



BRANZ Appraised
Appraisal No. 869 [2014]

MULTICOM® WALL PANEL SYSTEM

Appraisal No. 869 [2014]

Amended 06 March 2015



BRANZ Appraisals

Technical Assessments of
products for building and
construction.



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Product

- 1.1 The Multicom® Wall Panel System is a pre-finished wall lining system that incorporates panels manufactured from compact laminates.

Scope

- 2.1 The Multicom® Wall Panel System has been appraised for use as a non-structural wall lining in new or existing buildings, for the following:
 - wet areas such as ablution blocks, shower rooms, toilet blocks and bathrooms where moisture-resistant materials are required; and,
 - areas where hygiene is of particular importance and easy-to-clean surfaces are required; and,
 - other areas where low maintenance pre-finished wall lining systems are specified.

Building Regulations

New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, the Multicom® Wall Panel System, 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. The Multicom® Wall Panel System meets the requirements for loads arising from self-weight and impact [i.e. B1.3.3 (a) and (j)]. See Paragraphs 9.1 - 9.3.

Clause B2 DURABILITY: Performance B2.3.1 (b), 15 years, and B2.3.1 (c), 5 years. The Multicom® Wall Panel System meets this requirement. See Paragraphs 10.1 and 10.2.

Clause E3 INTERNAL MOISTURE: Performance E3.3.4, E3.3.5 and E3.3.6. The Multicom® Wall Panel System meets or contributes to meeting these requirements. See Paragraph 14.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. The Multicom® Wall Panel System meets this requirement and will not present a health hazard to people.

Clause G3 FOOD PREPARATION AND THE PREVENTION OF CONTAMINATION: Performance G3.3.2 (a) and (b). The Multicom® Wall Panel System will contribute to meeting this requirement. See Paragraph 15.1.

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

Product Information

Description

Multicom® Panels

- 4.1 Multicom® panels are compact laminate panels made from thermo-setting resins. They have a phenolic resin core that is pre-finished on both sides with a melamine resin surface finish.
- 4.2 Multicom® panels come in size of 2450 x 1850 mm, are 6 mm thick and have a density of 1350 kg/m³. They come in a range of colours. The panels are manufactured to the following tolerances:
 - length and width, -0 / +10 mm;
 - thickness, ±0.4 mm.

Accessories

- 4.3 Accessories used with the Multicom® Wall Panel System that are supplied by Resco Limited are:
 - **Jointers** - these are aluminium for joining of the Multicom® panels, and include internal corner, external corner, end capping, two angle returns and H-jointer profiles. They are available as silver anodised or powder coated.
- 4.4 Accessories used with the Multicom® Wall Panel System that are supplied by Resco Limited or others are:
 - **Adhesive** - Holdfast Soudaseal 240FC.
 - **Adhesive activator** - Holdfast Gorilla Surface Activator.
 - **Double sided tape** - Holdfast Gator tape, 12 mm x 2 mm x 60 m.
 - **Timber battens** - H3.1 or H1.2 treated, 40 x 18 mm radiata pine.
 - **Vent strip** - PVC vent strip, 16 mm wide.
 - **Fixings** - 32 mm x 8 g stainless steel countersunk screws.
 - **Building underlay** - Wall underlay complying with the requirements of NZBC Clause E2/AS1, Table 23.

Handling and Storage

- 5.1 Multicom® panels are supplied for shipping strapped on pallets overwrapped with a waterproof covering.
- 5.2 Long-term storage of Multicom® panels must be under cover, away from direct sunlight and high temperatures, on evenly spaced bearers to keep them flat and dry. Panels must be lifted and not dragged off the stack.

Technical Literature

- 6.1 Refer to the Appraisal listing on the BRANZ Website for details of the current Technical Literature for the Multicom® Wall Panel 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 Multicom® panels are impervious to moisture and are resistant to water, steam, typical hygienic cleaning chemicals and materials and abrasion. The panels are primarily intended for use as wall linings in wet areas such as ablution blocks, shower rooms, toilet blocks, bathrooms and kitchens. The panels are also intended for use in high-hygiene areas where the Building Code and health regulations require the use of water and chemical-resistant lining materials which are impervious, easily cleaned and maintained, and are capable of withstanding demanding hygienic cleansing operations. In wet and food processing areas, it is essential that sealant be used with jointers to ensure joints are impervious to moisture.
- 7.2 The Multicom® Wall Panel System may also be used in other areas to provide decorative pre-finished linings with a low maintenance requirement. The linings must not be used in areas listed in Acceptable Solution G3/AS1, Paragraph 2.2, such as electroplating and lead processing areas, or mortuaries.

