



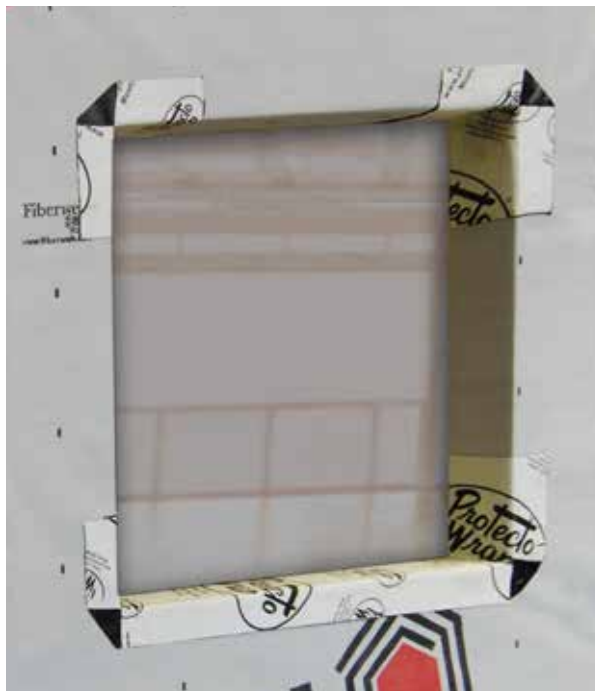
BRANZ Appraised

Appraisal No. 591 [2014]

ONE PIECE SILL TAPE FLEXIBLE FLASHING

Appraisal No. 591 [2014]

This Appraisal replaces BRANZ
Appraisal No. 591 [2008]



BRANZ Appraisals

Technical Assessments of
products for building and
construction.



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Product

- 1.1 One Piece Sill Tape is a flexible flashing tape system for use around framed joinery openings as a secondary weather resistant barrier.
- 1.2 The system is installed into and around the framed joinery opening over a flexible wall underlay and exposed frame to cover both the face and edge of the opening framing. One Piece Sill Tape is also used at joinery heads to seal flashing upstands to a flexible wall underlay.

Scope

- 2.1 One Piece Sill Tape has been appraised as a flexible flashing system for use around window and door joinery openings for buildings within the following scope:
 - constructed with timber framing in accordance with the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; or,
 - constructed with steel framing subject to specific engineering design with building height and floor plan area scope limitations in accordance with NZBC Acceptable Solution E2/AS1; 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; and,
 - with flexible wall underlays compatible with the flashing tape and complying with the NZBC; and,
 - situated in NZS 3604 Wind Zones up to, and including, Extra High [refer to Paragraph 7.3].

Building Regulations

New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, One Piece Sill Tape, 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. One Piece Sill Tape meets these requirements. See Paragraphs 8.1 and 8.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. One Piece Sill Tape contributes to meeting this requirement. See Paragraphs 7.1 - 7.4 and 11.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. One Piece Sill Tape 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 One Piece Sill Tape is a polyethylene faced, SBS modified rubberised asphalt, self-adhesive membrane. The tape is covered on the underside by a paper release film and the upper face by white polyethylene sheeting in two parts, printed with Protecto Wrap. The tape is 1.0 mm thick and is supplied in rolls 150 mm wide and 20 m long.

Handling and Storage

- 5.1 One Piece Sill Tape must be protected from damage and weather. The tape must be stored in cool, 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 One Piece Sill Tape. 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 One Piece Sill Tape has been assessed against 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 One Piece Sill Tape is an alternative solution to the installation method shown within NZBC Acceptable Solution E2/AS1, Figures 72A and 72B.
- 7.2 One Piece Sill Tape must not be exposed to the weather or ultra-violet light for a total of more than 90 days or as limited by the wall underlay before being covered by the cladding system.
- 7.3 One Piece Sill Tape is suitable for use over compatible flexible wall underlays in NZS 3604 Wind Zones up to and including Extra High. In the Extra High Wind Zone, the flexible underlay must be installed over a rigid underlay complying with NZBC Acceptable Solution E2/AS1, Table 23.
- 7.4 One Piece Sill Tape 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.
- 7.5 One Piece Sill Tape 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. One Piece Sill Tape is designed to be used in conjunction with air seals and joinery flashing systems, not as a substitute.
- 7.6 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.
- 7.7 When One Piece Sill Tape 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 One Piece Sill Tape 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 One Piece Sill Tape is expected to have a serviceable life equal to that of the cladding. The maximum exposure period of the tape may however be limited by the exposure limitations of the wall underlay.

