BRANZ Appraised

Appraisal No. 890 (2025)

BOSTIK EXPANDA PRO FOAM/PRO GUN FOAM AIR SEALS

Appraisal No. 890 (2025)

This Appraisal replaces BRANZ Appraisal No. 890 (2020)

BRANZ Appraisals

Technical Assessments of products for building and construction.

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Product

1.1 Bostik Expanda Pro Foam/Pro Gun Foam are self-expanding polyurethane foam air seals used around window and door penetrations and other cladding fenestration trim cavities to assist with weathertightness and energy efficiency.

Scope

2.1 Bostik Expanda Pro Foam/Pro Gun Foam have been appraised for use as air seals around window and door penetrations and other cladding fenestration trim cavities in buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1; and,
- situated in NZS 3604 Wind Zones up to, and including, Extra High.

2.2 Bostik Expanda Pro Foam/Pro Gun Foam have also been appraised as air seals with window and door joinery that is designed and manufactured in accordance with NZS 4211, situated in NZS 3604 Wind Zones up to, and including, Extra High, and where the cladding is an Alternative Solution and/or the building is outside the scope limitations of NZBC Acceptable Solution E2/AS1. The weathertightness design of the window and door joinery penetrations and other cladding fenestration trim cavities in these situations has not been assessed and is outside the scope of this Appraisal.

Building Regulations

New Zealand Building Code (NZBC)

3.1 **In the opinion of BRANZ, Bostik Expanda Pro Foam/Pro Gun Foam, 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. Bostik Expanda Pro Foam/Pro Gun Foam meet this requirement. See Paragraphs 8.1 and 8.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. When used as part of a cladding system, Bostik Expanda Pro Foam/Pro Gun Foam contribute to meeting this requirement. See Paragraphs 10.1-10.4.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Bostik Expanda Pro Foam/Pro Gun Foam meet this requirement.

Technical Specification

4.1 Products and accessories supplied by Bostik New Zealand Ltd are as follows:

Air Seals

- **Bostik Expanda Pro Foam/Pro Gun Foam** - are one-component self-expanding moisture cure polyurethane foams. Bostik Expanda Pro Gun Foam is available in a 750 ml can fitted with an adaptor system for use with a one-component dispensing gun. Bostik Expanda Pro Foam is available in a 750 ml multi-positional can. *(Note: This can be used in any position, the can does not have to be inverted to allow the foam to be propelled).*

Accessories

- **Expanda Gun & Foam Cleaner** - a solvent-based cleaner for uncured material and the dispensing gun.

4.2 Accessories supplied by the building contractor are as follows:

- **One-component dispensing gun.**
- **PEF backing rod** - a closed cell polyethylene foam (PEF) backing rod complying with ASTM C1330.

Handling and Storage

5.1 The handling and storage of Bostik Expanda Pro Foam/Pro Gun Foam on-site is the responsibility of the installer. Bostik Expanda Pro Foam/Pro Gun Foam have a shelf life of 12 months if stored in unopened packaging under dry, cool conditions at temperatures between 5°C and 35°C. The products must be stored out of direct sunlight.

Technical Literature

6.1 This Appraisal must be read in conjunction with:

- Expanda Pro Foam - High Yield, Low Expansion Multi-Positional PU Expanding Foam TDS, version 1, dated 22 September 2014.
- Expanda Pro Gun Foam - High Yield, Low Expansion PU Expanding Foam TDS, version 1, dated 22 September 2014.

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 The use of air seals is critical to assist the weathertightness performance of window and door joinery installations at the trim cavities, and other wall penetrations. Air seals also assist energy efficiency by reducing heat loss through these cavities.

7.2 Bostik Expanda Pro Foam/Pro Gun Foam are designed to be used as gap-filling air seals around window and door trim cavities and wall penetrations, e.g. plumbing pipes. They are designed for use in interior locations, and along with their good gap-filling capacities, they have excellent adhesion to most materials. Two exceptions are polyethylene or polypropylene. However, testing completed on window installations incorporating polyethylene building wraps and polyethylene backed flashing tapes has shown that any potential lack of adhesion between Bostik Expanda Pro Foam/ Pro Gun Foam and the polyethylene will not affect their performance as an air seal.

7.3 Bostik Expanda Pro Foam/Pro Gun Foam are designed to prevent air leakage at the interior face of the window and door trim cavities and wall penetrations. This prevention of air leakage assists in achieving the overall airtightness requirements of the trim cavity.

7.4 A PEF backing rod complying with ATSM C1330 must be used in all trim cavities and around wall penetrations to support the Bostik Expanda Pro Foam/Pro Gun Foam. At the same time the backing rod prevents the trim cavity from being completely filled by restricting the depth of the air seal to a maximum of 45 mm.

7.5 Bostik Expanda Pro Foam/Pro Gun Foam are not designed to overcome poor detailing and workmanship of window or door joinery installation. They are designed to be used in conjunction with flashing systems, not as a substitute.

Durability

8.1 Assessment of durability to meet the NZBC is based on difficulty of access and replacement of the air seal, and the ability to detect failure of the air seal both during normal use and maintenance of the building.