Installation Information

- 7.3 The Multicom® Wall Panel System can be fixed directly over:
- new wall timber or steel framing;
 - existing wall timber or steel framing after removal of existing linings;
 - new or existing wall linings;
 - new or existing concrete or concrete masonry.
- 7.4 In wet areas timber battens at maximum 600 mm centres are used for support. In non-wet areas, the Multicom® panels may be fixed directly to timber framing at maximum 600 mm centres. A combination of proprietary aluminium jointers and adhesive are used to hold the panels in place. No mechanical fasteners are to be used to fix panels. In all applications, continuous support must be provided at all panel edges, including around 'cut-outs' for plumbing fixtures and other services. Wall fixtures must only be fixed directly to the underlying supports.
- 7.5 Detailing at shower trays must be in accordance with the requirements of Acceptable Solution E3/AS1, or an alternative method meeting the requirements of NZBC E3.
- 7.6 Joints between baths, basins, tubs and the linings must be in accordance with the requirements of Acceptable Solution E3/AS1, or to another method meeting the requirements of NZBC E3. The jointers are reasonably watertight, and any water that does pass through is drained out the cavity behind.

Wet Areas

- 7.7 Wet areas are spaces where sanitary fixture and sanitary appliances are located such as bathrooms, toilets, laundries and kitchens. The two general categories of wet areas are as follows:
1. **Water Splash** - These are areas subject to intermittent splashing of water such as around baths, vanities, tubs and sinks.
 2. **Shower Areas** - These are areas subject to frequent and heavy splash such as enclosed showers, unenclosed shower zones and showers over baths.
- 7.8 The Multicom® Wall Panel System may be used in both wet area categories described above. Installation of the panels on these areas must be in accordance with the Technical Literature.

Framing and supports

- 7.9 When fixed directly over new or existing wall framing, supports must be at 600 mm maximum centres. In all buildings, timber framing for walls and ceilings must have a moisture content of less than 18%. Battens must be 40 x 18 mm machine gauged, H3.1 or H1.2 treated timber, and kiln dried to a moisture content of less than 18%.
- 7.10 Existing wall framing must be sound, free of borer [or similar insect infestations] and decay. Damaged framing must be replaced.
- 7.11 Care must be taken with the layout of all framing and supports, in order to ensure that framing will be at appropriate positions for the fixing of jointers.

Concrete and masonry substrates

- 7.12 Existing concrete and masonry substrates must be sound and capable of holding the fixings for the battens.

Structure

Mass

- 8.1 The mass of Multicom® panels is approximately 8.1 kg/m².

Bracing

- 8.2 The Multicom® Wall Panel System has not been appraised for bracing applications.

Impact

- 8.3 Multicom® panels will withstand typical soft body impacts normally expected in areas where the product will be used. The panels may be damaged by hard body impacts such as hammer blows. The possibility of impacts damaging panels must be considered at the design stage, especially in public, institutional, or educational buildings which are prone to robust behaviour or vandalism. The manufacturer must be consulted for advice on a suitable means of providing protection in these buildings. In hygiene areas, the surface finishes must also be protected from likely impact, and not be subjected to chipping in order to comply with Acceptable Solution G3/AS1, Paragraph 2.1.4.

Durability

- 9.1 With normal maintenance, the Multicom® Wall Panel System will meet the performance requirements of NZBC B2.3.1 [b], 15 years, when used in shower areas, and NZBC B2.3.1 [c], 5 years, in other areas, as given in Table 1 of Acceptable Solution B2/AS1.

Serviceable Life

- 9.2 If properly maintained, the Multicom® Wall Panel System will remain serviceable for at least 15 years. This statement assumes that mouldings and flanges to wall mounted plumbing or sanitary fixtures are detailed to minimise the passage of moisture behind the panels, especially in critical areas such as around baths, shower trays, wash basins and sinks.

Maintenance

- 10.1 Cleaning must be carried out using a soft cloth lubricated with non-abrasive mild detergent or soap solutions. Solvents may be used to clean any stains, but must be washed off immediately. Abrasive cleaners must not be used. See the Technical Literature for more information.
- 10.2 Mouldings, flashings and sealants used around baths, urinals, shower trays, wash basins or sinks must be maintained in a serviceable condition in order to ensure joints are impervious to moisture.

