



BRANZ Appraised
Appraisal No. 853 [2019]

FASTWRAP ULTRA-BOND SILL TAPE

Appraisal No. 853 [2019]

This Appraisal replaces BRANZ Appraisal No. 853 [2014]



BRANZ Appraisals

Technical Assessments of products for building and construction.



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Product

- 1.1 Fastwrap ULTRA-BOND 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 the wall underlay and exposed frame to cover both the face and edge of the opening framing. Fastwrap ULTRA-BOND Sill Tape is also used at joinery heads to seal flashing upstands to the wall underlay.

Scope

- 2.1 Fastwrap ULTRA-BOND 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 that specifies a flexible flashing system; 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 7.4].

Building Regulations

New Zealand Building Code (NZBC)

- 3.1 **In the opinion of BRANZ, Fastwrap ULTRA-BOND 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. Fastwrap ULTRA-BOND Sill Tape meets these requirements. See Paragraphs 8.1 and 8.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. Fastwrap ULTRA-BOND 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. Fastwrap ULTRA-BOND Sill Tape meets this requirement and will not present a health hazard to people.



Technical Specification

- 4.1 System components and accessories supplied by Paul Industries are:
- **Fastwrap ULTRA-BOND Sill Tape** is a white spun bonded polyethylene film faced, butyl rubber self-adhesive tape with a release backing paper. The tape is supplied in rolls 200, 150, 75 and 50 mm wide x 25 m long. The rolls are wrapped in clear polythene film.
- 4.2 Accessories used with the system which are supplied by the building contractor are:
- **Flexible wall underlay** – building paper complying with NZBC Acceptable Solution E2/AS1, Table 23, or breather-type membranes covered by a valid BRANZ Appraisal for use as wall underlays.

Handling and Storage

- 5.1 Handling and storage of all materials supplied by Paul Industries, whether on or off site, is under the control of the installer. Fastwrap ULTRA-BOND Sill Tape 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 Fastwrap ULTRA-BOND 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 Fastwrap ULTRA-BOND 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 Fastwrap ULTRA-BOND Sill Tape is an alternative solution to the installation method shown within NZBC Acceptable Solution E2/AS1, Figures 72A and 72B.
- 7.2 Fastwrap ULTRA-BOND Sill Tape must not be exposed to the weather or ultra-violet light for a total of more than 30 days before being covered by the cladding system.
- 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 Fastwrap ULTRA-BOND Sill Tape 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 underlay complying with NZBC Acceptable Solution E2/AS1, Table 23.
- 7.5 Fastwrap ULTRA-BOND 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 timber.
- 7.6 Fastwrap ULTRA-BOND 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. Fastwrap ULTRA-BOND Sill Tape is designed to be used in conjunction with air seals and joinery flashing systems, not as a substitute.
- 7.7 When Fastwrap ULTRA-BOND 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 Fastwrap ULTRA-BOND 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 30 days, and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather resistant, Fastwrap ULTRA-BOND Sill Tape is expected to have a serviceable life equal to that of the cladding.

Maintenance

- 9.1 No maintenance is required for Fastwrap ULTRA-BOND 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 the Fastwrap ULTRA-BOND Sill Tape from heat sources such as fireplaces, heating appliances and chimneys. Part 7 of NZBC Acceptable Solution C/AS1 and C/AS2, 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 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], Fastwrap ULTRA-BOND Sill Tape may be used.

Installation Information

Installation Skill Level Requirements

- 12.1 All design and building work must be carried out in accordance with the Fastwrap ULTRA-BOND Sill Tape Technical Literature and this Appraisal by competent and experienced tradespersons conversant with sill tape installations. Where the work involves Restricted Building Work [RBW] this must be completed by, or under the supervision of, a Licensed Building Practitioner [LBP] with the relevant License class.

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 Before the Fastwrap ULTRA-BOND Sill 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.
- 13.3 A 50 mm wide x 120 mm long sealing tape 'butterfly' must be installed at 45° across the corner of the sill/jamb junctions overlapping the corner by 3 mm to create a seal at the corner junction.
- 13.4 A length of Fastwrap ULTRA-BOND Sill 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. A spatula or similar 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 Fastwrap ULTRA-BOND Sill 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 120 mm long sealing tape 'butterfly' must be installed at 45° across the corner of the head/jamb junctions overlapping the corner by 3 mm.
- 13.6 Fastwrap ULTRA-BOND Sill Tape must not be stretched. To avoid wastage, the tape can be lapped 100 mm minimum onto itself without reducing the performance of the Fastwrap ULTRA-BOND Sill Tape System.
- 13.7 If the Fastwrap ULTRA-BOND Sill Tape is exposed to the weather or UV light for more than 30 days, then it must be replaced.

Installation Temperature

- 13.8 Fastwrap ULTRA-BOND Sill Tape must not be installed at temperatures less than 5°C. *[Note: Paul Industries approve the installation of Fastwrap ULTRA-BOND Sill Tape within the temperature range of -17°C to +45°C. This has not been addressed by the BRANZ and is therefore outside the scope of the Appraisal.]*

Inspections

- 13.9 The Technical Literature must be referred to during the inspection of Fastwrap ULTRA-BOND Sill Tape installations.

Basis of Appraisal

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

Tests

- 14.1 Testing of Fastwrap ULTRA-BOND Sill Tape has been completed by BRANZ to the requirements of ICC Evaluation Service Acceptance Criteria for Flashing Materials AC148:2001. The adhesion of Fastwrap ULTRA-BOND 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 Fastwrap ULTRA-BOND 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 Fastwrap ULTRA-BOND 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 Paul Industries.
- 16.3 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of framing systems and wall underlays 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 Paul Industries.



Sources of Information

- ICC Evaluation Service, Inc, AC148 Acceptable Criteria for Flexible Flashing Materials, July 2001.
- 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.



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18 November 2019

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In the opinion of BRANZ, **Fastwrap ULTRA-BOND Sill 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 **Paul Industries**, 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. **Paul Industries**:
 - 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 **Paul Industries**.
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 **Paul Industries** or any third party.

For BRANZ

Chelydra Percy

Chief Executive

Date of Issue:

18 November 2019