



BRANZ Appraised

Appraisal No.450 [2011]

BRANZ Appraisals

Technical Assessments of products
for building and construction

**BRANZ
APPRAISAL
No. 450 (2011)**

This Appraisal replaces BRANZ
Appraisal No. 450 (2005) dated
10 June 2010.

**PROTECTO TAPE
FLASHING TAPE**

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Product

1.1 Protecto Tape flashing tape is a self-adhering waterproofing membrane used for flashing parapet and balustrade caps. The tape provides a base to which most plaster or texture coat finishing systems are able to be applied, creating a monolithic finish that conceals the tape from view.



Scope

2.1 Protecto Tape flashing tape has been appraised for use as a waterproofing membrane tape within the following scope:

- on buildings within the scope of NZBC Acceptable Solution E2/AS1 Paragraph 1.1 with regards to building height and floor plan area; and,
- on parapets and balustrades, which have a minimum slope of 10° (1 in 4); and,
- with proprietary EIFS and texture coated fibre cement cladding systems; and,
- over fibre cement, polystyrene or timber substrates; and,
- as a sealing 'bandage' over fixing blocks in external walls.

2.2 Proprietary EIFS and texture coated fibre cement cladding systems have not been assessed in this Appraisal and are outside the scope of this Appraisal.

Building Regulations

New Zealand Building Code (NZBC)

3.1 Protecto Tape flashing tape as a product is not within the scope of the NZBC, however it is used in conjunction with building elements and proprietary cladding systems that are required to meet the NZBC. Therefore, in the opinion of BRANZ, Protecto Tape, if used, designed, 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. The Protecto Tape flashing tape meets this requirement. See Paragraphs 8.1 and 8.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. The Protecto Tape flashing tape contributes to meeting this requirement. See Paragraphs 7.1 - 7.4 and 11.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. The Protecto Tape flashing 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 NZBC compliance.

Technical Specification

4.1 System components and accessories supplied by Marshall Waterproofing NZ/AUS Ltd are:

- Protecto Tape flashing tape is a black, self-adhering, conformable, modified SBS (styrene-butadiene-styrene) rubberised asphalt tape. The adhesive surface of the tape is covered with a silicone release paper. A white polyester bonding layer is laminated to the topside of the tape. The tape is 1.0 mm thick and supplied in roll sizes 75, 150, 300, 400 and 600 mm wide by 30 m long. Special sizes are available on request.
- Protecto Wrap JS160H is black mastic sealant/adhesive. It is supplied in 310 mls cartridges.
- Protecto Tak is a blue solvent-based spray-on adhesive primer. It is supplied in 369 g cans.

Handling and Storage

5.1 Protecto Tape flashing tape, primer and mastic adhesive must be protected from damage and weather. They must be stored under cover in clean, dry conditions away from direct exposure to sunlight, heat or flame. The materials should not be removed from packaging until they are ready to use.

5.2 Handling and storage of the materials, whether on-site or off-site, is the responsibility of the installer.

Technical Literature

6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for Protecto Tape. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained within the scope of this Appraisal and the Technical Literature must be followed.

Design Information

General

7.1 Protecto Tape flashing tape when used with an EIFS or fibre cement cladding system provides an Alternative Solution to the parapet and balustrade capping specified in Section 6 of NZBC Acceptable Solution E2/AS1. Protecto Tape is also an Alternative Solution to the waterproofing membranes specified in Paragraph 9.7.8.1 and 9.9.10.2 of NZBC Acceptable Solution E2/AS1.

7.2 The use of waterproofing membrane tapes over parapets and balustrades is critical to assist in achieving overall weathertightness performance of EIFS and texture coated fibre cement cladding systems. Where a cladding manufacturer specifies the use of a generic waterproof tape over parapets and balustrades as part of their system, Protecto Tape may be used.

7.3 Protecto Tape flashing tape is primarily designed to prevent moisture penetration through the top of parapets and balustrades and at wall junctions of parapets and balustrades. Protecto Tape may also be used as a sealing 'bandage' over cladding and fixing block junctions in EIFS and fibre cement cladding systems.

7.4 The performance of the product is reliant on it being supported by a suitable substrate and protected by a proprietary plaster or texture coat finishing system.

7.5 Where a proprietary cladding system is used, all flashing details must be carried out in accordance with the specifications of the system. Flashing details which are outside the scope of the cladding system are the responsibility of the designer.

7.6 Protecto Tape flashing tape is suitable for use with most plaster or texture coat finishing systems. Confirmation of the suitability of using Protecto Tape flashing tape with a given plaster or finishing system must be obtained from the cladding manufacturer, proprietary plaster or coating finishing manufacturer, or from Marshall Waterproofing NZ/AUS Ltd.

7.7 The use of Protecto Tape flashing tape is not designed to overcome poor detailing and workmanship of wall cladding installation. Protecto Tape flashing tape must not be considered in isolation, but as part of the wall cladding system.

