



BRANZ Appraised

Appraisal No.774 [2012]

BRANZ Appraisals

Technical Assessments of products
for building and construction

**BRANZ
APPRAISAL
No. 774 (2012)**

Amended March 2014

**WARMUP WETROOM
SYSTEM**

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Product

1.1 The Warmup Wetroom System is for internal wet areas of buildings that are to be finished with ceramic or stone tiles.



Scope

2.1 Warmup Wetroom System has been appraised for use within the following scope: In internal wet areas of buildings, within the following scope:

- on substrates of Warmup Insulation Backer Board or fibre cement tile underlay supported by floor substrates of concrete, plywood, compressed fibre cement sheet; and,
- when protected from physical damage by a screed and ceramic or stone tiles; and,
- where floors are designed and constructed such that deflections do not exceed 1/360th of the span; and,
- movement and control joints in the substrate must be carried through to the screed, tile or stone finish; and,
- with Ardex Waterproofing Membranes (WPM001, 002 and 750) used as the waterproofing systems; and,
- where floors are designed not to exceed a continuous operating temperature of 35°C; and,
- the system must be installed using detailing as set out in the Technical Literature; and,
- the Warmup Wetroom System must be installed by trained applicators, approved by Warmup New Zealand Ltd; and,
- the design and construction of the movement and control joints is specific to the building and therefore the responsibility of the building designer and building contractor and is therefore outside this scope; and,
- tiling or stone finishes are outside the scope of this Appraisal.

Building Regulations

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, Warmup Wetroom 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 and B2.3.2. Warmup Wetroom System meets these requirements. See Paragraphs 10.1 and 10.2.

Clause E3 INTERNAL MOISTURE: Performance E3.3.4, E3.3.5 and E3.3.6. Warmup Wetroom System meets these requirements. See Paragraph 12.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Warmup Wetroom System meets this requirement and will not present a health hazard to people.

3.2 This is an Appraisal of an **Alternative Solution** in terms of New Zealand Building Code compliance.

Technical Specification

4.1 System components and accessories for Warmup Wetroom System, which are supplied by Warmup New Zealand Ltd are:

Ardex Undertile Sheet Membrane (WPM750)

- A single ply synthetic rubber membrane with polypropylene filaments welded to both sides, this enables better wetting out by water based adhesives. It is supplied as a 1.0 mm thick, 1.4 m wide x 20 m long roll.

Superflex™ WPM001 Premixed Bathroom and Balcony

- A one part, polymer-based, ready-to-use, liquid-applied membrane containing micro-fibres, supplied as a light blue thixotropic paste in 6.5 kg (approximately 5 litres) and 20 kg (approximately 15 litres) pails.

Superflex™ WPM002 Two Part Bathroom and Balcony

- A fast drying, two part, flexible, cementitious-based, liquid applied membrane containing micro-fibres. It is supplied as Superflex™ WPM002 Part A Liquid in 10 and 20 kg pails and Superflex™ WPM002 Part B Powder in 10 kg multi-wall bags. When dry, the membrane is light grey in colour.

Warmup Insulation Backer Board

- Substrate boards made from extruded polystyrene and coated both sides with a close woven fiberglass mesh embedded on a cement polymer mortar. It is available in a range of thickness from 6 mm to 60 mm, with widths 600 mm or 1200 mm and lengths of 1250 mm or 2500 mm. It is also available as preformed shower trays and hobs.

Clamp Waste

- An outlet designed to securely clamp the membrane that can be tiled over. The plumbing aspects of the floor clamp waste have not been assessed by BRANZ and are outside the scope of this Appraisal.

Ardex Optima Adhesive

- A highly flexible, fast setting tile adhesive for adhering the shower bases or hobs to base substrate. It is supplied as a light colour powder in 5 kg bags.

Warmup Undertile Heating Cables

- Multi stranded single conductor, teflon insulated, full earth screen with outer PVC insulation. All heating elements are factory terminated and available in 13 different sizes. Each different element length is colour coded to ensure the correct element is used.

Warmup Thermostats

- A range of 6 models of non-programmable and programmable temperature controllers for the Warmup Undertile System.

Handling and Storage

5.1 Handling and storage of all materials supplied by Warmup New Zealand Ltd, whether on site or off site, is under the control of the trained applicators, approved by Warmup New Zealand Ltd. Warmup Insulation Backer Board must be stacked flat, off the ground and supported on a level platform. It must be kept dry at all times either by storing under cover or by providing waterproof covers to the stack. Care must be taken to avoid damage to edges, ends and surfaces. The sheets must always be carried on edge.

Technical Literature

6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for Warmup Wetroom System. 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 Warmup Wetroom System may be used in the following areas:

- Wet areas – all floor areas in a wet area. The system including the waterproofing membrane is designed to be used in these areas as substrates for ceramic or stone tiles finishes.
- Semi-wet or dry areas or floor areas adjacent to sanitary fixtures such as baths, tubs and basins. The system is designed to be used in these areas as substrates for ceramic or stone finishes.

