



BRANZ Appraised

Appraisal No.838 [2013]

BRANZ Appraisals

Technical Assessments of products
for building and construction

**BRANZ
APPRAISAL
No. 838 (2013)**

**TESCON EXTORA
SEALING TAPE**

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Product

1.1 TESCON EXTORA Sealing Tape is a flashing tape for use around the head and jambs (not sills) of framed joinery openings as a secondary weather resistant barrier.

1.2 TESCON EXTORA Sealing Tape can also be used as a jointing tape for rigid wall underlays (fibre cement sheet and H3.2 treated plywood) before they are over-fixed with a flexible wall underlay.

1.3 TESCON EXTORA Sealing Tape can also be used to seal flashing upstands to the wall underlay and as a lap sealing tape for flexible wall and roof underlays.



Scope

2.1 TESCON EXTORA Sealing Tape has been appraised as a flashing tape for use around the **head** and **jambs** of 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 a compatible flexible wall underlay fixed directly to the framing or over-fixed over a rigid wall underlay (fibre cement sheet and H3.2 treated plywood in accordance with NZBC Acceptable Solution E2/AS1 Paragraph 9.1.7.2); and,
- situated in NZS 3604 Wind Zones up to, and including, Extra High.

2.2 TESCON EXTORA Sealing Tape has also been appraised as a joint sealing tape for rigid wall underlays (fibre cement sheet and H3.2 treated plywood in accordance with NZBC Acceptable Solution E2/AS1) which are over-fixed with a flexible wall underlay in accordance with NZBC Acceptable Solution E2/AS1 Paragraph 9.1.7.2 on 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; and,
- situated in NZS 3604 Wind Zones up to, and including, Extra High.

(Note: Pro Clima (NZ) Ltd offer TESCON EXTORA Sealing Tape as a jointing and flashing tape for use with rigid air barrier systems that do not require a flexible wall underlay, but this aspect is outside the scope of this Appraisal. Contact the rigid air barrier system proprietor for system details including recommended jointing and flashing tapes.)

2.3 TESCON EXTORA Sealing Tape has also been appraised as a lap sealing tape for flexible wall and roof underlays, and as a tape for sealing metal and uPVC head flashings to flexible wall underlays in accordance with NZBC Acceptable Solution E2/AS1 Paragraph 9.1.10.3.

Building Regulations

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, TESCON EXTORA Sealing 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. TESCON EXTORA Sealing Tape meets these requirements. See Paragraphs 8.1 and 8.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. TESCON EXTORA Sealing Tape contributes to meeting this requirement. See Paragraphs 7.1 - 7.5 and 11.1 - 11.4.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. TESCON EXTORA Sealing 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 TESCON EXTORA Sealing Tape is a pressure-sensitive, self-adhering tape with a PP fleece protection layer and release backing paper. The tape is coloured black with the product and manufacturer's name printed on the face. The tape is supplied in rolls 60 mm, 100 mm, 150 mm and 200 mm wide by 30 m long. The rolls are wrapped in clear plastic. Pro Clima (NZ) Ltd also provide a PRESSFIX application tool to aid installation of the tapes.

Handling and Storage

5.1 Handling and storage of all materials supplied by Pro Clima (NZ) Ltd, whether on or off site, is under the control of the installer. TESCON EXTORA Sealing 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 the TESCON EXTORA Sealing 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 TESCON EXTORA Sealing Tape has been assessed against BRANZ criteria which is an alternative solution to the test method referenced by NZBC Acceptable Solution E2/AS1 Paragraph 9.1.5(b). The installation method for TESCON EXTORA Sealing Tape to the lintel/jamb junction of the wall penetration openings follows the installation guidelines provided within NZBC Acceptable Solution E2/AS1.

7.2 TESCON EXTORA Sealing Tape must not be used on horizontal surfaces, such as sills of joinery openings, where fasteners will penetrate the tape. A self-sealing flashing tape which meets the requirements of AC148:2001 (including nail sealability) and is covered by a valid BRANZ Appraisal, such as Pro Clima (NZ) Ltd TESCON EXTOSEAL (refer BRANZ Appraisal No. 815 (2013) TESCON EXTOSEAL Sill Tape), must be used in these areas.

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 TESCON EXTORA Sealing Tape is designed to prevent air leakage and water penetration around the heads of window and door joinery openings at the lintel/jamb junction, and to keep any water that gets past the cladding or through the joinery, from direct contact with the framing.

7.5 TESCON EXTORA Sealing 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 flexible flashing and wall cladding system. TESCON EXTORA Sealing Tape is designed to be used in conjunction with air seals and joinery flashing systems, not as a substitute.

7.6 When the TESCON EXTORA Sealing 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.

7.7 TESCON EXTORA Sealing Tape is designed to prevent air leakage and water penetration at sheet joints to rigid wall underlays (fibre cement and H3.2 treated plywood in accordance with NZBC Acceptable Solution E2/AS1 Paragraph 9.1.7.2). The rigid wall underlay must be over-fixed with a flexible wall underlay in accordance with NZBC Acceptable Solution E2/AS1 Paragraph 9.1.7.2 c).

7.8 Although not a NZBC requirement, laps of flexible roof and wall underlays may be taped with TESCON EXTORA Sealing Tape to reduce air leakage and water penetration. However, the underlay laps must still meet the requirements of NZBC Acceptable Solution E2/AS1 Paragraphs 8.1.5 and 9.1.7.1.

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 TESCON EXTORA Sealing 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, TESCON EXTORA Sealing 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 requirements of the substrate manufacturer.

Maintenance

9.1 No maintenance is required for TESCON EXTORA Sealing 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 TESCON EXTORA Sealing 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 the use of generic flashing tape 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), TESCON EXTORA Sealing Tape may be used at the lintel/jamb junction, but not on sills or other horizontal surfaces (Refer Paragraph 7.1).

