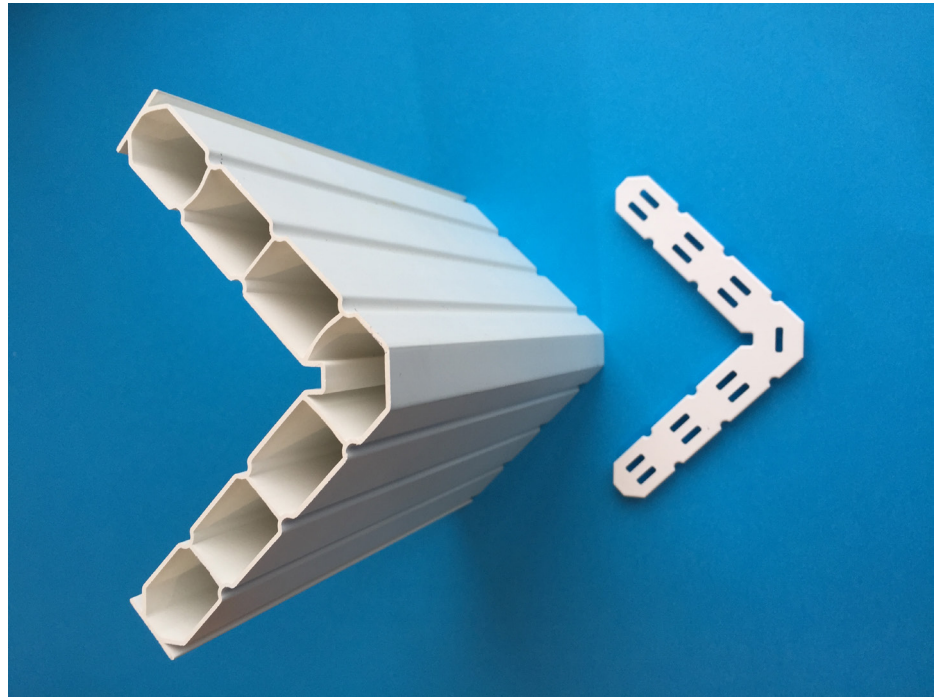




BRANZ Appraised
Appraisal No. 920 [2016]

EZYCORNER CAVITY FLASHING

Appraisal No. 920 [2016]



BRANZ Appraisals

Technical Assessments of products for building and construction.



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Product

- 1.1 The EzyCorner Cavity Flashing is a combination uPVC batten and flashing, for use in lieu of timber cavity battens and corner flashings at both internal and external corners of walls.

Scope

- 2.1 The EzyCorner Cavity Flashing has been appraised for use as a non-structural cavity batten and corner flashing on timber and steel framed buildings within the following scope:
- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regard to building height and floor plan area; and,
 - with a risk score of 0-20, calculated in accordance NZBC Acceptable Solution E2/AS1, Table 2; and,
 - with cavity based wall cladding systems complying with NZBC Acceptable Solution E2/AS1 or having a valid BRANZ Appraisal that specifies a nominal 20 mm drained and vented cavity; and,
 - situated in NZS 3604 Wind Zones up to, and including Extra High.

[Note: The EzyCorner Cavity Flashing can also be used on buildings subject to specific weathertightness design. Weathertightness design and detailing of these installations is the responsibility of the designer and is outside the scope of the Appraisal].

Building Regulations

New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, the EzyCorner Cavity Flashing 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 B1 STRUCTURE: Performance B1.3.1, B1.3.2 and B1.3.4. The EzyCorner Cavity Flashing meets the requirements for loads arising from wind and impact [i.e. B1.3.3 (h) and (j)]. See Paragraphs 8.1 – 8.3.

Clause B2 DURABILITY: Performance B2.3.1 (b), 15 years and B2.3.2. The EzyCorner Cavity Flashing meets these requirements. See Paragraphs 9.1 and 9.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. The EzyCorner Cavity Flashing when used as a cavity batten and corner flashing on external and internal corners will contribute to meeting this requirement. See Paragraphs 12.1 – 12.4.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. The EzyCorner Cavity Flashing 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.

Technical Specification

- 4.1 The EzyCorner Cavity Flashing is a hollow white uPVC extrusion. It is a right angle profile and each leg is 100 mm long on the longest face. The profile is 19 mm thick and is supplied in 2.7 m lengths. An EzyCorner Cap manufactured from white ASA plastic is also available.
- 4.2 Accessories used with the EzyCorner Cavity Flashing, which are supplied by the building contractor are:
 - **Fixings for timber frame** – 60 x 2.8 mm hot-dip galvanised flat-head nails.
 - **Fixings for steel frame** – 30 mm x 8 g galvanised wafer-head screws.
 - **Adhesive**– compatible adhesive for bonding EzyCorner Cavity Flashing to the substrate instead of mechanical fixing and for bonding the EzyCorner Cap to the base of the EzyCorner Cavity Flashing.
 - **PVC Solvent Cement** – generic high solids PVC adhesive/sealant for bonding the EzyCorner Cap to the base of the EzyCorner Cavity Flashing.