7.2 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. 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%. 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.

Substrates

Plywood

8.1 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 and 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. Fibre cement sheet tile underlay must be suitable for use in internal wet areas. 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, concrete slab-on-ground to NZS 3604, 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 suitable for use in internal wet areas.

8.5 Fibre cement sheet manufactured to comply with the requirements of AS 2908.2 and must be specified by the manufacturer as being suitable for use in wet areas.

Finishing

9.1 Wet areas as defined by AS 3740 must be protected with BRANZ Appraised Ardex Waterproofing Membranes (WPM001, 002 and 750).

9.2 Tiling must be carried out in accordance with AS 3958.1, or the BRANZ publication 'Good Tiling Practice'. A flexible adhesive complying with AS 2358 must be used. All tiles must be fixed in accordance with the tile adhesive manufacturer's instructions.

Durability

10.1 Warmup Wetroom System meet the performance requirements of NZBC Clause B2.3.1 (b), 15 years when used in accordance with this Appraisal as a wetroom system in 'wet areas'.

Serviceable Life

10.2 Warmup Wetroom System installations are expected to have a serviceable life of at least 20 years provided the tile or stone finish system is maintained in accordance with this Appraisal.

Maintenance

11.1 Regular maintenance is essential for Warmup Wetroom System installations to continue to meet the NZBC durability performance provision and to maximise their serviceable life.

11.2 In wet areas, annual inspections must be made to ensure that all aspects of the finishing system remain in a waterproof condition. Any damaged areas or areas showing signs of deterioration which would allow water ingress, must be repaired immediately as for new work.

Internal Moisture

12.1 Warmup Wetroom System can be installed and finished as a Wetroom System to provide a system that is impervious and easily cleaned, and will prevent water from penetrating behind linings or to concealed spaces.

Installation Information

Installation Skill Level Requirements

13.1 Installation of Warmup Wetroom System must be completed by trained applicators, approved by Warmup New Zealand Ltd in accordance with instructions given within the Warmup Wetroom System Technical Literature and this Appraisal.

System Installation

Installation of Warmup Insulation Backer Board

14.1 Refer Warmup Wetroom System Technical Literature for full installation details and methods.

Finishing

14.2 Warmup Insulation Backer Board may have a tiled or stone finish applied. Application of the tile or stone finish must be carried out in accordance with the relevant supplier's instructions.

Inspections

14.3 The Technical Literature must be referred to during the inspection of Warmup Wetroom System installations.

Health and Safety

15.1 Safe use and handling procedures for the components that make Warmup Wetroom System is provided in the relevant Warmup New Zealand Ltd Technical Literature.

Basis of Appraisal

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

Tests

16.1 An assessment of testing information provided for Warmup Insulation Backer Board and Ardex Waterproofing Membranes (WPM001, 002 and 750) was made by BRANZ technical experts.

Other Investigations

17.1 Durability opinions on Warmup Insulation Backer Board and Ardex Waterproofing Membranes (WPM001, 002 and 750) by BRANZ technical experts.

17.2 The practicability of installation has been assessed by BRANZ.

17.3 The Technical Literature for Warmup Wetroom System has been examined by BRANZ and found to be satisfactory.

Quality

18.1 The manufacture of Warmup Insulation Backer Board 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.

18.2 The manufacture of the Ardex Waterproofing Membranes (WPM001, 002 and 750) has been examined by BRANZ and details regarding the quality and composition of the materials were obtained by BRANZ and found to be satisfactory.

18.3 The quality of the supplied to market of the Warmup Wetroom System is the responsibility of the trained applicators,

approved by Warmup New Zealand Ltd.

18.4 Quality of installation on site of components and accessories supplied by Warmup New Zealand Ltd is the responsibility of the trained applicators, approved by Warmup New Zealand Ltd.

18.5 Designers are responsible for the building design.

18.6 Building owners are responsible for the maintenance of Warmup Wetroom System in accordance with the instructions of Warmup New Zealand Ltd.

Sources of Information

- AS 3740: 2010 Waterproofing of domestic areas.
- AS/NZS 1170: 2002 Structural design action - General principles.
- AS/NZS 4858: 2004 Wet area membranes.
- AS/NZS 60335.1:2011 Household and similar electrical appliances.
- NZS 3602: 2003 Timber and wood-based products for use in building.
- NZS 3603: 1993 Timber Structures Standard.
- NZS 3604: 2011 Timber-framed buildings.
- New Zealand Building Code Handbook Department of Building and Housing, Third Edition (Amendment 12, 10 October 2011).
- The Building Regulations 1992.



BRANZ

In the opinion of BRANZ, the **Warmup Wetroom 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 **Warmup New Zealand**, 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. **Warmup New Zealand**:
 - 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 **Warmup New Zealand**.
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 **Warmup New Zealand** or any third party.

For BRANZ

P Burghout
Chief Executive

Amendment No. 1, dated March 2014.

This Appraisal has been amended to include new waterproofing membranes.

Date of issue: 31 August 2012