Framing

7.7 When Protecto Tape flashing 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 tape.

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 Protecto Tape flashing tape during both 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, Protecto Tape flashing tape is expected to have a serviceable life equal to that of the cladding.

Maintenance

9.1 No maintenance is required for the Protecto Tape flashing tape, however regular checks must be made of the plaster or texture coat finish on parapets, balustrades and around fixing blocks to ensure it is sound and will not allow moisture penetration. The finishing system must be recoated as required by the manufacturer of the system which typically is every 5-10 years.

Outbreak of Fire

10.1 Protecto Tape flashing tape must be protected or separated from fireplaces, heating appliances, chimneys and flues in accordance with the requirements of Acceptable Solution C/AS1 Part 9 for the protection of combustible materials.

External Moisture

11.1 Protecto Tape flashing tape provides suitable flashing and sealing of parapet and balustrade caps when used in conjunction with proprietary cladding systems and other building elements, to meet code compliance with Clause E2.3.2.

Installation Information

Installation Skill Level Requirements

12.1 Installation of materials supplied by Marshall Waterproofing NZ/AUS Ltd must be completed in accordance with the Technical Literature from Marshall Waterproofing NZ/AUS Ltd.

General

13.1 Installation must be in accordance with this Appraisal and the Technical Literature.

13.2 The substrate must be clean, dry and free from any foreign matter that may adversely affect the adhesion of the membrane. All fibre cement sheet joints must be jointed and sealed before Protecto Tape flashing tape is applied.

13.3 Protecto Tape flashing tape must not be installed in temperatures lower than 7°C.

13.4 Before the Protecto Tak adhesive primer is applied, the substrate surfaces must be clean, dry and free from any surface contaminant such as dust, grease and the like which may cause loss of adhesion. The Protecto Tak adhesive primer must be sprayed along the entire length of the substrate that is to be covered by Protecto Tape flashing tape.

13.5 The correct roll width must be selected to ensure that when centred over the top of the parapet or balustrade, Protecto Tape flashing tape covers the top surface and extends a minimum of 50 mm down the face of the polystyrene or fibre cement board.

13.6 For maximum adhesion to the substrate, the backing paper should be removed in small sections and the tape progressively rolled or pressed firmly to the substrate to avoid air being trapped underneath.

13.7 Protecto Tape flashing tape must be lapped 100 mm at all end laps. Two beads of JS160H mastic adhesive must be applied to the end of the installed piece of Protecto Tape flashing tape to seal the overlap. The mastic must be trowelled smooth before the second length of Protecto Tape is installed over the mastic adhesive.

13.8 Protecto Tape flashing tape must not be exposed to the weather or UV light for more than 90 days. It must be replaced with new material should exposure exceed 90 days.

Health and Safety

14.1 Safe use and handling procedures for the components that make up the Protecto Tape flashing tape is provided in the Technical Literature.

14.2 Extra care must be taken when using Protecto Tak primer in areas where there is insufficient ventilation, and suitable respiratory equipment must be worn at all times. Additional information on the products are available in the Material Safety Data Sheets available from Marshall Waterproofing NZ/AUS Ltd.

Other Investigations

16.1 An assessment was made of the durability of Protecto Tape flashing tape by BRANZ technical experts.

16.2 The practicability of installation was assessed by BRANZ and found to be satisfactory.

16.3 The Technical Literature has been reviewed by BRANZ and found to be satisfactory.

Quality

17.1 The manufacture of Protecto Tape flashing 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.

17.2 The quality of manufacture of Protecto Tape flashing tape is the responsibility of the Protecto Wrap Company Inc.

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

17.4 The quality of installation on site is the responsibility of the installer.

17.5 Designers are responsible for the building design, and building contractors are responsible for the quality of the installation of the framing system and the substrates.

17.6 Building owners are responsible for the maintenance of the EIFS or texture coated fibre cement cladding system.

Sources of Information

- ASTM C794: 2001 Standard test method for adhesion-in-peel of elastomeric joint sealants.
- New Zealand Building Code Handbook Department of Building and Housing, Third Edition May 2007.
- The Building Regulations 1992, up to, and including August 2008 Amendment.

Basis of Appraisal

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

Tests

15.1 Tests have been carried out which covered fungus and micro-organism growth, breaking strength, dimensional stability and waterproofness. The test results were reviewed by BRANZ experts and found to be satisfactory.

15.2 Adhesion tests to various substrates have been carried out by ADCO in accordance with ASTM C974. The results have been reviewed by BRANZ experts and found to be satisfactory.



BRANZ

In the opinion of BRANZ, **Protecto Tape 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 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.
 - 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 Waterproofing NZ/AUS 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 **Marshall Waterproofing NZ/AUS Ltd** or any third party.

For BRANZ

P Burghout
Chief Executive

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