



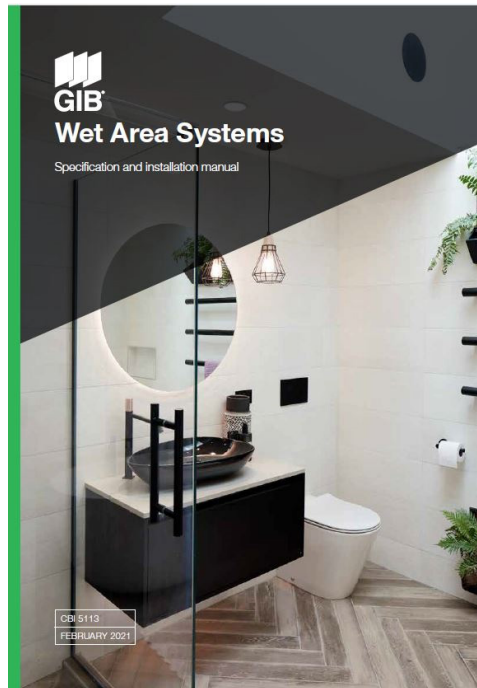
BRANZ Appraised

Appraisal No. 427 [2021]

GIB® WET AREA SYSTEMS

Appraisal No. 427 [2021]

This Appraisal replaces BRANZ Appraisal No. 427 [2007]



BRANZ Appraisals

Technical Assessments of products for building and construction.



Winstone Wallboards Ltd

P0 Box 12 256
Penrose
Auckland 1642
Tel: 09 633 0100
Email: info@gib.co.nz
Web: www.gib.co.nz



BRANZ

BRANZ

1222 Moonshine Rd,
RD1, Porirua 5381
Private Bag 50 908
Porirua 5240,
New Zealand
Tel: 04 237 1170
branz.co.nz



Product

- 1.1 GIB® Wet Area Systems are for the interior lining of timber and steel-framed walls and ceilings in wet areas such as bathrooms, laundries, kitchens and toilets where a water-resistant lining material is desirable.

Scope

- 2.1 GIB® Wet Area Systems have been appraised for use as a wet area wall and ceiling lining in buildings within the following scope:
 - on timber-framed walls and ceilings within the scope limitations on NZS 3604; or,
 - on steel-framed walls and ceilings within the scope limitations of NASH Standard Part 2, or,
 - on timber and light gauge steel-framed walls and ceilings subject to specific design.

Building Regulations

New Zealand Building Code [NZBC]

- 3.1 In the opinion of BRANZ, GIB® Wet Area Systems, 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 B1 STRUCTURE: Performance B1.3.1, B1.3.2 and B1.3.4. GIB® Wet Area Systems meet the requirements for loads arising from self-weight and impact [i.e. B1.3.3 (a) and (j)]. See Paragraphs 8.1-8.3.

Clause B2 DURABILITY: Performance B2.3.1 (b) 15 years and B2.3.1 (c) 5 years. GIB® Wet Area Systems meet these requirements. See Paragraphs 9.1-9.5.

Clause E3 INTERNAL MOISTURE: Performance E3.3.4 and E3.3.5. GIB® Wet Area Systems meet these requirements. See Paragraphs 12.1-12.3.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. GIB® Wet Area Systems meet this requirement.

Technical Specification

4.1 The GIB® plasterboards and accessories used in GIB® Wet Area Systems, and supplied by Winstone Wallboards Ltd are as follows:

GIB® Plasterboards

- **GIB Aqualine®** is a paper-bound, modified water-resistant gypsum-plaster core sheet lining material. It is available in 10 and 13 mm sheet thicknesses. Sheets are available in various edge profiles and lengths from 2,400 mm to 4,800 mm. Refer to Table 1. The nominal sheet weights are 8 kg/m² and 11 kg/m² for 10 mm and 13 mm thick sheets respectively. GIB Aqualine® face paper is green in colour.
- **GIB Toughline® Aqua** is a paper-bound, modified water-resistant gypsum-plaster core sheet lining material. It is available in a sheet thickness of 13 mm. Sheets are available in various edge profiles and lengths from 2,400 mm to 3,000 mm. Refer to Table 1. The nominal sheet weight is 11.4 kg/m². GIB Toughline® Aqua face paper is mauve in colour.
- **GIB Weatherline®** is an exterior-grade, glass-fibre fleece-wrapped modified-gypsum core sheet material. The product is available in 10 mm and 13 mm thicknesses and a board width of 1,200 mm. Standard sheet lengths are 2,450, 2,700 and 3,000 mm. Custom sheet lengths are also available. The nominal sheet weights are 9 kg/m² and 11.5 kg/m² for 10 mm and 13 mm thick sheets respectively.

Table 1: GIB® Wet Area Plasterboard Available Sheet Sizes

Plasterboard Type	Sheet Thickness [mm]	Sheet Edge Profile	Sheet Width [mm]	Sheet Length [mm]					
				2,400	2,450	2,700	3,000	3,600	4,800
GIB Aqualine®	10	TE/TE	1,200	✓		✓	✓	✓	
		TE/SE	1,200	✓					✓
		TE/SE	1,350	✓				✓	
	13	TE/TE	1,200	✓		✓	✓	✓	
GIB Toughline® Aqua	13	TE/TE	1,200	✓		✓	✓		
GIB Weatherline®	10	SE/SE	1,200		✓	✓	✓		
	13	SE/SE	1,200			✓	✓		

TE = Tapered Edge SE = Square Edge

Fastenings

- GIB® Grabber® High Thread Drywall screws for fixing to timber: 6 g x 25 mm and 32 mm.
- GIB® Grabber® Self Tapping Drywall screws for fixing to light gauge steel: 6 g x 25 mm and 32 mm.

Adhesive and Sealants

- GIBFix® One (Acrylic).
- GIBFix® All-Bond (Solvent).

GIB® Accessories

- Corner Support Angle - GIBFix® Angle or GIB® Rondo® NZ18. Minimum 32 x 32 x 0.55 mm galvanised metal angle.

GIB® Jointing Compounds

- As specified in the GIB® Wet Area Systems and GIB® Site Guide Technical Literature.

4.2 System components and accessories for the GIB® Wet Area Systems, which are supplied by the building contractor are:

Waterproofing

- A waterproofing system complying with AS/NZS 4858.

Finishes

- Finishes such as tiling, flexible sheet vinyl, paints and wallpapers have not been assessed and are outside the scope of this Appraisal.

Handling and Storage

- 5.1 The best results are achieved when GIB® plasterboards are treated as a finishing material and protected from damage. Sheets must be stacked flat and kept dry at all times. For limits on stack heights see the GIB® Site Guide. Sheets must be carried on edge and not dragged.
- 5.2 All accessories must be kept dry.

Technical Literature

- 6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for GIB® Wet Area Systems. The Technical Literature must be read in conjunction with this Appraisal. 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 GIB® Wet Area Systems provide a water-resistant lining as a base for finishing systems in wet areas such as bathrooms, toilets, laundries and kitchens. The typical finishes are ceramic tiles and flexible sheet vinyl to walls, and paint and wallpaper to walls and ceilings. [Note: GIB Weatherline® is a suitable substrate for ceramic tiles and sheet vinyl. For paint or wallpaper finishes use GIB Aqualine® or GIB Toughline® Aqua.]
- 7.2 GIB® Wet Area Systems must not be used in the following situations:
- For bracing applications in shower areas or adjacent baths [See Paragraphs 7.4 and 8.2].
 - In areas of high humidity [above 90% RH] or continually wet areas such as group showers, steam rooms, or swimming pools.
 - Installed over a vapour barrier.
 - Applied directly to masonry, concrete or solid plaster.
 - Applied over other sheet lining materials.
 - Used externally of the building envelope.
 - Exposed to temperatures of 52°C or greater for prolonged periods. [Refer to appliance and fitting manufacturers for installation details.]
- 7.3 GIB Aqualine® may be substituted for some other GIB® plasterboard products in specific GIB® Bracing Systems, GIB® Fire Rated Systems and GIB® Noise Control Systems. Refer to the relevant systems technical literature for details.

