



BRANZ Appraised

Appraisal No. 712 [2023]

TRADE SILL FLASHING TAPE

Appraisal No. 712 [2023]

This Appraisal replaces BRANZ
Appraisal No. 712 [2018]



BRANZ Appraisals

Technical Assessments of
products for building and
construction.



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Product

- 1.1 Trade Sill is a wall opening flexible flashing tape. It is installed into and around the framed joinery opening over the building wrap and exposed timber frame to cover both the face and edge of the opening framing. Trade Sill is also used at joinery heads to seal flashing upstands to the building wrap.

Scope

- 2.1 Trade Sill has been appraised as a flexible flashing tape 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 for timber-framed buildings; or,
 - the scope limitations of NASH Building Envelope Solutions, Paragraph 1.1 for steel-framed buildings; and,
 - with a risk score of 0-20, calculated in accordance with NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions, Table 2; and,
 - with wall cladding systems complying with NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions, or a valid BRANZ Appraisal that specifies a flexible flashing tape system; and,
 - with flexible wall underlays compatible with the flashing tape and complying with the NZBC; and,
 - situated in NZS 3604 and NASH Standard Part 2 Wind Zones up to, and including, Extra High.

Building Regulations

New Zealand Building Code (NZBC)

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

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. Trade Sill contributes to meeting this requirement. See Paragraphs 7.1-7.8 and 11.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Trade Sill meets this requirement.

Technical Specification

- 4.1 Trade Sill tape is a polyethylene backed, modified SBS rubberised asphalt adhesive membrane tape. The adhesive surface of the tape is covered with a silicone release paper. The tape is 0.5 mm thick and is supplied in rolls of 75, 150, 200 mm wide and 25 m long. It is also supplied in a roll 150 mm wide and 10 m long.
- 4.2 Protecto Tak is a solvent-based, spray-on adhesive primer, coloured blue. It is supplied in 369 g cans.

Handling and Storage

- 5.1 Handling and storage of all materials supplied by Marshall Innovations Limited, whether on-site or off-site, is under the control of the installer. Trade Sill 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 Trade Sill. 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 Trade Sill meets the requirements of AC148:2001 which is an alternative solution to the version of AC148 referenced by NZBC Acceptable Solution E2/AS1 and NASH Building Envelope Solutions, Paragraph 9.1.5. Two layers of Trade Sill must be installed on the horizontal sill surface [a single layer is used in all other locations]. The installation method for Trade Sill is an alternative solution to the installation method shown within the NZBC Acceptable Solution E2/AS1, Figures 72A and 72B and NASH Building Envelope Solutions Figures 67A and 67B.
- 7.2 Trade Sill must not be exposed to the weather or ultraviolet (UV) light for longer than the exposure period stated for relevant wall underlay. A maximum of 90 days exposure applies to the Trade Sill Flashing Tape.
- 7.3 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.
- 7.4 Trade Sill is suitable for use over flexible wall underlays compatible with the flashing tape 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 wall underlay complying with NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions, Table 23.
- 7.5 Trade Sill 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 water that gets past the cladding, or through the joinery, from direct contact with the framing.
- 7.6 Trade Sill 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. Trade Sill is designed to be used in conjunction with air seals and joinery flashing systems, not as a substitute.
- 7.7 When Trade Sill 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.
- 7.8 Trade Sill is not compatible with a range of sealants used to provide an air seal between the flashing tape and joinery reveal. An aluminium separation tape is recommended *[note: these tapes have not been assessed by BRANZ and are outside the scope of this appraisal contact Marshall Innovations Ltd for further information.]*

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 Trade Sill both during normal use and maintenance of the building.

Serviceable Life

- 8.2 Provided it is not exposed to the weather or ultraviolet (UV) 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, Trade Sill is expected to have a serviceable life equal to that of the cladding.

Maintenance

- 9.1 No maintenance is required for Trade Sill. 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 Trade Sill from heat sources such as fireplaces, heating appliances and chimneys. Part 7 of NZBC Verification Method C/VM1 and Acceptable Solution C/AS1, and Acceptable Solution C/AS2 provide methods for separation and protection of combustible materials from heat sources.

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), Trade Sill may be used.

Installation Information

Installation Skill Level Requirement

- 12.1 Installation of Trade Sill must be completed by tradespersons with an understanding of flexible flashing tapes, in accordance with instructions given within the Trade Sill 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 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.
- 13.3 Protecto Tak adhesive primer must be applied to all surfaces that are to receive Trade Sill. The primed surface should be tacky when touched and have a light blue colour. The curing time will vary depending on temperature. If the surface loses its tack, Protecto Tak spray must be reapplied.
- 13.4 Trade Sill is cut to suit the opening of the sill and with enough length to run 150 mm up each side of the jamb in one piece. For the top of the opening, 300 mm lengths are positioned evenly into the corner. Trade Sill is installed flush with the interior face of the opening.
- 13.5 At the corner and starting at the front edge of the tape overhang, cut the tape back towards the framing stopping 3 mm from the corner. The overhanging tape is folded onto the face of the building underlay.
- 13.6 Cut 50 mm by 150 or 200 mm strips of Trade Sill and remove the backing paper. Adhere diagonally across each corner, overlapping the corner by 3 mm to create a seal at the corner junction.
- 13.7 If Trade Sill 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 Trade Sill 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 Trade Sill installations.

Basis of Appraisal

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

Tests

- 14.1 Cyclic and static water pressure leakage tests in accordance with AS/NZS 4284 were carried out by BRANZ on cladding systems incorporating Trade Sill. The test results were reviewed by BRANZ experts and found to be satisfactory.
- 14.2 The adhesion of Trade Sill to black bituminous Kraft building paper complying with the requirements of NZBC Acceptable Solution E2/AS1, Table 23 and selected other synthetic wall underlays have been tested by BRANZ and found to be satisfactory.
- 14.3 Tests have been carried out on Trade Sill 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 Trade Sill 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 Trade Sill 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 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 in accordance with the instructions of Marshall Innovations Limited.

Sources of Information

- ICC Evaluation Service, Inc, AC148 Acceptable Criteria for Flashing Materials, July 2001.
- NASH Building Envelope Solutions: 2019 Light steel-framed buildings.
- NASH Standard Part Two: 2019 Light steel-framed buildings.
- 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.



In the opinion of BRANZ, **Trade Sill Flashing Tape** 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:
29 March 2023