Handling and Storage

- 5.1 Handling and storage of all materials supplied by EzyBuild Products Ltd, whether on site or off site, is under the control of the installer. The EzyCorner Cavity Flashing and EzyCorner Cap must be protected from physical damage and must be stored in clean, dry conditions.
- 5.2 Handling and storage of all materials supplied by the building contractor, whether on or off site, is under the control of the building contractor. Materials must be handled and stored in accordance with the relevant manufacturer's instructions.

Technical Literature

- 6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for the EzyCorner Cavity Flashing. 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 EzyCorner Cavity Flashing can be used on internal and external corners of walls as an alternative to timber and polystyrene battens specified within NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.4. The EzyCorner Cavity Flashing also provides the corner flashing as specified in NZBC Acceptable Solution E2/AS1, Table 7.
- 7.2 The EzyCorner Cap provides vermin proofing to the base of the EzyCorner Cavity Flashing in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.3.
- 7.3 The EzyCorner Cavity Flashing is compatible with wood-based, cement-based, fibre cement, polystyrene-based, metal and uPVC cladding products and flexible and rigid wall underlays.

Structural

- 8.1 The EzyCorner Cavity Flashing must be treated as a non-structural packer only. Fixing lengths for the cladding material must be as required for non-structural timber cavity battens. If the EzyCorner Cavity Flashing is to be used with a cladding system that was originally direct fixed, the fixing length must be increased by a minimum of 20 mm to ensure frame penetration depths are maintained.

Impact Resistance

- 8.2 The EzyCorner Cavity Flashing has adequate resistance to impact loads likely to be encountered in normal residential and commercial use. EzyCorner Cavity Flashing also has adequate resistance to compressive loads likely to be encountered during fixing of the cladding.

Wind Zone

- 8.3 The EzyCorner Cavity Flashing is able to transfer the positive wind loads on the wall cladding to the structural wall frame. The EzyCorner Cavity Flashing is suitable for use on buildings situated in all Wind Zones of NZS 3604 up to, and including, Extra High.

Durability

Serviceable Life

- 9.1 The EzyCorner Cavity Flashing is expected to have a serviceable life of at least 15 years. The EzyCorner Cavity Flashing must not be exposed to weather or ultra-violet [UV] light for more than 30 days prior to the wall cladding being installed.
- 9.2 The EzyCorner Cavity Flashing will have a durability equivalent to that of the cladding to meet code compliance with NZBC Clause B2.3.2 provided the cladding is maintained in accordance with this Appraisal and the EzyCorner Cavity Flashing is continually protected from UV light.

Maintenance

- 10.1 Regular maintenance is essential for exposed sections of the EzyCorner Cap to continue to meet the NZBC durability performance provision and to maximise their serviceable life.
- 10.2 Regular cleaning [at least annually] of the exposed sections of the EzyCorner Cap is recommended to remove grime, dirt and organic growth and to maximise the life and appearance of the surface finish. Build-up of residue, mould or dirt can be removed by brushing with a soft brush, warm water and detergent. The drain/vent holes must be kept clear. Abrasive cleaners, thinners, solvents or petrol must not be used to clean the EzyCorner Cap.
- 10.3 Regular checks, at least annually, must be made of the wall cladding, flashings and penetrations to ensure they are maintained weathertight and continue to perform their function, to ensure that water will not penetrate the cladding.

Prevention of Fire Occurring

- 11.1 Separation or protection must be provided to the EzyCorner Cavity Flashing 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

- 12.1 In cavity construction, the EzyCorner Cavity Flashing, when installed in accordance with this Appraisal and the Technical Literature, allows the cavity to be drained and open to the exterior at the bottom of the cavity in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.2 [d]. The EzyCorner Cap also provides vermin proofing at the cavity base in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.2 [e].
- 12.2 Where a cladding manufacturer specifies a drained cavity that complies with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.8.2 as part of their system, the EzyCorner Cavity Flashing may be used at the external and internal corners of walls. Where a proprietary cladding system manufacturer specifies cavity battens as part of their system, permission must be obtained from the cladding manufacturer before the cavity battens are substituted with the EzyCorner Cavity Flashing.
- 12.3 The detailing of the cladding system including external and internal corner junctions, is the responsibility of the building designer for compliance with the NZBC. These details have not been assessed as part of this Appraisal.
- 12.4 The use of the EzyCorner Cavity Flashing to form a drainage path for moisture that penetrates the cladding at external and internal corners of walls, does not reduce the requirements for junctions, penetrations etc of the cladding system to remain weather resistant.