Wet Areas

- 7.4 Wet areas are spaces where sanitary fixtures and sanitary appliances are located such as bathrooms, toilets, laundries and kitchens. There are two general categories of wet areas as follows:
- Water Splash – These are areas subject to intermittent splashing of water such as around baths, vanities, tubs and sinks.
 - Shower Areas – These are areas subject to frequent and heavy water splash such as enclosed showers, unenclosed shower zones and showers over baths.
- 7.5 Both the above wet area categories must be finished with surfaces and joints that are impervious and easily cleaned. In addition, shower areas must be waterproofed. This can be achieved using proprietary rigid shower lining systems, flexible vinyl shower wall finishes, or tiling. Tiled shower areas must include a wet area waterproofing membrane system under the tiles.

Intertenancy Walls – Wet Areas

- 7.6 Intertenancy construction that incorporates fire resistance and noise control must be protected from water splash. In shower areas, GIB® Wet Area plasterboards must not be substituted for other GIB® plasterboards but must be an extra lining layer. Refer to the Technical Literature.

Tiling

- 7.7 GIB® Wet Area Systems are suitable as a substrate for tiling up to the following weights:
- 10 mm GIB Aqualine® and GIB Weatherline® - up to 26 kg/m².
 - 13 mm GIB Aqualine®, GIB Toughline® Aqua and GIB Weatherline® - up to 40 kg/m².
- [Note: Most ceramic and porcelain wall tiles weigh less than 20 kg/m². For further information on tiling consult the BRANZ Good Practice Guide – Tiling.]*

Framing

- 7.8 Supporting framing must comprise one of the following, subject to the minimum sizes, dwang centres and all other frame requirements of GIB® Wet Area Systems Technical Literature:
- Timber framing must be designed and constructed in accordance with NZS 3604, or to a specific design using NZS 3603 and AS/NZS 1170. Refer to Paragraph 15.2 regarding recommended moisture content of timber framing.
 - Steel framing must be designed and constructed in accordance with NASH Standard Part 2, or to a specific design in accordance with AS/NZS 1170.

Structure

Bracing

- 8.1 GIB Aqualine®, GIB Toughline® Aqua and GIB Weatherline® can be used in GIB EzyBrace® Systems. Refer to BRANZ Appraisals Nos. 928 [2016] and 1048 [2019].
- 8.2 GIB Wet Area Systems must not be used for bracing in shower areas or behind baths.

Impact Resistance

- 8.3 GIB® plasterboards provide adequate resistance to soft body impact, based upon experience of use in domestic and light commercial applications. GIB Toughline® Aqua is recommended by Winstone Wallboards Ltd where higher impact resistance is desired.

Durability

Serviceable Life

- 9.1 GIB® Wet Area Systems have a serviceable life of at least 15 years as a fully protected shower or water splash lining. As a general wall and ceiling lining, GIB® Wet Area Systems will have a serviceable life in excess of 50 years. The ability of GIB® plasterboards to remain durable is dependent on being protected and remaining dry in service, and being maintained in accordance with this Appraisal.

Maintenance

- 9.2 The building must be maintained weathertight and all lining systems protected from internal and external moisture.
- 9.3 Finishes to water splash and shower areas, including tiles, grout, waterproof membranes, sealants and flexible sheet vinyl must be checked to ensure the integrity of the system is maintained. They must be repaired or replaced if necessary. When repairing or replacing finishes, the GIB® plasterboard substrate must be checked for defects and repaired or replaced, as required.
- 9.4 For flexible sheet vinyl, particular attention must be paid to joints, especially at corners. Checks should be made to ensure the vinyl has not been punctured. Where damage has occurred, repairs must be made immediately.
- 9.5 Impact damage to GIB® plasterboard, resulting in small holes and cracks, may be patched, stopped and finished. For larger areas of damage, expert advice on repair must be sought from Winstone Wallboards Ltd.

