



BRANZ Appraised
Appraisal No. 1122 [2020]

THERMAFLASH FLASHING TAPE

Appraisal No. 1122 [2020]
Amended 02 September 2024



BRANZ Appraisals

Technical Assessments of
products for building and
construction.



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Product

- 1.1 ThermoFlash Flashing Tape is a flexible flashing tape system for use around framed joinery openings in conjunction with the optional Thermakraft Corner Mould.
- 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 as a secondary weather resistant barrier.
- 1.3 ThermoFlash Flashing Tape is also used at joinery heads to seal flashing upstands to the wall underlay.

Scope

- 2.1 ThermoFlash Flashing Tape has been appraised as a flexible flashing tape system 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, Table 2 or NASH Building Envelope Solutions, Table 2; and,
 - with wall cladding systems complying with NZBC Acceptable Solution E2/AS1, 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.

[Note: Kingspan Insulation NZ Limited offers ThermoFlash as a flashing tape for mid-rise buildings with wall claddings systems complying with NZBC Verification Method E2/VM2, but this aspect is outside the scope of this Appraisal. The suitability of use of ThermoFlash Flashing Tape in proprietary wall cladding systems must be confirmed by the relevant system proprietor.]

Building Regulations

New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, Thermaflash Flashing 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. Thermaflash Flashing Tape meets these requirements. See Paragraphs 8.1 and 8.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. Thermaflash Flashing Tape contributes to meeting this requirement. See Paragraphs 7.1-7.6 and 11.1-11.3.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Thermaflash Flashing Tape meets this requirement.

Technical Specification

- 4.1 System components and accessories supplied by Kingspan Insulation NZ Limited are:
- **Thermaflash Flashing Tape** is a self-adhering flexible flashing tape. It is coloured white on the top surface and printed with the name Thermaflash. The tape incorporates a clear release liner. The tape is available in rolls 75, 150 and 200 mm wide x 23 m long. The rolls are supplied individually shrink wrapped.
 - **Thermakraft Corner Moulds** are made from polyethylene and are coloured orange. They can be used at the lower corners of joinery openings instead of 'butterflies' of Thermaflash Flashing Tape.
- 4.2 Accessories used with the system, which are supplied by the installer are:
- **Corner Mould fixings** - staples, clouts or screws to attach the corner mould to timber framing prior to the installation of the Thermaflash Flashing Tape. For steel framing, use a double-sided tape.
 - **Scotch® Super 77™ Multipurpose Adhesive** - a clear spray-adhesive primer.

Handling and Storage

- 5.1 Handling and storage of all materials supplied by Kingspan Insulation NZ Limited, whether on-site or off-site, is under the control of the installer. Thermaflash Flashing Tape and accessories 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 This Appraisal must be read in conjunction with:
- Product Data Sheet Thermaflash®, Issue 3.0, September 2022.
 - Installation Guide Thermaflash®, Issue 2.0, September 2022.
- 6.2 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 Thermaflash Flashing Tape meets the requirements of AC 148:2001 which is an alternative solution to the version of AC 148 referenced by NZBC Acceptable Solution E2/AS1, Paragraph 9.1.5 and NASH Building Envelope Solutions, Paragraph 9.1.5. Two layers of Thermaflash Flashing Tape must be installed on the horizontal sill surface [a single layer is used in all other locations]. The installation method for Thermaflash Flashing Tape 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 Thermaflash Flashing Tape 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 180 days exposure applies to the Thermaflash 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 Thermaflash Flashing 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 wall underlay complying with NZBC Acceptable Solution E2/AS1, Table 23 or NASH Building Envelope Solutions, Table 23.
- 7.5 Thermaflash Flashing 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 water that gets past the cladding, or through the joinery, from direct contact with the framing.
- 7.6 Thermaflash Flashing 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. Thermaflash Flashing Tape is designed to be used in conjunction with air seals and joinery flashing systems, not as a substitute.
- 7.7 When Thermaflash 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 system.
- 7.8 Thermaflash Flashing Tape is compatible with a range of sealants used to provide an air seal between the flashing tape and joinery reveal, without the need for a separation tape. *[Note: These sealants have not been assessed by BRANZ and are outside the scope of this Appraisal. Contact Kingspan Insulation NZ Limited 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 Thermaflash Flashing Tape both during normal use and maintenance of the building.

Serviceable Life

- 8.2 Provided the selected wall underlay is not exposed to the weather or UV light for longer than stated in the relevant Appraisal, [a maximum of 180 days applies to the Thermaflash Flashing Tape], and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather-resistant, Thermaflash Flashing Tape is expected to have a serviceable life equal to that of the cladding.