Installation Information

Installation Skill Level Requirements

- 13.1 Installation must always be carried out in accordance with the Technical Literature and this Appraisal, by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant Licence Class.

System Installation

Wall Underlay Installation

- 14.1 The selected wall underlay must be installed by the building contractor in accordance with the underlay manufacturer's instructions prior to the installation of EzyCorner Cavity Flashing.

EzyCorner

- 14.2 The EzyCorner Cavity Flashing may be cut with a hand saw or drop saw.
- 14.3 The EzyCorner Cavity Flashing must be positioned to overhang the bottom plate by a minimum of 15 mm. The EzyCorner Cavity Flashing is fixed to the timber corner framing (internal or external) with 60 x 2.8 mm hot-dip galvanised flat-head nails. For steel framing, 30 mm x 8g galvanised wafer-head screws are used to secure the EzyCorner Cavity Flashing. The EzyCorner Cavity Flashing is fixed to the bottom and top plates, and noggings/blocking at maximum 1200 mm centres. Alternatively, the EzyCorner Cavity Flashing may be adhesive fixed with 25 mm diameter daubs at maximum 600 mm centres along the length of the profile. When adhesive fixing is used, temporary support is required to hold the profile in position while the adhesives cures or the cladding is fixed over.
- 14.4 It is recommended that where practicable, full lengths of EzyCorner Cavity Flashing are used. Where a joint is required, cut opposing lengths with a 30° mitre cut. The slope of the mitre must be such that water is shed to the exterior face of the EzyCorner Cavity Flashing.
- 14.5 The maximum number of joints is one for a wall height up to 3.0 m and two joints for a wall height up to 7.0 m. *[Note: NZBC Acceptable E2/AS1 Paragraph 9.1.9.4 b] limits the height of a continuous cavity to a maximum of 2 storeys or 7.0 m].*
- 14.6 A EzyCorner Cap is fitted and adhered to the base of the EzyCorner Cavity Flashing at the base of the wall to prevent vermin entry, where cavity closers abut the EzyCorner Cavity Flashing.

Basis of Appraisal

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

Tests

- 15.1 The following testing has been completed by BRANZ:
- Assessment of the face load strength of the EzyCorner Cavity Flashing was completed by fixing a representative cladding material through the EzyCorner Cavity Flashing into timber framing. Hand-driven nails and Tek screws were used to fix the cladding and the results were used in assessing the compressive strength of the EzyCorner Cavity Flashing.
 - An evaluation was completed to verify the ability of EzyCorner Cavity Flashing joints to manage water between adjacent lengths of EzyCorner Cavity Flashing.

Investigations

- 16.1 BRANZ expert opinion on NZBC E2 code compliance for the EzyCorner Cavity Flashing was based on evaluation of all details within the scope and as stated within this Appraisal. The details contained within the Technical Literature have been reviewed, and an opinion has been given by BRANZ technical experts that the system will meet the performance levels of Acceptable Solution E2/AS1 for cavity closures, cavity battens and corner flashings.
- 16.2 A durability opinion has been provided by BRANZ technical experts.
- 16.3 The practicability of installation has been assessed by BRANZ.

16.4 The Technical Literature for the EzyCorner Cavity Flashing has been examined by BRANZ and found to be satisfactory.

Quality

- 17.1 The manufacture of the EzyCorner Cavity Flashing and EzyCorner Cap has not been examined by BRANZ, but details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory. BRANZ also undertakes an ongoing review of product quality on an inwards goods basis.
- 17.2 The quality of materials, components and accessories supplied by EzyBuild Products Ltd is the responsibility of EzyBuild Products Ltd.
- 17.3 Quality on site is the responsibility of the installer.
- 17.4 Designers are responsible for the building design, and building contractors are responsible for the quality of installation of the framing systems, building underlays, cavity battens and cladding system in accordance with the instructions of the designer.
- 17.5 Building owners are responsible for the maintenance of the EzyCorner Cavity Flashing and cladding system in accordance with the instructions of EzyBuild Products Ltd and the designer.

Sources of Information

- NZS 3604: 2011 Timber-framed buildings.
- Acceptable Solutions and Verification Methods for New Zealand Building Code External Moisture Clause E2, Ministry of Business, Innovation and Employment, Third Edition July 2005 [Amendment 6, 14 February 2014].
- Ministry of Business, Innovation and Employment Record of Amendments for Compliance Documents and Handbooks.
- The Building Regulations 1992.



In the opinion of BRANZ, **EzyCorner Cavity Flashing** 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 **EzyBuild Products 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. **EzyBuild Products 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 **EzyBuild Products 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 **EzyBuild Products Ltd** or any third party.

For BRANZ



Chelydra Percy

Chief Executive

Date of Issue:

24 June 2016