



BRANZ Appraised

Appraisal No.614 [2008]

BRANZ Appraisals

Technical Assessments of products
for building and construction

**BRANZ
APPRAISAL
No. 614 (2008)**

Amended 31 January 2012

**ALUBAND™ /
ALUMINIUM WINDOW
SEALING SYSTEM**

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Product

1.1 The Aluband™ / Aluminium Window Sealing System comprises Aluband™ / Aluminium Window Sealing Tape and the Aluband™ Corner Moulded Piece™. The system is used around framed joinery openings as a secondary weather resistant barrier.

1.2 The system is installed into and around the framed joinery opening over the building wrap and exposed frame to cover both the face and edge of the opening framing. Aluband™ / Aluminium Window Sealing Tape is also used at joinery heads to seal flashing upstands to the building underlay.



Scope

2.1 The Aluband™ / Aluminium Window Sealing System has been appraised as a flexible flashing system for use around window and door joinery openings for buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
- with a risk score of 0-20, calculated in accordance with NZBC Acceptable Solution E2/AS1, Table 2; and,
- with wall cladding systems complying with NZBC Acceptable Solution E2/AS1 or a valid BRANZ Appraisal that specifies a flexible flashing system; and,
- with flexible wall underlays compatible with the flashing tape; and,
- situated in NZS 3604 Wind Zones up to, and including, 'Extra High'.

2.2 The Aluband™ / Aluminium Window Sealing System has also been appraised as a flexible flashing system for use around window and door joinery openings for steel framed buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, with regards to building height and floor plan area; and,
- constructed with steel framing complying with the NZBC; and,
- with a risk score of 0-20, calculated in accordance with NZBC Acceptable Solution E2/AS1, Table 2; and,
- with wall cladding systems covered by a valid BRANZ Appraisal that specifies a flexible flashing system; and,
- with flexible wall underlays compatible with the flashing tape and steel frame; and,
- situated in NZS 3604 Wind Zones up to, and including, 'Extra High'.

Building Regulations

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, the Aluband™ / Aluminium Window Sealing 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 B2 DURABILITY: Performance B2.3.1(b), 15 years and B2.3.2. The Aluband™ / Aluminium Window Sealing System meets these requirements. See Paragraphs 8.1 and 8.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. The Aluband™ / Aluminium Window Sealing System contributes to meeting this requirement. See Paragraphs 7.1 - 7.4 and 11.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. The Aluband™ / Aluminium Window Sealing 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. See Paragraph 7.1.

Technical Specification

4.1 System components and accessories supplied by Thermakraft Industries (N.Z.) Ltd are:

- Aluband™ / Aluminium Window Sealing Tape is a polymeric faced, high quality, bituminous modified, self adhesive tape with a polyethylene release backing paper. The tape is supplied in rolls 200, 150, 75 and 50 mm wide x 25 m long and 150 mm wide x 10 m long. The product is printed with the Aluband™ / Aluminium Window Sealing System logo repeated along the length of the roll. The rolls are wrapped in clear polythene film.
- The Aluband™ / Aluminium Corner Moulded Piece™ is made from inert polyethylene and is coloured orange. It is used in conjunction with the Aluband™ / Aluminium Window Sealing Tape and building underlays as part of the Aluband™ / Aluminium Window Sealing System.
- The Aluband™ / Aluminium Tool is used to ensure proper adhesion of the Aluband™ / Aluminium Window Sealing Tape and to achieve a tight fit into corners.

4.2 Accessories used with the system which are supplied by the installer are:

- Aluband™ / Aluminium Corner Moulded Piece™ fixings - staples, clouts or other temporary fixings to attach the corner mould to the framing prior to the installation of the Aluband™ / Aluminium Window Sealing Tape.

