

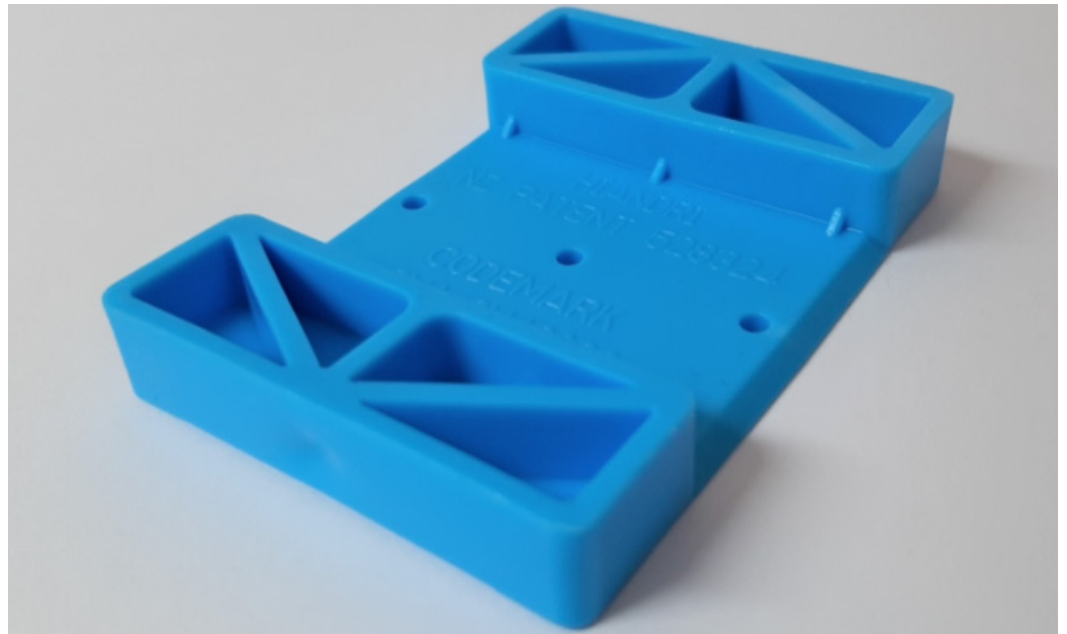


BRANZ Appraised
Appraisal No. 1095 [2020]

HIANDRI BOTTOM PLATE PACKERS

Appraisal No. 1095 [2020]

Amended 01 June 2023



BRANZ Appraisals

Technical Assessments of
products for building and
construction.



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Product

- 1.1 Hiandri Bottom Plate Packers provide a 12 mm gap under the bottom plate of lightweight timber framing to allow for unimpeded drainage of water from floors during construction. The packers are manufactured from polypropylene plastic with a plan dimension of 84 mm x 60 mm.

Scope

- 2.1 Hiandri Bottom Plate Packers are used for separating bottom plates of internal and external walls from concrete floor slabs or from timber flooring in timber-framed buildings, to allow for unimpeded drainage of water from floors during construction.
- 2.2 This Appraisal covers the use of Hiandri Bottom Plate Packers in buildings otherwise designed and constructed in accordance with NZS 3604. The use of Hiandri Bottom Plate Packers with steel-framed buildings or under fire or acoustically rated walls is outside the scope of this Appraisal.

Building Regulations

New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, Hiandri Bottom Plate Packers, 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. Hiandri Bottom Plate Packers meet the requirements for loads arising from self-weight, imposed gravity loads arising from use, earthquake, snow and wind [i.e. B1.3.3 (a), (b), (f), (g) and (h)]. See Paragraphs 8.1-8.5.

Clause B2 DURABILITY: Performance B2.3.1 (a) not less than 50 years and B2.3.2. Hiandri Bottom Plate Packers meet these requirements. See Paragraph 9.1.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.3 Hiandri Bottom Plate Packers meet this requirement. See Paragraphs 10.1 and 10.2.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Hiandri Bottom Plate Packers meet this requirement.

Clause H1 ENERGY EFFICIENCY: Performance H1.3.1 and H1.3.2E. Hiandri Bottom Plate Packers contribute to meeting these requirements. See Paragraph 12.1.



Technical Specifications

- 4.1 Components supplied by Hiandri Solutions Ltd are:
- **Hiandri Bottom Plate Packers** - manufactured from polypropylene plastic, measuring 84 mm x 60 mm x 12 mm and coloured blue.
- 4.2 Components supplied by the building contractor are:
- **Fixings** - Hiandri Bottom Plate Packers may be fixed to the bottom plate at the pre-cut stage, hand-nailed on-site with a clout, or fixed with a brad by a finishing gun.
 - **Air seal** - self-expanding moisture cure polyurethane foam complying with NZBC Acceptable Solution E2/AS1 Paragraph 9.1.6 c) or covered by a valid BRANZ Appraisal and installed in accordance with the Technical Literature.
 - **Proprietary bottom plate fixings** - in accordance with NZS 3604.
 - **Proprietary bottom plate fixings for bracing elements** - in accordance with the Technical Literature.

Handling and Storage

- 5.1 Hiandri Bottom Plate Packers and their associated accessories must be stored out of direct sunlight and handled carefully to prevent physical damage.