Prevention of Fire Occurring

- 10.1 Separation or protection must be provided to the GIB® Wet Area Systems from heat sources such as fireplaces, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 and C/AS2, and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

Fire Affecting Areas Beyond the Fire Source

Control of Internal Fire and Smoke Spread

- 11.1 The gypsum plasterboard used in GIB® Wet Area Systems without an applied paint or wallpaper finish has been tested in accordance with ISO 5660 and achieved a Material Group Number of 1-S.
- 11.2 The gypsum plasterboard used in GIB® Wet Area Systems with an untested applied finish of a waterborne or solvent borne paint coating \leq 0.4mm thick achieves a Material Group Number of G2-S in accordance with Table A1 of NZBC Verification Method C/VM2.
- 11.3 A lower Material Group Number may be achieved when used with a tested finishing system. The Material Group Number for the complete lining system must be obtained from the supplier of the finish product or system.

Fire Resistance Ratings (FRRs)

- 11.4 GIB® Wet Area plasterboards, when used as part of GIB® Fire Rated Systems, can be used to provide FRRs as determined by NZBC Acceptable Solutions C/AS1 and C/AS2 and NZBC Verification Method C/VM2. Refer to BRANZ Appraisal No. 289 [2018] and relevant technical literature.

Internal Moisture

- 12.1 When installed in accordance with this Appraisal, GIB® Wet Area Systems will provide wall surfaces adjacent to sanitary fixtures and sanitary appliances that are impervious and easily cleaned.
- 12.2 The construction methods in the Technical Literature meet with the internal moisture requirements of the NZBC Acceptable Solution E3/AS1.
- 12.3 To minimise internal condensation, adequate levels of ventilation and thermal resistance must be provided to all spaces where moisture may be generated.

Airborne and Impact Sound

- 13.1 GIB® Wet Area plasterboards, when used as part of GIB® Noise Control systems, can be used to provide acoustic ratings as required by NZBC Acceptable Solution G6/AS1. Refer to BRANZ Appraisal No. 394 [2017] and relevant technical literature.

Installation Information

Installation Skill Level Requirement

- 14.1 Installation of GIB® Wet Area Systems must be completed by, or under the supervision of, a Licensed Building Practitioner with the relevant Licence Class, in accordance with the Technical Literature and this Appraisal.

General

- 15.1 GIB® Wet Area Systems must be installed in accordance with the Technical Literature. For inspection, reference must be made to the Technical Literature.

Framing

- 15.2 To achieve an acceptable decorative finish, the walls must not be lined unless the moisture content of timber framing is less than 18%. Winstone Wallboards Ltd recommend a moisture content of 8–12% where buildings are to be air conditioned or centrally heated.

Cutting

- 15.3 GIB® Wet Area plasterboards are easily cut by scoring the face paper with a sharp short-bladed trimming knife, and then snapping the plasterboard away from the cut face and cutting the back paper or by sawing. Use of a metal straightedge facilitates clean straight cuts. Cut edges can be tidied up by using a knife. Paper dags should be removed.

Fixing Sheets

Non-Tiled Areas

- 16.1 GIB® Wet Area plasterboards may be installed vertically or horizontally. Sheets are fixed with GIB® Grabber® screws at 300 mm centres around the perimeter of the sheet, and with GIBFix® adhesive on all intermediate studs and dwangs. Adhesive must not be used under fasteners. A 5–10 mm gap must be left between the floor and the bottom of the sheet.

Tiled Areas

- 16.2 Control joints must be provided at maximum 4 m centres.
- 16.3 Internal corners in shower areas must be reinforced with a minimum 32 x 32 x 0.55 mm galvanised metal angle [i.e. GIBFix® Angle or GIB® Rondo® NZ18] prior to lining the walls.
- 16.4 GIB® Wet Area plasterboards may be installed vertically or horizontally. Sheets are fixed with GIB® Grabber® screws at 150 mm centres to the perimeter of wall and to all intermediate studs. Adhesive must not be used in place of screws.