Handling and Storage

5.1 Handling and storage of all materials supplied by Thermakraft Industries (N.Z.) Ltd, whether on or off site, is under the control of the installer. The Aluband™ / Aluminium Window Sealing System components must be protected from damage and weather. Rolls must be stored under cover, in clean, dry conditions away from direct exposure to sunlight.

Technical Literature

6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for the Aluband™ / Aluminium Window Sealing 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 The Aluband™/Aluminium Window Sealing System meets the requirements of AC148: 2001 which is an alternative solution to the version of AC148 referenced by NZBC Acceptable Solution E2/AS1 Paragraph 9.1.5(b). The installation method for the Aluband™/Aluminium Window Sealing System is an alternative solution to the installation method shown within NZBC Acceptable Solution E2/AS1, Figures 72(a) and 72(b).

7.2 The use of flexible flashing systems around window and door joinery openings is critical to assist the overall weathertightness performance of window and door joinery installations.

7.3 The Aluband™ / Aluminium Window Sealing System is designed to prevent air leakage and water penetration around window and door openings at framing junctions (e.g. at the sill trimmer and opening stud junction), and to keep any water that gets past the cladding, or through the joinery, from direct contact with the framing timber.

7.4 The Aluband™ / Aluminium Window Sealing System is not designed to overcome poor detailing and workmanship of the window or door joinery installation. The system must not be considered in isolation, but be considered as part of the wall cladding system. The Aluband™ / Aluminium Window Sealing System is designed to be used in conjunction with air seals and joinery flashing systems, not as a substitute.

7.5 When the Aluband™ / Aluminium Window Sealing System is used in conjunction with LOSP (light organic solvent preservative) treated timber, the solvent from the timber treatment must be allowed to evaporate (generally at least one week) prior to the installation of the system.

Durability

8.1 Assessment of durability to meet the NZBC is based on difficulty of access and replacement, and the ability to detect failure of the Aluband™ / Aluminium Window Sealing System both during normal use and maintenance of the building.

Serviceable Life

8.2 Provided it is not exposed to the weather or ultra-violet light for a total of more than 90 days, and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather resistant, the Aluband™ / Aluminium Window Sealing System is expected to have a serviceable life equal to that of the cladding.

Maintenance

9.1 No maintenance is required for the Aluband™ / Aluminium Window Sealing System. Regular checks, at least annually, must be made of the junctions between the joinery and wall cladding to ensure that they are maintained weathertight and that the primary means of weather resistance for the junction e.g. flashing, sealant, etc continues to perform its function, to ensure that water will not penetrate the cladding.

Outbreak of Fire

10.1 The Aluband™ / Aluminium Window Sealing System must be separated from chimneys and flues in accordance with the requirements of NZBC Acceptable Solution C/AS1 Part 9 for the protection of combustible materials.

External Moisture

11.1 Where a cladding manufacturer specifies the use of generic flashing tapes around window and door joinery openings at framing junctions as part of their system, or they specify the use of flexible flashing tapes that comply with NZBC E2/AS1, Paragraph 9.1.5(b), the Aluband™ / Aluminium Window Sealing System may be used.

Installation Information

Installation Skill Level Requirements

12.1 Installation of the Aluband™ / Aluminium Window Sealing System must be completed by tradespersons with an understanding of flexible flashing systems, in accordance with instructions given within the Aluband™ / Aluminium Window Sealing System Technical Literature and this Appraisal.

General

13.1 The selected building underlay must be installed in accordance with the manufacturer's instructions, and must completely cover the joinery opening. The underlay is then cut on a 45° angle away from each corner of the opening so the flaps can be folded into the opening and secured to the interior face of the timber framing.

13.2 Fit an Aluband™ / Aluminium Moulded Corner Piece™ into each of the bottom corners to create a seal at the corner junction. The corner piece must be fixed to the framing with staples or clouts.

13.3 Before the Aluband™ / Aluminium Window Sealing Tape is applied, the substrate surfaces must be clean, dry and free from any surface contaminants such as dust and grease that may cause loss of adhesion.

