



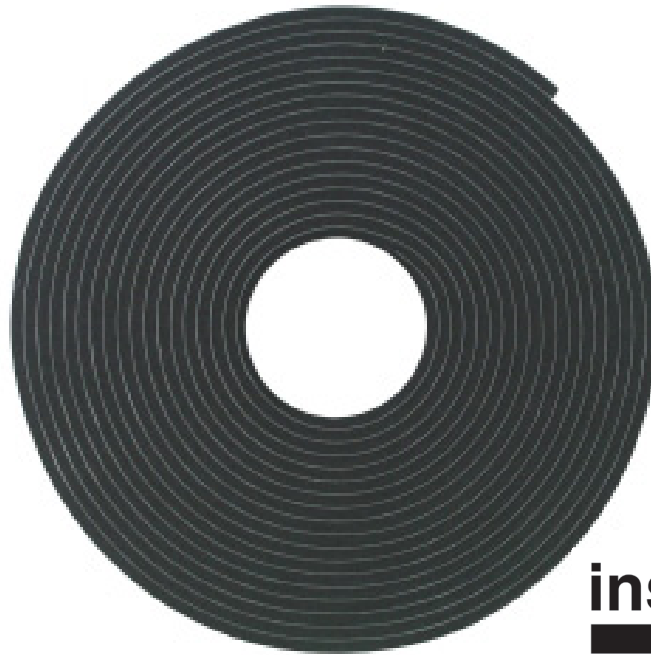
BRANZ Appraised

Appraisal No. 442 [2021]

INSEAL® 3259 AND 3109/BUTYL WEATHER SEAL TAPES

Appraisal No. 442 [2021]

This Appraisal replaces BRANZ
Appraisal No. 442 [2016]



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BRANZ Appraisals

Technical Assessments of
products for building and
construction.



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Product

- 1.1 Inseal® 3259 and 3109/Butyl Weather Seal Tapes are joint seal tapes used as a means of weather resistance behind joints in exterior sheet claddings.
- 1.2 The tapes are suitable for use as a primary or secondary means of weather resistance (first or second line of defence) against possible water penetration through joints of fibre cement or plywood sheet claddings.

Scope

- 2.1 Inseal® 3259 Tape has been appraised for use as a weather seal tape within the following scope:
 - behind vertical and horizontal joints of fibre cement and plywood sheet claddings on buildings within the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
 - where the tape is continuously protected from ultraviolet (UV) light.
- 2.2 Inseal® 3109/Butyl Tape has been appraised for use as a weather seal tape within the following scope:
 - behind vertical expressed joints of fibre cement and plywood sheet claddings on buildings within the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
 - where the Inseal® 3109 component of the tape is continuously protected from UV light.

Building Regulations

New Zealand Building Code (NZBC)

- 3.1 In the opinion of BRANZ, Inseal® 3259 and 3109/Butyl Weather Seal Tapes, 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. Inseal® 3259 and 3109/Butyl Weather Seal Tapes meet these requirements. See Paragraphs 9.1-9.3.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. When used as part of the cladding system, Inseal® 3259 and 3109/Butyl Weather Seal Tapes will contribute to the cladding system meeting this requirement. See Paragraphs 12.1-12.3.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Inseal® 3259 and 3109/Butyl Weather Seal Tapes meet this requirement.

Technical Specification

- 4.1 Inseal® 3259 Tape is a black, compressible, medium density polyvinyl chloride (PVC) closed-cell foam. The foam is coated on one face with pressure sensitive acrylic adhesive. The other face is covered by a silicone release paper. The tape is 1.5 mm thick and is supplied in rolls 50 and 80 mm wide and 50 m long.
- 4.2 Inseal® 3109/Butyl Tape is a 1 mm thick black butyl rubber membrane with 6 x 9 mm Inseal® 3109 adhered along each edge of one face with an acrylic adhesive. Inseal® 3109 is a compressible, black, low density PVC foam. The tape is supplied in rolls 50 and 80 mm wide and 12 m long.

Handling and Storage

- 5.1 Inseal® 3259 and 3109/Butyl Weather Seal Tapes have a shelf life of 12 months if stored in unopened packaging under dry, clean conditions. The tapes must be protected from damage and weather, and stored out of direct sunlight.

