Tile Backer Board System, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal will meet the following performance requirements of the BCA:

BCA Volume 1 – Class 2 to Class 9 Buildings

Part F1 – Damp and weatherproofing. Performance FP 1.7. The DensShield® Tile Backer Board System meets this requirement. See Paragraph 13.1 – 13.6

BCA Volume 2 – Class 1 and Class 10 Buildings

Part 2.4 – Health and amenity. Performance P2.4.1. The DensShield® Tile Backer Board System meets this requirement. See Paragraph 13.1 – 13.6



Technical Specification

- 4.1 Materials supplied by Georgia-Pacific Gypsum LLC are as follows:
- **DensShield® Tile Backer Board:** a gypsum based waterproof board with a glass-fibre mat embedded beneath the surface and one face covered with a grey acrylic. It is supplied as a board in four thicknesses: 8.1 mm, 10.0 mm, 12.7 mm, or 15.9 mm. The size of each panel varies depending on the thickness.
- 4.2 Materials specified by Georgia-Pacific Gypsum LLC and supplied by the trained installer based on Wet Area Solutions [Aust] Pty Ltd specification are as follows:
- **Sealant:** a one component, thixotropic, polyurethane based sealant with low modulus. It is supplied in 600 ml sausages either white or grey.
 - **Tape:** a self-adhesive plasterboard jointing tape. It is supplied in rolls 50 mm wide and either 20 or 90 m long.
 - **Approved tile adhesive.**

Handling and Storage

- 5.1 All materials must be stored inside in dry conditions, out of direct sunlight and out of freezing conditions.

Technical Literature

- 6.1 Refer to the Appraisals listing on the BRANZ Website for details of the current Technical Literature for the DensShield® Tile Backer Board System. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained within the scope of this Appraisal and the Technical Literature must be followed.

Design Information

General

- 7.1 The DensShield® Tile Backer Board System is for use where an impervious waterproof layer is required to walls to prevent damage to building elements and adjoining areas.
- 7.2 The DensShield® Tile Backer Board System must be protected from physical damage by the application of ceramic or stone tile finishes.
- 7.3 Movement and control joints may be required depending on the shape and size of the wall and the tiling finish. Design guidance can be found in the BRANZ Good Practice Guide - Tiling.

Durability

Serviceable Life

- 8.1 The DensShield® Tile Backer Board System, 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 tile finishes with a design service life of 15 – 25 years.

Maintenance

- 9.1 No maintenance of the DensShield® Tile Backer Board System will be required provided significant substrate movement does not occur and the ceramic or stone tile finish remains intact. Regular checks must be made of 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.
- 9.2 In the event of damage to the DensShield® Tile Backer Board System, the tiles must be removed and the DensShield® Tile Backer Board System repaired by removing and replacing the damaged portion and applying a patch as for new work in line with the Technical Literature.



Outbreak of Fire

- 10.1 The DensShield® Tile Backer Board System must be protected or separated from fireplaces, heating appliances, chimneys and flues in accordance with the requirements of BCA Volume 1, Part G2, Performance GP 2.1, and BCA Volume 2, Part 3.10.7 and Performance 2.7.3.

Spread of Fire

- 11.1 The DensShield® Tile Backer Board System are considered an exempt building material, as listed in BCA, Specification C1.10 [c] [i].

Internal Moisture

- 12.1 The DensShield® Tile Backer Board System can be used to prevent water from penetrating behind fittings and linings or into concealed spaces and therefore meets BCA Volume 1, Part F1 – Damp and weatherproofing, Performance FP 1.7 and BCA Volume 2, Part 2.4 – Health and amenity, Performance P 2.4.1.
- 12.2 Wall surfaces must be finished with ceramic or stone tiles.
- 12.3 Design guidance on waterproofing can be obtained from AS 3740, the BRANZ Good Practice Guide - Tiling, and flooring and wallboard manufacturers.

Installation Information

Installation Skill Level Requirements

- 13.1 Installation and finishing of the DensShield® Tile Backer Board System must be completed in accordance with the Technical Literature, by trained installers, approved by Wet Area Solutions [Aust] Pty Ltd.
- 13.2 Screws, nails and any penetrations made through the board, as well as board junctions have to be sealed with sealant specified by Wet Area Solutions [Aust] Pty Ltd.

Tiling

- 14.1 All components of the DensShield® Tile Backer Board System must be fully cured before tiling. The cured system must be protected at all times to prevent mechanical damage.
- 14.2 Tiling must be undertaken in accordance with AS 3958.1 and the BRANZ Good Practice Guide - Tiling.

Inspections

- 15.1 Critical areas of inspection are:
- Construction of substrates, including crack control and installation of under flashings and movement control joints.
 - Installation of the DensShield® Tile Backer Board System to the manufacturer's instructions.
 - DensShield® Tile Backer Board component curing and integrity prior to the installation of tiles including protection from mechanical damage during curing and prior to tile installation.

Health and Safety

- 16.1 Safe use and handling procedures for the DensShield® Tile Backer Board System 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

- 17.1 The following testing of the DensShield® Tilebacker Board System has been undertaken by the following organisations:
- Moisture resistance testing was carried out on the DensShield® Tilebacker Board System.
 - Water resistance testing was carried out on the DensShield® Tilebacker Board System.
- 17.2 Test methods and results have been reviewed by BRANZ and found to be satisfactory.

Other Investigations

- 18.1 An assessment was made of the durability of the DensShield® Tilebacker Board System by BRANZ technical experts.
- 18.2 Site inspections were carried out by BRANZ to examine the practicability of installation.
- 18.3 The Technical Literature has been examined by BRANZ and found to be satisfactory.

Quality

- 19.1 The manufacture of the membranes has not been examined by BRANZ, but details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.
- 19.2 The quality of supply to the market is the responsibility of Wet Area Solutions (Aust) Pty Ltd.
- 19.3 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of the framing systems and the substrates.
- 19.4 Quality on site is the responsibility of the trained installers, approved by Wet Area Solutions (Aust) Pty Ltd.
- 19.5 Building owners are responsible for the maintenance of the ceramic tiles in accordance with the instructions of Wet Area Solutions (Aust) 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 - 1998 Installation of Particle Board.
- AS 3740 - 2004 Waterproofing of wet areas within residential buildings.
- AS 3958.1: 2007 Ceramic Tiles - Guide to the installation of ceramic tiles.
- AS/NZS 2908.2: 2000 Cellulose-cement products - flat sheet.
- AS/NZS 2269: 2012 Plywood - structural.
- AS/NZS 4858: 2004 Wet area membranes.
- Good Practice Guide - Tiling, BRANZ, April 2015.
- National Construction Code Series, Building Code of Australia 2019, Australian Building Codes Board.

Amendments

Amendment No 1, dated 12 March 2021

This Appraisal has been amended to add a board thickness of 10.0mm to the technical specifications.



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13 September 2019

DENSSHIELD® TILE BACKER
BOARD SYSTEM



In the opinion of BRANZ, **DensShield® Tile Backer Board System** 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 **Georgia Pacific Gypsum LLC**, 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. **Georgia Pacific Gypsum LLC:**
 - 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 **Georgia Pacific Gypsum LLC**.
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 **Georgia Pacific Gypsum LLC** or any third party.

For BRANZ

Chelydra Percy

Chief Executive

Date of Issue:

13 September 2019