Technical Literature

- 6.1 This Appraisal must be read in conjunction with:
- Installation Manual for Hiandri Bottom Plate Packer, V.6, March 2023.
- 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

- 7.1 Hiandri Bottom Plate Packers are used to lift the bottom plates of timber frames off the floor to create a gap between the bottom plate and the concrete slab or timber floor. This allows for accelerated drying of the timber framing by allowing rain water to drain off the floor structure instead of ponding. They may be used to contribute to meeting requirements as described in NZBC Acceptable Solution E2/AS1 Clause 10.0.
- 7.2 Hiandri Bottom Plate Packers may also be used with fire rated and/or acoustically rated walls, however this has not been assessed and is outside the scope of this Appraisal.

Structure

General

- 8.1 Double Hiandri Bottom Plate Packers are required under any supporting stud with a lintel with a span of 1,400 mm or greater.
- 8.2 Triple Hiandri Bottom Plate Packers are required for use under any stud supporting a lintel with a span greater than 4,000 mm and up to 6,000 mm.
- 8.3 Studs under girder trusses supporting a tributary roof area greater than 36 m² and up to 50 m² require two packers. Where a girder truss with a tributary roof area greater than 20 m² and a mid-floor lintel coincide, three packers are required under the lower storey studs supporting the mid-floor lintel.
- 8.4 Hiandri Bottom Plate Packers may be fixed to the bottom plate at the pre-cut stage, hand-nailed on-site with clouts or fixed with brads by a finishing gun. Additional packers may be slipped underneath the bottom plate if required and do not have to be fixed in place.
- 8.5 On 140 mm x 45 mm frames, two Hiandri Bottom Plate Packers are required, side by side under each stud.



Bottom Plate Fixings

- 8.6 Fixings used for bottom plates must meet the requirements of Section 7.5.12 of NZS 3604 when used with Hiandri Bottom Plate Packers.

Bracing

- 8.7 Hiandri Bottom Plate Packers have been evaluated to not reduce the effectiveness of proprietary bracing systems. Refer to the Technical Literature for compatible proprietary bracing systems. The compliance of proprietary bracing systems to the relevant NZBC Clauses is outside of the scope of this Appraisal.

Durability

- 9.1 The durable life of Hiandri Bottom Plate Packers is at least 50 years.

Prevention of Fire Occurring

- 10.1 Separation or protection must be provided to Hiandri Bottom Plate Packers from heat sources such as fire places, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1, C/AS2 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

- 11.1 The total building envelope must be weathertight and comply with the requirements of NZBC Clause E2.
- 11.2 Hiandri Bottom Plate Packers can be used for compliance with NZS 3604 Section 2.3.3 (a) requiring separation between framing timbers and concrete.

Energy Efficiency

- 12.1 The 12 mm gap created by Hiandri Bottom Plate Packers must be sealed with a self-expanding polyurethane foam complying with either NZBC Acceptable Solution E2/AS1 Paragraph 9.1.6 c), or covered by a valid BRANZ Appraisal for use around window, door and other wall penetration openings.
- 12.2 The Hiandri Bottom Plate Packers when installed in accordance with the Technical Literature and the Appraisal will not impact on the thermal performance of the wall.

Maintenance

- 13.1 Hiandri Bottom Plate Packers do not require maintenance.

Installation Information

- 14.1 Installation of Hiandri Bottom Plate Packers must strictly be in accordance with the Technical Literature.
- 14.2 The Hiandri Bottom Plate Packers are installed to the underside of the bottom plate prior to the erection of the structural framing of the wall.
- 14.3 The orientation of the Hiandri Bottom Plate Packers is dependent on the slab overhang and the size of the bottom plate. Refer to the Technical Literature for the suitable orientation of the Hiandri Bottom Plate Packer for the individual design of the building.
- 14.4 An air seal complying with NZBC Acceptable Solution E2/AS1 Paragraph 9.1.6 c) or covered by a valid BRANZ Appraisal must be installed to all exterior walls, including first floor exterior walls, after the framing is erected and before the framing is closed in by external claddings and internal linings.



Basis of Appraisal

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

Tests

15.1 Comprehensive strength tests have been carried out on the Hiandri Bottom Plate Packers by independent laboratories. The results of these tests have been reviewed by BRANZ and found to be satisfactory.

Other Investigations

16.1 A structural assessment by BRANZ has been completed on testing supplied from independent laboratories.

16.2 A durability assessment has been carried out on Hiandri Bottom Plate Packers by BRANZ experts.

16.3 An assessment has been completed by BRANZ of the Hiandri Bottom Plate Packers to not affect the thermal performance of the wall design when installed in accordance with the Technical Literature.

Quality

17.1 The manufacture of Hiandri Bottom Plate Packers has been examined by BRANZ and found to be satisfactory.

17.2 Quality of the supply of the product to the market is the responsibility of Hiandri Solutions Ltd.

17.3 Designers are responsible for the design of the building and incorporating the Hiandri Bottom Plate Packers in accordance with this Appraisal and the Technical Literature.

17.4 Quality of the installation is the responsibility of the installer.

Sources of Information

- 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.

Amendments

Amendment No. 1, dated 01 June 2023

This Appraisal has been amended to include Energy Efficiency information and to add a new installation method for the Hiandri Bottom Plate Packers.



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01 May 2020

HIANDRI BOTTOM PLATE
PACKERS



In the opinion of BRANZ, **Hiandri Bottom Plate Packers** 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 **Hiandri Solutions 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. **Hiandri Solutions 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 **Hiandri Solutions 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 **Hiandri Solutions Ltd** or any third party.

For BRANZ

Chelydra Percy

Chief Executive

Date of Issue:

01 May 2020