Maintenance

- 9.1 No maintenance is required for the One Piece Sill Tape. 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.

Prevention of Fire Occurring

- 10.1 Separation or protection must be provided to One Piece Sill Tape 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.

External Moisture

- 11.1 Where a cladding manufacturer specifies as part of their system the use of generic flashing tapes, or flexible flashing tapes that comply with NZBC E2/AS1, Paragraph 9.1.5 (b), One Piece Sill Tape may be used.

Installation Information

Installation Skill Level Requirements

- 12.1 Installation of the One Piece Sill Tape must be completed by tradespersons with an understanding of flexible flashing tape, in accordance with instructions given within the One Piece Sill Tape Technical Literature and this Appraisal.

General

- 13.1 The selected wall 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 The substrate surfaces must be clean, dry and free from any surface contaminants such as dust and grease that may cause loss of adhesion. *[Note: In extreme conditions Protecto Tak adhesive primer may be used to enhance adhesion, but generally the primer is not required.]*
- 13.3 For the top corners of the opening a 300 mm length of One Piece Sill Tape is installed, 150 mm down the jamb and 150 mm across the lintel. The release film is removed from the back face of the tape and the exposed face is folded into the frame, prior to pressing the tape onto the front face of the wall underlay, the outer branded face is folded back exposing the front face of the tape. The tape is then pressed onto to the outer face of the wall underlay. The branded front face flap is then folded forward and cut at the corner and pressed onto the exposure front face of the tape.
- 13.4 To dress the bottom of the opening, the One Piece Sill Tape is cut to the opening plus sufficient length to return up either side of the opening 150 mm. Then the process above is repeated.
- 13.5 If the flexible wall underlay or the One Piece Sill Tape is exposed to the weather or UV light for more than its exposure limitation, then it must be replaced with new material.

Inspections

- 13.6 The Technical Literature must be referred to during the inspection of One Piece Sill Tape installations.

Basis of Appraisal

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

Tests

- 14.1 Testing of One Piece Sill Tape has been completed to the requirements of ICC Evaluation Service Acceptance Criteria for Flashing Materials AC148:2001. The results have been reviewed by BRANZ and found to be satisfactory. The adhesion of One Piece Sill 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 One Piece Sill Tape 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 One Piece Sill Tape has not been examined by BRANZ, but details of the quality and composition of the materials used were obtained and found to be satisfactory. BRANZ undertakes an ongoing review of product quality on an inwards goods basis.
16.2 The quality of supply to the market is the responsibility of Marshall Innovations Limited.
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.

Sources of Information

- Acceptable Solutions and Verification Methods for New Zealand Building Code External Moisture Clause E2, Department of Building and Housing, Third Edition July 2005 (including Amendment 6, 14 February 2014).
- ICC Evaluation Service, Inc, AC148 Acceptable Criteria for Flexible Flashing Materials, July 2001.
- Ministry of Business, Innovation and Employment Record of Amendments for Compliance Documents and Handbooks.
- NZS 3604: 2011 Timber-framed buildings.
- The Building Regulations 1992.



In the opinion of BRANZ, **One Piece Sill Tape Flexible Flashing** 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 **Marshall Innovations 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. **Marshall Innovations 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 **Marshall Innovations 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 **Marshall Innovations Limited** or any third party.

For BRANZ



Chelydra Percy

Chief Executive

Date of Issue:

25 July 2014