13.4 A length of Aluband™ / Aluminium Window Sealing Tape must be cut to the length of the sill plus 400 mm. The tape is installed flush with the interior face of the opening and is applied along the entire length of the sill and 200 mm up each jamb. The overhanging tape is cut at the corner of the opening to allow the tape to be folded onto the face of the building underlay. The Aluband™ / Aluminium Tool must be used to ensure that adequate adhesion of the tape is achieved and that the tape is installed tight into the sill/jamb junction.

13.5 A 400 mm length of Aluband™ / Aluminium Window Sealing Tape must be installed 200 mm down the jamb and 200 mm along the lintel at each of the top corners of the window or door joinery opening. A 50 mm wide x 100 mm long sealing tape 'butterfly' must be installed at 45° across the corner of the head/jamb junction overlapping the corner by 3 mm to create a seal at the corner junction.

13.6 Aluband™ / Aluminium Window Sealing Tape must not be stretched. To avoid wastage, the tape can be lapped 100 mm minimum onto itself without reducing the performance of the Aluband™ / Aluminium Window Sealing System.

13.7 If the Aluband™ / Aluminium Window Sealing System is exposed to the weather or UV light for more than 90 days, then it must be replaced with new material.

Installation Temperature

13.8 The Aluband™ / Aluminium Window Sealing System must not be installed at temperatures of less than 10°C.

Inspections

13.9 The Technical Literature must be referred to during the inspection of Aluband™ / Aluminium Window Sealing System installations.

Basis of Appraisal

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

Tests

14.1 Testing of Aluband™ / Aluminium Window Sealing Tape has been completed by BRANZ to the requirements of ICC Evaluation Service Acceptance Criteria for Flashing Materials AC148. The adhesion of Aluband™ / Aluminium Window Sealing Tape to black bituminous Kraft building paper complying with the requirements of NZBC Acceptable Solution E2/AS1, Table 23 and selected other synthetic wall underlays has been tested and found to be satisfactory.

Other Investigations

15.1 An assessment was made of the durability of the Aluband™ / Aluminium Window Sealing System by BRANZ technical experts.

15.2 Site inspections were carried out by BRANZ to examine the practicability of installation.

15.3 The Technical Literature has been reviewed by BRANZ and found to be satisfactory.

Quality

16.1 The manufacture of the Aluband™ / Aluminium Window Sealing System has not been examined by BRANZ, but details of the quality and composition of the materials used were obtained and found to be satisfactory.

16.2 The quality of supply to the market is the responsibility of Thermakraft Industries (N.Z.) Ltd.

16.3 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems and building wraps in accordance with the instructions of the designer.

16.4 The quality of installation, handling and storage on site is the responsibility of the installer in accordance with the instructions of Thermakraft Industries (N.Z.) Ltd.

Sources of Information

- ICC Evaluation Service, Inc, AC148 Acceptable Criteria for Flexible Flashing Materials, July 2001.
- NZS 3604: 2011 Timber-framed buildings.
- Compliance Document for New Zealand Building Code External Moisture Clause E2, Department of Building and Housing, Third Edition July 2005 (Amendment 5, 1 August 2011).
- 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, **Aluband™ / Aluminium Window Sealing 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 **Thermakraft Industries (N.Z.) 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. **Thermakraft Industries (N.Z.) 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.
3. 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.
4. 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 **Thermakraft Industries (N.Z.) Ltd**.
5. 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.
6. BRANZ provides no certification, guarantee, indemnity or warranty, to **Thermakraft Industries (N.Z.) Ltd** or any third party.

For BRANZ

C Preston
Chief Executive

Amendment No. 1, dated 31 January 2012.

This Appraisal has been amended to update clause changes as required by the introduction of NZS 3604: 2011 and NZBC Acceptable Solution E2/AS1 Third Edition, Amendment 5.

Date of issue: 7 July 2008