



BRANZ Appraised

Appraisal No.591 [2008]

BRANZ Appraisals

Technical Assessments of products
for building and construction

**BRANZ
APPRAISAL
No. 591 (2008)**

Amended 5 June 2009

**ONE PIECE SILL TAPE
FLEXIBLE FLASHING**

**Marshall Waterproofing
NZ/AUS Ltd**
P O Box 9411
Greerton
Tauranga

Tel: 07 543 0948
Fax: 07 541 1029



BRANZ Limited
Private Bag 50 908
Porirua City
New Zealand
Tel: +64 4 237 1170
Fax: +64 4 237 1171
www.branz.co.nz



Product

1.1 One Piece Sill Tape is a wall opening flexible flashing tape system. The tape is installed over the building wrap to cover both the face and edge of the opening.



Scope

2.1 One Piece Sill Tape has been appraised for use as a flexible flashing tape system for use around window, door and other 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 tape system; and,
- with wall wraps compatible with the One Piece Sill Tape; and,
- situated in NZS 3604 Building Wind Zones up to, and including, 'Very High'.

2.2 The One Piece Sill Tape 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 wall wraps compatible with the flashing tape and steel frame; and,
- situated in NZS 3604 Building Wind Zones up to, and including, 'Very High'.

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 10.1.

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 **Acceptable Solution** in terms of New Zealand Building Code Compliance. One Piece Sill Tape meets the requirements of NZBC Acceptable Solution E2/AS1, Paragraph 9.1.5(b).

Technical Specification

4.1 The One Piece Sill Tape is installed with the flashing moulded into the framed joinery opening covering both the face and edge.

System component supplied by Marshall Waterproofing NZ/AUS Ltd is:

- One Piece Sill Tape is a polyethylene faced, modified SBS rubberised asphalt, self adhesive membrane. The tape is covered on the underside by a paper backing 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 Handling and storage of all materials supplied by Marshall Waterproofing NZ/AUS Ltd, whether on or off site, is under the control of the installer. 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.

5.2 The tape has a recommended shelf life of 1 year.

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

7.2 The One Piece Sill Tape is designed to keep any water that gets past the cladding, or through the joinery at framing junctions (e.g. at the window head, sill trimmer and opening stud junction) from direct contact with the framing timber.

7.3 Refer to the Technical Literature for details of wall wraps that are compatible with the One Piece Sill Tape.

7.4 The One Piece Sill Tape is not designed to overcome poor detailing and workmanship of 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.

7.5 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.

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.

Outbreak of Fire

10.1 The One Piece Sill Tape 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 flexible flashing tapes around window, door and other 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), 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 building wrap must be installed in accordance with the manufacturer's instructions, and must completely cover the joinery opening. The wrap 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 A 300 mm length of One Piece Sill Tape is installed around the top corners of the opening, 150 mm down the jamb and 150 mm across the lintel, keeping the tape flush with the interior face of the opening and ensuring the exposed timber framing is covered. The loose plastic is folded into the opening. The release film is removed from the upper face of the tape and the exposed tape is folded onto the face of the building wrap. The loose plastic is folded back out of the opening, the plastic is cut at the corner and folded to stick to the exposed membrane.

13.4 To dress the bottom of the opening, the One Piece Sill Tape is cut to the of the opening plus sufficient length to return up either side of the opening 150 mm. Then the process above is repeated.

13.5 If One Piece Sill Tape is exposed to the weather or UV light for more than 90 days, 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.

Quality

16.1 The manufacture of the 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.

16.2 The quality of supply to the market is the responsibility of Marshall Waterproofing NZ/AUS 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.

Sources of Information

- AS/NZS 1170 Structural design actions.
- AS/NZS 4284: 1995 Testing of building facades.
- NZS 3603: 1993 Timber Structure Standard.
- NZS 3604: 1999 Timber framed buildings.
- Compliance Document for New Zealand Building Code External Moisture Clause E2, Department of Building and Housing, Third Edition July 2005.
- New Zealand Building Code Handbook, Department of Building and Housing, Third Edition, May 2007
- The Building Regulations 1992, up to, and including June 2007 Amendment.

Basis of Appraisal

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

Tests

14.1 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 wraps has been tested by BRANZ and found to be satisfactory.

14.2 Tests have been carried out on the tape in accordance with ICC Evaluation Service Criteria for Flashing Materials, AC148. The results have been reviewed by BRANZ experts 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.



BRANZ

In the opinion of BRANZ, **The One Piece Sill 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 **Marshall Waterproofing NZ/AUS 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. **Marshall Waterproofing NZ/AUS 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 **Marshall Waterproofing NZ/AUS 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 **Marshall Waterproofing NZ/AUS Ltd** or any third party.

For BRANZ

C Preston
Chief Executive

Date of issue: 14 May 2008

Appraisal Amendment No. 1, dated 17 July 2008

The Appraisal has been amended to include steel framed construction in the Appraisal scope.

Appraisal Amendment No. 2, dated 27 February 2009

The Appraisal has been amended to increase the exposure to weather or ultra-violet light restriction from 30 days to 90 days. Refer to Paragraph 8.2.

Amendment No. 3, dated 5 June 2009.

This Appraisal has been amended to update the reference from NZS 4203 to AS/NZS 1170.