Ceilings

- 16.5 Supports of timber or steel battens or ceiling joists must be 450 mm centres for 10 mm GIB Aqualine®, or 600 mm centres for 13 mm GIB Aqualine® or GIB Toughline® Aqua.
- 16.6 GIB Aqualine® and GIB Toughline® Aqua sheets must be fixed with GIB® Grabber® screws at 600 mm centres around the perimeter of the ceiling and at 200 mm centre along supports. Alternatively, sheets are screw fixed at 600 mm centres along the supports and GIBFix® adhesive placed at 200 mm centres between the screws.

Penetrations and Sealants

- 17.1 All cut-outs for pipe penetrations must be made neatly using a hole saw. Cut-outs should be made approximately 12 mm diameter greater than the pipe.
- 17.2 A bead of sealant must be placed to the full thickness of the plasterboard sheet around all pipe penetrations, at bath rims and preformed shower bases and where an impervious junction is required at the floor/wall line.
- 17.3 In tiled areas, a bead of sealant 6 mm wide must also be placed to the full thickness of the tiles where the above situation occurs. The sealant manufacturer's technical literature must be followed for installation.

Jointing and Finishing

- 18.1 Jointing must be carried out in accordance with GIB® Site Guide Technical Literature.
- 18.2 Tiled shower areas must incorporate a waterproofing membrane over GIB® Wet Area Systems. Waterproofing membranes are outside the scope of this Appraisal and must otherwise be specified and approved.

Health and Safety

- 19.1 Dust resulting from the sanding of stopping and finishing compounds may be a respiratory irritant, and the use of a suitable facemask is recommended.

Basis of Appraisal

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

Tests

- 20.1 Winstone Wallboards Ltd GIB® plasterboards have been assessed for the following properties: MOR, MOE, paper tensile strength, paper shear strength, nail pull resistance, edge hardness, water resistance, hard and soft body impact tests and humidified deflection.
- 20.2 Cone calorimeter tests to ISO 5660 have been carried out by BRANZ.

Other Investigations

- 21.1 An assessment was made of the durability of the systems by BRANZ technical experts and found to be satisfactory.
- 21.2 Site inspections were carried out by BRANZ to assess the practicability of the installation of the systems, and to view completed installations.
- 21.3 The GIB® Wet Area Systems and GIB® Site Guide Technical Literature have been examined by BRANZ and found to be satisfactory.

Quality

- 22.1 Winstone Wallboards Ltd's manufacturing process and details of the quality and composition of the materials, have been examined by BRANZ and found to be satisfactory.
- 22.2 The quality management systems of Winstone Wallboards Ltd have been assessed and registered by TELARC as meeting the requirements of ISO 9001: 2015, Registration No. 581.
- 22.3 Winstone Wallboards Ltd is responsible for the quality of the product supplied.
- 22.4 The quality of the application and finish on site is the responsibility of the installation, stopping and finishing contractors.
- 22.5 Designers are responsible for the design of buildings.
- 22.6 Building owners are responsible for the maintenance in accordance with the instructions of Winstone Wallboards Ltd.



Sources of Information

- AS/NZS 1170: 2002 Structural design actions - General principles.
- AS/NZS 2588: 2018 Gypsum plasterboard.
- BRANZ Good Practice Guide: Tiling (3rd edition), April 2015.
- ISO 5660-1:2002 Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Part 1: Heat release rate (cone calorimeter method).
- NZS 3603: 1993 Timber Structures Standard.
- 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.



In the opinion of BRANZ, **GIB® Wet Area Systems** 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 **Winstone Wallboards 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. **Winstone Wallboards 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 **Winstone Wallboards 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 **Winstone Wallboards Ltd** or any third party.

For BRANZ



Chelydra Percy

Chief Executive

Date of Issue:

15 February 2021