Serviceable Life

8.2 When air seals are installed using Bostik Expanda Pro Foam/Pro Gun Foam in accordance with this Appraisal (i.e. in dry, interior environments where the product is inaccessible, and completely sheltered from exposure to sunlight, chemicals, solvents and temperature extremes), they will remain serviceable for at least 15 years.

Prevention of Fire Occurring

9.1 Separation or protection must be provided to Bostik Expanda Pro Foam/Pro Gun Foam from heat sources such as fireplaces, heating appliances and chimneys. NZBC Acceptable Solutions C/AS1 and C/AS2 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

10.1 Bostik Expanda Pro Foam/Pro Gun Foam are self-expanding polyurethane foams complying with the requirements of NZBC Acceptable Solution E2/AS1.

10.2 When installed over a PEF backing rod complying with ASTM C1330, window, door and other penetration openings in exterior walls incorporating Bostik Expanda Pro Foam/Pro Gun Foam can minimise the risk of airflows carrying water into the building wall.

10.3 Bostik Expanda Pro Foam/Pro Gun Foam, when installed in accordance with this Appraisal, will assist the total cladding system in complying with NZBC Acceptable Solution E2/AS1.

10.4 Buildings outside the scope of NZBC Acceptable Solution E2/AS1 are the subject of specific weathertightness design. The designer must incorporate air seal details to meet their own requirements and the performance requirements of the NZBC. These details are outside the scope of this Appraisal.

Installation Information

Installation Skill Level Requirement

11.1 All design and building work must be carried out in accordance with the Bostik Expanda Pro Foam/ Pro Gun Foam Technical Literature and this Appraisal by competent and experienced tradespeople conversant with the Bostik Expanda Pro Foam/Pro Gun Foam. 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 Licence Class.

General

12.1 Before the installation of Bostik Expanda Pro Foam/Pro Gun Foam, the installer must refer to the contract documentation, E2/AS1 and the cladding system manufacturer's Technical Literature for guidance on the installation requirements of air seals in their system.

12.2 Substrate surfaces must be clean and free from any surface contaminants such as dust or grease that may cause loss of adhesion. Window and door joinery or wall penetrations must have been installed and firmly secured in place.

12.3 Substrate surfaces should be moistened with a mist of water before the installation of Bostik Expanda Pro Foam/Pro Gun Foam. The moisture assists by accelerating the curing of the air seal and creating a more homogeneous cell structure.

12.4 After installation of the PEF backing rod, Bostik Expanda Pro Foam/Pro Gun Foam must be extruded into the gap between the window or door reveal liner or wall penetration and the timber frame or building wrap at the internal face of the cavity using the dispensing gun. Once extruded, it will expand to fill the gap and form a continuous air seal.

12.5 Bostik Expanda Pro Foam/Pro Gun Foam that has spilled but not cured can be removed with Expanda Gun & Foam Cleaner.

12.6 Bostik Expanda Pro Foam/Pro Gun Foam that has cured can be trimmed with a sharp knife.

Health and Safety

13.1 Safe use and handling procedures for Bostik Expanda Pro Foam/Pro Gun Foam are provided on the can. Extra care must be taken when using the product in areas where there is insufficient ventilation, and suitable respiratory equipment must therefore be worn. Additional information on the product is available in the Material Safety Data Sheet available from Bostik New Zealand Ltd.

Basis of Appraisal

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

Tests

14.1 A BRANZ ad-hoc test was completed to confirm the suitability of Bostik Expanda Pro Foam/Pro Gun Foam for use as an air seal. The test results were reviewed by BRANZ experts and found to be satisfactory.

14.2 Cyclic and static pressure water leakage tests in accordance with AS/NZS 4284 were carried out by BRANZ on typical window installations to assess the practicability of expanding foam air seals.

Other Investigations

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

15.2 A Material Safety Data Sheet for Bostik Expanda Pro Foam/Pro Gun Foam has been reviewed by BRANZ and found to be satisfactory.

15.3 A durability opinion has been given by BRANZ technical experts for Bostik Expanda Pro Foam/Pro Gun Foam when used as an air seal.

Quality

16.1 The manufacture of the product has not been examined by BRANZ, but details of the quality and composition of the materials used were obtained and found to be satisfactory. The manufacturer is an ISO 9001 certified manufacturer.

16.2 The quality of supply of the product to the market is the responsibility of Bostik New Zealand Ltd.

16.3 The quality of installation of the product on-site is the responsibility of the installer.

16.4 Building designers are responsible for the design of the building, and for the incorporation of the air seal into their design in accordance with the instructions of Bostik New Zealand Ltd.

Sources of Information

- AS/NZS 4284:2008 Testing of building facades.
- ASTM C1330-02 Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants.
- NZS 3604:2011 Timber-framed buildings.
- NZS 4211:2008 Specification for performance of windows.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

BRANZ

In the opinion of BRANZ, Bostik Expanda Pro Foam/Pro Gun Foam Air Seals are fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided they are used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to Bostik New Zealand 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. Bostik New Zealand 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 quality of work;
   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 Bostik New Zealand 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 Bostik New Zealand Ltd or any third party.

For BRANZ

Claire Falck
Chief Executive

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30 October 2025