11.2 Where a designer specifies the use of generic flashing tape to seal the sheet joints of rigid wall underlays, then TESCON EXTORA Sealing Tape may be used. A flexible wall underlay must be fixed over the rigid wall underlay in accordance with NZBC Acceptable Solution E2/AS1 Paragraph 9.1.7.2 c). (*Note: Pro Clima (NZ) Ltd offer TESCON EXTORA Sealing Tape as a jointing and flashing tape for use with rigid air barrier systems that do not require a flexible wall underlay, but this aspect is outside the scope of this Appraisal. Contact the rigid air barrier system proprietor for system details including recommended jointing and flashing tapes.*)

11.3 Where a cladding manufacturer specifies the use of flexible flashing tapes to seal the upstands of head flashings to the wall underlay in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.10.3, TESCON EXTORA Sealing Tape may be used.

11.4 Where specified by the designer, TESCON EXTORA Sealing Tape may be used to seal laps of flexible roof and wall underlays. The underlay laps must meet the minimum lap cover requirements of NZBC Acceptable Solution E2/AS1, Paragraphs 8.1.5 and 9.1.7.1.

Installation Information

Installation Skill Level Requirements

12.1 Installation of the TESCON EXTORA Sealing Tape must be completed by tradespersons with an understanding of flashing tape systems, in accordance with the instructions given within the TESCON EXTORA Sealing Tape Technical Literature and this Appraisal.

General

13.1 Before the TESCON EXTORA 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.

13.2 TESCON EXTORA 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 tape.

13.3 If the TESCON EXTORA Sealing Tape is exposed to the weather or UV light for more than 90 days, then it must be replaced with new material.

13.4 The Pro Clima (NZ) Ltd PRESSFIX tool is used to ensure adequate adhesion of the tape to the wall underlay and that the tape is installed tight into the lintel/jamb junction.

Wall Penetration Lintel/Jamb Junction

13.5 The selected flexible wall underlay (e.g. Pro Clima (NZ) Ltd SOLITEX EXTASANA) 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.

13.6 A length of self-sealing flashing tape (e.g. Pro Clima (NZ) Ltd TESCON EXTASEAL) must be fitted to the sill in accordance with the tape supplier's instructions.

13.7 A 200 mm length of TESCON EXTORA Sealing Tape must be installed minimum 100 mm down the jamb and minimum 100 mm along the lintel at each of the top corners of the window or door joinery opening. A 150 mm wide x 100 mm long 'butterfly' of TESCON EXTORA Sealing Tape must be installed at 45° at the corner of lintel/jamb junction and folded into the opening to create a seal at the corner junction.

Rigid Wall Underlay Joints

13.8 Rigid wall underlays must be cleaned of dust and other surface contaminants prior to the application of the TESCON EXTORA Sealing Tape to ensure adequate adhesion is achieved.

13.9 All vertical and horizontal sheet joints, internal and external corners of the rigid wall underlay may be covered with TESCON EXTORA Sealing Tape in accordance with the designer's requirements.

13.10 The rigid wall underlay must be over-fixed with a flexible wall underlay in accordance with NZBC Acceptable Solution E2/AS1 Paragraph 9.1.7.2 c).

Roof and Wall Underlay Lap Sealing

13.11 Where TESCON EXTORA Sealing Tape is used to seal the laps of flexible roof and wall underlays, the laps must still meet the minimum cover requirements of NZBC Acceptable Solution E2/AS1, Paragraphs 8.1.5 and 9.1.7.1, i.e. 150 mm minimum for roof underlay laps, 75 mm minimum for horizontal wall underlay laps and 150 mm minimum for vertical wall underlay laps.

Head Flashing Upstands

13.12 Where TESCON EXTORA Sealing Tape is used to seal the upstands of head flashings to the building underlay, installation must be in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.10.3.

Installation Temperature

13.13 The TESCON EXTORA Sealing Tape must not be installed where the ambient air and substrate temperatures are less than -5°C. Care is required to ensure adhesion is still able to be achieved when the temperature is less than 0°C. (*Note: Pro Clima (NZ) Ltd claims an installation temperature from -20°C. This claim has not been assessed by BRANZ and is therefore outside the scope of this Appraisal.*)

Inspections

13.14 The Technical Literature must be referred to during the inspection of TESCON EXTORA Sealing Tape installations.

Basis of Appraisal

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

Tests

14.1 The TESCON EXTORA Sealing Tape has been tested to BRANZ criteria to assess the tensile strength of control and UV aged material, water resistance of control and UV accelerated aged material and pliability. BRANZ has determined that the tape is fit for purpose for the intended use. The adhesion of TESCON EXTORA Sealing Tape to black bituminous Kraft paper complying with the requirements of NZBC Acceptable Solution E2/AS1, Table 23, other selected synthetic flexible wall underlays and rigid wall underlays has also been tested and found to be satisfactory.

Other Investigations

15.1 An assessment was made of the durability of the TESCON EXTORA Sealing 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 the TESCON EXTORA Sealing Tape has been examined on behalf of BRANZ, including methods adopted for quality control. 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 Pro Clima (NZ) Ltd.

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 Pro Clima (NZ) 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).
- Ministry of Business, Innovation and Employment Record of Amendments for Compliance Documents and Handbooks.
- The Building Regulations 1992.



BRANZ

In the opinion of BRANZ, **TESCON EXTORA Sealing 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 **Pro Clima (NZ) 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. **Pro Clima (NZ) 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.
 - 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 **Pro Clima (NZ) Ltd**.
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 **Pro Clima (NZ) Ltd** or any third party.

For BRANZ

C Percy
Chief Executive

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