Prevention of Fire Occurring

- 11.1 Separation or protection must be provided to the Multicom® Wall Panel System from heat sources such as fire places, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 - C/AS6 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

Control of Internal Fire and Smoke Spread

- 12.1 Multicom® panels have been tested in accordance with ISO 5660 and have a Group Number of 3. Refer to Table 4.1 of NZBC Acceptable Solutions C/AS2 - C/AS6 to determine where Multicom® panels may be used according to their Group Number. No applied finishes are to be used over Multicom® panels. There is no internal surface finish requirement for Multicom® panels when they are used in buildings with a SH Risk Group classification.

Internal Moisture

- 13.1 Multicom® panels are impervious to moisture, and can be easily cleaned.
- 13.2 The Multicom® Wall Panel System is a modular lining system meeting the requirements of NZBC Acceptable Solution E3/AS1 Paragraph 3.1.2 [h].

Food Preparation and Prevention of Contamination

- 14.1 The Multicom® Wall Panel System, when installed in accordance with the requirements of this Appraisal and the Technical Literature, is suitable for installing next to appliances and facilities as specified by NZBC Acceptable Solution G3/ AS1, Paragraph 1.6 for wall linings in domestic facilities, and Paragraph 2.1.5 for wall linings in commercial and industrial facilities.

Installation Information

General

- 15.1 Installation must be in accordance with the instructions given in this Appraisal and the Technical Literature.

Preparation

- 15.2 Existing linings may be removed or, if sound, retained. If the linings are removed, damaged framing must be replaced and vertical supports provided at maximum 600 mm centres where they do not exist.
- 15.3 All supporting substrates (concrete, masonry, new framing or existing framing and linings) must form a basis for providing a true and level surface for the Multicom® Wall Panel System. The procedures for fixing the Multicom® Wall Panel System are the same for both new and retro-fitting applications.

System Installation

- 15.4 It is recommended that the installer dry fit each sheet before final fixing to ensure good fit.
- 15.5 It is critical to allow the 3 mm expansion clearance between the extrusion and the panel being installed to allow for future movement. See the Technical Literature for details.
- 15.6 The double sided tape, activator and adhesive are applied to the framing or battens and the panel fixed into position. The double sided tape holds the panel until the adhesive has cured.

Basis of Appraisal

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

Tests

- 16.1 A series of tests has been carried out on Multicom® panels by BRANZ to assess durability and material properties of the panels and their performance with the specified adhesive.
- 16.2 BRANZ has carried out a reaction to fire test in accordance with ISO 5660 to determine the Group Number of Multicom® panels.

Other Investigations

- 17.1 An assessment of the durability of Multicom® Wall Panel System has been made by BRANZ technical experts.
- 17.2 The use of Multicom® panels as wall linings over many years both in New Zealand and overseas has been noted.
- 17.3 Site inspections of the Multicom® Wall Panel System have been undertaken by BRANZ.

Quality

- 18.1 The quality of the manufacture of the Multicom® panels by Maica Laminates Sdn. Bhd. has been assessed by a certified body as meeting the requirements of ISO 9001 certification. This has been reviewed by BRANZ and found to be satisfactory.
- 18.2 Quality of materials, components and accessories supplied by Resco Limited is the responsibility of Resco Limited.
- 18.3 The quality of installation on site of components and accessories supplied by Resco Limited is the responsibility of the installer.

Sources of Information

- ISO 5660 Reaction-to-fire tests - Heat release, smoke production and mass loss rate.
- Ministry of Business, Innovation and Employment Record of Amendments for Compliance Documents and Handbooks.
- The Building Regulations 1992.

Amendments

Amendment No. 1, dated 06 March 2015.

This Appraisal has been amended to include H1.2 treated battens and direct fixing to timber framing.



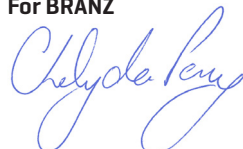
In the opinion of BRANZ, **Multicom® Wall Panel System** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Resco Limited**, 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. **Resco Limited**:
 - 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 **Resco Limited**.
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 **Resco Limited** or any third party.

For BRANZ



Chelydra Percy
Chief Executive
14 July 2014