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Certificate no: CMNZ10019

Version: Revision 2

Original issue date: 15 May 2020 Version date: 12 October 2023

1. Certificate Holder Details



Hiandri Solutions Ltd PO Box 3026

Hawkes Bay Mailing Centre

Napier, New Zealand **Tel:** 0274 425238

Email: alan@hiandri.com

Web: hiandri.com

2. Product Certification Body

BRANZ Limited

1222 Moonshine Rd, RD1, Porirua 5381 Private Bag 50 908, Porirua 5240, New Zealand

Tel: 04 237 1170

Email: assuranceservices@branz.co.nz

Web: <u>branz.nz</u>

Complaints: The complaints process for this

certificate can be found here:

https://www.branz.co.nz/codemark-info/complaints-and-appeals/



Product Certificate

HIANDRI BOTTOM PLATE PACKERS

3. Description of Building Method or Product

Hiandri Bottom Plate Packers provide a 12 mm gap under the bottom plate of light weight 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 and are labelled on the underside with the product name.

4. Intended use of Building Method or Product

- Hiandri Bottom Plate Packers are used for separating the 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.
- This Product Certificate 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 certification.

5. New Zealand Building Code Provisions

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)].

Clause B2 DURABILITY: Performance B2.3.1 (a) not less than 50 years and B2.3.2 (a).

Clause E2 EXTERNAL MOISTURE: Performance E2.3.3.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1.

3A CONTRIBUTES TO THE FOLLOWING PROVISIONS OF THE NZBC:
Clause H1 ENERGY EFFICIENCY: Performance H1.3.1 and H1.3.2E.

6. Conditions and Limitations of Use

- Hiandri Bottom Plate Packers must be used in accordance with Hiandri Solutions Ltd's Technical Literature.
- 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 certification.



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- 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.
- 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.

Reference Documents:

This Product Certificate must be used in accordance with:

Technical Literature: Installation Manual for Hiandri Bottom Plate Packer, V.6, March 2023.

7. Health and Safety Information

Care must be taken in factory when fixing the Hiandri packers to the bottom plates.

8. Basis for Certification

The following tests have been carried out on Hiandri Bottom Plate Packers:

- Comprehensive strength tests have been carried out on Hiandri Bottom Plate Packers by independent laboratories. The results of these tests have been reviewed by BRANZ and found to be satisfactory.
- BRANZ Expert judgement (Structural Engineer) Confirmation of compliance to the NZBC Clause B1 Structure Performance Requirements.
- BRANZ Expert judgement (Materials Scientist) Confirmation of compliance to the NZBC Clause B2 Durability Performance Requirements.
- BRANZ Expert judgement (Building Physicist) Confirmation of contribution to compliance to the NZBC Clause H1 Energy Efficiency Performance Requirements.
- The practicability of installation of Hiandri Bottom Plate Packers has been assessed by BRANZ and found to be satisfactory.
- The referenced Technical Literature has been examined by BRANZ and found to be satisfactory.
- The quality of supply to the market is the responsibility of Hiandri Solutions Ltd.
- Building contractors are responsible for the incorporation of Hiandri Bottom Plate Packers in accordance with the instructions of Hiandri Solutions Ltd.

9. Supporting Documentation for Certification

BRANZ Appraisal No. 1095 Hiandri Bottom Plate Packers.



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- BRANZ Structural Memorandum TP12394, issue date 12th March 2020. The Hiandri Bottom Plate Packers have been assessed to meet the relevant NZBC structural requirements.
- BRANZ Durability Opinion TP11943-001, issue date 6th January 2020. The Hiandri Bottom Plate Packers have been assessed to meet the relevant NZBC durability requirements.
- BRANZ Weathertightness Opinion TP12394-01, issue date 23rd March 2020. The Hiandri Bottom Plate Packers have been assessed to
 meet the relevant NZBC weathertightness requirements.
- 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.

10. Supporting Information About Description (Optional)

Type and intended use of product

- Hiandri Bottom Plate Packers are used for separating the 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.
- This Product Certificate 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 certification.

Description of Product

• Hiandri Bottom Plate Packers provide a 12 mm gap under the bottom plate of light weight 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 and are labelled on the underside with the product name.

Product specification

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.

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 or the Technical Literature.



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Proprietary bottom plate fixings for bracing elements - in accordance with the Technical Literature.

11. Supporting Information About Intended Use (Optional)

Installation Requirements

- Installation of Hiandri Bottom Plate Packers must be in accordance with the Hiandri Solutions Ltd's Technical Literature.
- 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.
- 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 Packers for the individual design of the building.
- 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.

Building Code

B1 Structure:

- Double Hiandri Bottom Plate Packers are required under any supporting stud with a lintel with a span of 1,400 mm or greater.
- 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.
- Studs under girder trusses supporting a tributary roof area greater than 36 m² and up to 50 m² require a double packer. Where a girder truss with a tributary roof area greater than 20 m² and a mid-floor lintel coincide, a triple packer is required under the lower storey studs supporting the mid-floor lintel.
- 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.
- On 140 mm x 45 mm frames, two Hiandri Bottom Plate Packers are required, side by side under each stud.

Bottom Plate Fixings

• Fixings used for bottom plates must meet the requirements of Section 7.5.12 of NZS 3604:2011 when used with Hiandri Bottom Plate Packers.

Bracina

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 certification.

B2 Durability



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

C3 Prevention of Fire Occurring

 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.

E2 External Moisture

Hiandri Bottom Plate Packers can be used for compliance with NZS 3604:2011 Section 2.3.3 (a) requiring separation between framing
timbers and concrete. Air seals must be installed to all exterior frames when using Hiandri Bottom Plate Packers. The air seal must be a
self-expanding polyurethane foam complying with NZBC Acceptable Solution E2/AS1 Paragraph 9.1.6 (c) and installed with the
instructions of Hiandri Solutions Ltd's Technical Literature.

H1 Energy Efficiency

- 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.
- 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.

12. Supporting Information About Conditions and Limitations of Use (Optional)

All conditions and limitations provided as stated in this Product Certificate.

Signatures

Galde

Claire Falck
Acting Chief Executive Officer
BRANZ Limited



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If the certificate is not listed on this register or it appears as (SUSPENDED), it is not a valid CodeMark certificate and does not have to be accepted by a building consent authority as establishing compliance with the New Zealand Building Code.