Maintenance

- 9.1 No maintenance is required for Thermaflash Flashing 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 Thermaflash Flashing Tape from heat sources such as fireplaces, heating appliances and chimneys. Part 7 of NZBC Acceptable Solution C/AS1 and NZBC 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 Acceptable Solution E2/AS1, Paragraph 9.1.5 or NASH Building Envelope Solutions, Paragraph 9.1.5, Thermaflash Flashing Tape may be used.
- 11.2 Thermaflash Flashing Tape can also be used to seal joinery head flashing upstands to wall underlay in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.10.3 or NASH Building Envelope Solutions, Paragraph 9.1.11.3.
- 11.3 Pipes and service penetrations may be made weathertight using Thermaflash Flashing Tape in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.9.3 or NASH Building Envelope Solutions, Paragraph 9.1.10.3.

Installation Information

Installation Skill Level Requirements

- 12.1 All design and building work must be carried out in accordance with the Thermaflash Flashing Tape Technical Literature and this Appraisal by competent and experienced tradespersons conversant with Thermaflash Flashing Tape. 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 Thermaflash Flashing 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. When installing Thermaflash Flashing Tapes on difficult to bond substrates, Scotch® Super 77™ Spray Adhesive may be used. Ensure that the wall underlay/substrate is dry and free of dirt before applying the spray adhesive. Apply a light spray/coating of the spray adhesive onto the underlay/ substrate. Wait for a minute to allow the spray adhesive to become tacky. When tacky to the touch apply the flashing tape in the normal manner.
- 13.3 When being used, fit a Thermakraft Corner Mould into each of the bottom corners to create a seal at the corner junction. The Thermakraft Corner Mould must be fixed to timber framing with staples, clouts or screws. On steel framing, use double-sided tape.

Sill/Jamb

- 13.4 A length of 150 or 200 mm wide Thermaflash Flashing 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.
- 13.5 When a Thermakraft Corner Mould is not being used, a 75 mm wide x 100 mm long 'butterfly' of Thermaflash Flashing Tape must be installed at 45° across the corner of the sill/jamb junction, overlapping the corner by 3 mm to create a seal at the corner junction.

Sill Tape

- 13.6 A second layer of 75 mm wide Thermaflash Flashing Tape must then be installed along the entire length of the sill. The tape is installed flush with the exterior face of the opening. This is a mandatory requirement for horizontal surfaces to ensure nail penetration self-seal.

Jamb/Head

- 13.7 A 400 mm length of Thermaflash Flashing 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 75 mm wide x 100 mm long sealing tape 'butterfly' must be installed at 45° across the corner of the head/jamb junction overlapping the corner by 3 mm to create a seal at the corner junction.
- 13.8 Thermaflash Flashing Tape must not be stretched. To avoid wastage, the tape can be lapped 100 mm minimum onto itself without reducing the performance of the Thermaflash Flashing Tape system.
- 13.9 If the Thermaflash Flashing Tape is exposed to the weather or UV light for more than 180 days, then it must be replaced with new material.

Installation Temperature

- 13.10 Thermaflash Flashing Tape must not be installed at temperatures of less than -10°C.

Inspections

- 13.11 The Technical Literature must be referred to during the inspection of Thermaflash Flashing Tape installations.

Basis of Appraisal

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

Tests

- 14.1 Testing of Thermaflash Flashing Tape has been completed by BRANZ to the requirements of ICC Evaluation Service Acceptance Criteria for Flashing Materials AC 148:2001. The adhesion of Thermaflash Flashing 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 Thermaflash Flashing 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 Thermaflash 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. 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 Kingspan Insulation NZ Limited.
- 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 Kingspan Insulation NZ Limited.



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15 September 2020

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Sources of Information

- ICC Evaluation Service Inc., AC148 Acceptable criteria for flexible 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.

Amendments

Amendment No. 1, 02 September Month 2024

This Appraisal has been amended to update the Appraisal Holder and Technical Literature.



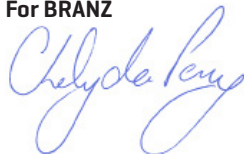
In the opinion of BRANZ, **Thermaflash Flashing Tape** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **Kingspan Insulation NZ 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. **Kingspan Insulation NZ 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 **Kingspan Insulation NZ 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 **Kingspan Insulation NZ Limited** or any third party.

For BRANZ



Chelydra Percy

Chief Executive

Date of Issue:

15 September 2020