Technical Literature

- 6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for Inseal® 3259 and 3109/Butyl Weather Seal Tapes. 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 Inseal® 3259 Tape is designed to be installed behind vertical and horizontal joints of fibre cement and plywood sheet cladding on timber-framed buildings built within the scope of NZBC Acceptable Solution E2/AS1. The tape is designed for use in both a direct fixed and cavity situation as a secondary means of weather resistance against possible water leakage through these joints [i.e. behind jointing and texture coating, cover battens, PVC jointers or sealant]. Inseal® 3259 Tape is not suitable for use behind expressed joints, and must not be exposed to UV light.
- 7.2 Inseal® 3109/Butyl Tape is designed to be installed behind vertical expressed joints of fibre cement and plywood sheet cladding on timber-framed buildings built within the scope of NZBC Acceptable Solution E2/AS1. The tape is designed for use in cavity situations as the primary means of weather resistance against water leakage through these joints. Inseal® 3109/Butyl Tape must not be used to form horizontal expressed joints.
- 7.3 The Technical Literature contains typical joint details that incorporate Inseal® 3259 and 3109/Butyl Weather Seal Tapes. The tapes may be used when such a product is required by fibre cement and plywood sheet cladding manufacturers' technical information.
- 7.4 Inseal® 3259 Tape and the Inseal® 3109 foam component of the Inseal® 3109/Butyl Tape must not be used in contact with expanded polystyrene foam insulation, solvent-based paints, and solvent-based adhesives and sealants. The compatibility of sealants used with Inseal® 3259 and 3109/Butyl Weather Seal Tapes must be checked prior to use.
- 7.5 When Inseal® 3259 and 3109/Butyl Weather Seal Tapes are used in conjunction with light organic solvent preservative (LOSP) treated timber, the solvent must be allowed to evaporate [generally at least one week] prior to the installation of the tapes.

Structure

Wall Bracing

- 8.1 Inseal® 3259 Tape is suitable for use behind the joints of fibre cement and plywood sheet wall bracing panels. However, the bracing units achieved by the panel for resistance against wind loads must be downgraded by 5%, and the bracing units achieved for resistance against earthquake loads must be downgraded by 15%.
- 8.2 Inseal® 3109/Butyl Tape is not suitable for use behind the joints of sheet wall bracing panels.

Durability

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

Serviceable Life

- 9.2 Provided Inseal® 3259 Tape is not exposed to the weather or UV light for a total of more than 30 days and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather resistant, Inseal® 3259 is expected to have a serviceable life compatible with that of the cladding. If Inseal® 3259 Tape is exposed to the weather or UV light for more than 30 days, then it must be replaced with new material.
- 9.3 Inseal® 3109/Butyl Tape, when installed in accordance with this Appraisal, can expect to have a serviceable life of at least 15 years.

Maintenance

- 10.1 Little or no maintenance should be required for the Inseal® 3259 and 3109/Butyl Weather Seal Tapes. However, regular checks, at least annually, must be made of the exterior cladding to ensure that the joints are maintained weathertight and that the primary means of weather resistance for the joint, e.g. sealant, texture coating etc. continues to perform its function, to ensure that water will not penetrate the cladding.

Prevention of Fire Occurring

- 11.1 Separation or protection must be provided to Inseal® 3259 and 3109/Butyl Weather Seal Tapes from heat sources such as fireplaces, heating appliances and chimneys. Part 7 of NZBC Verification Method C/VM1 and Acceptable Solution C/AS1, and Acceptable Solution C/AS2 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

- 12.1 The Inseal® 3259 Tape and the Inseal® 3109 component of the Inseal® 3109/Butyl Tape are an Alternative Solution to the closed cell foam tape specified in NZBC Acceptable Solution E2/AS1, Paragraph 9.1.10.7.
- 12.2 The use of Inseal® 3259 Tape as a secondary means of weather resistance does not reduce the requirement for the primary sealing of sheet joints in the exterior cladding to remain weather resistant.
- 12.3 Designers must check that details incorporating Inseal® 3259 and 3109/Butyl Weather Seal Tapes will meet their own design requirements and the requirements of the NZBC Clause E2 when they are incorporated into their particular design.



Installation Information

Installation Skill Level Requirements

- 13.1 All design and building work must be carried out in accordance with the Inseal® 3259 and 3109/ Butyl Weather Seal Tapes Technical Literature and this Appraisal by competent and experienced tradespersons conversant with the Inseal® 3259 and 3109/Butyl Weather Seal Tapes. 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

Inseal® 3259 Tape

- 14.1 Inseal® 3259 Tape is applied straight from the roll leaving the release liner in place to prevent stretching of the tape. The tape is applied directly to the wall underlay or cavity batten under sheet joints by pressing firmly along the entire tape to obtain maximum benefit of the pressure sensitive adhesive and to ensure a continuous seal.
- 14.2 The release liner must be left in place to protect the tape until the sheet cladding is ready for installation. Fixing and weatherproofing requirements for the cladding are the responsibility of the cladding manufacturer and are outside the scope of this Appraisal.

Inseal® 3109/Butyl Tape

- 14.3 Before fixing in place, Inseal® 3109/Butyl Tape must be unrolled, cut to length and allowed to 'relax'. Prior to installation of the sheet cladding, the tape is temporarily fixed in position over the cavity batten by stapling through the outside edge of the butyl membrane.
- 14.4 The tape is finally secured in place by the installation of the exterior sheet cladding. Fixing and weatherproofing requirements for the cladding are the responsibility of the cladding manufacturer and are outside the scope of this Appraisal.

Health and Safety

- 15.1 There are no particular safe use and handling procedures required for Inseal® 3259 and 3109/Butyl Weather Seal Tapes installation.

Inspections

- 16.1 The Technical Literature and the cladding manufacturer's Technical Literature must be referred to during the inspection of Inseal® 3259 and 3109/Butyl Weather Seal Tapes installation.

Basis of Appraisal

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

Tests

- 17.1 Weathertightness testing of direct fixed fibre cement jointing systems incorporating Inseal® 3259 and 3109/Butyl Weather Seal Tapes was completed by BRANZ in accordance with the general requirements of AS/NZS 4284.
- 17.2 Structural testing to determine nail slip under lateral loads in-plane was completed by BRANZ using Inseal® 3259 Tape behind fibre cement sheet cladding.
- 17.3 Accelerated QUV weatherometer aging tests have been completed on Inseal® 3259 and Inseal® 3109 foam tapes by Scapa UK Ltd for a period of 3,000 hours in accordance with ASTM G53-84. The test results were reviewed by BRANZ experts and found to be satisfactory.



Other Investigations

- 18.1 An assessment was made of the durability of the Inseal® 3259 and 3109/Butyl Weather Seal Tapes by BRANZ technical experts.
- 18.2 The practicability of installation was assessed by BRANZ and found to be satisfactory.

Quality

- 19.1 The manufacture of Inseal® 3259 and 3109/Butyl Weather Seal Tapes 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 has taken note of product certification covering quality aspects associated with the product. BRANZ also undertakes an ongoing review of product quality on an inwards goods basis.
- 19.2 The butyl rubber membrane is manufactured under an ISO 9001 Quality Management System.
- 19.3 The quality of supply and distribution of the Inseal® 3259 and 3109/Butyl Weather Seal Tapes is the responsibility of Acme Supplies Limited.
- 19.4 The quality of installation of the tapes on-site is the responsibility of the installer.
- 19.5 Building designers are responsible for the design of the building and for the incorporation of the tapes into their design in accordance with the instructions of Acme Supplies Limited.

Sources of Information

- ASTM G53-84 Standard practice for operating light and water apparatus [fluorescent UV condensation type] for exposure of non-metallic materials.
- AS/NZS 4284: 1995 Testing of building facades.
- NZS 3604: 2011 Timber-framed buildings.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The New Zealand Building Regulations 1992.



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07 May 2021

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WEATHER SEAL TAPES



In the opinion of BRANZ, **Inseal® 3259 and 3109/Butyl Weather Seal Tapes** 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 **Acme Supplies 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. **Acme Supplies 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 **Acme Supplies 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 **Acme Supplies Limited** or any third party.

For BRANZ

Chelydra Percy

Chief Executive

Date of Issue:

07 May 2021