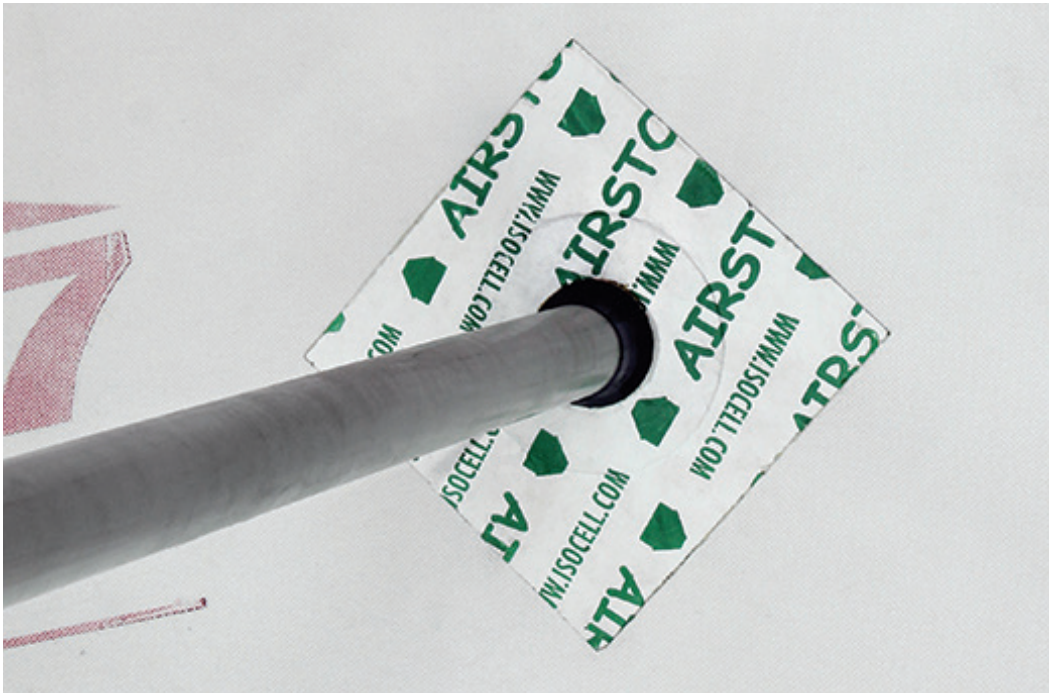
BRANZ Appraised
Appraisal No. 931 [2022]

ISOCELL AIR SEAL

PIPE AND SERVICES PENETRATION SEAL

Appraisal No. 931 (2022)

This Appraisal replaces BRANZ Appraisal No. 931 [2017]



BRANZ Appraisals

Technical Assessments of products for building and construction.

Product

1.1 ISOCell Air Seal is a wall cladding pipe and service penetration seal consisting of an elastic EPDM sleeve fitted with a self-adhesive flange.

Scope

2.1 ISOCell Air Seal has been appraised for use as a pipe and service penetration seal for use where the pipes and service penetration penetrates the wall underlay on timber-framed buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
- with BRANZ appraised flexible and rigid wall underlays; and,
- situated in NZS 3604 Wind Zones up to, and including, Extra High.

2.2 ISOCell Air Seal has been appraised for use as a pipe and service penetration seal for use where the pipes and service penetration penetrates the wall underlay on steel-framed buildings within the following scope:

- the scope limitations of NASH Building Envelope Solutions, Paragraph 1.1, with regards to building height and floor plan area; and,
- with BRANZ appraised flexible and rigid wall underlays; and,
- situated in NASH Standard Part Two Wind Zones up to, and including, Extra High.

2.3 ISOCell Air Seal has also been appraised for use on buildings subject to specific weathertightness design. Building designers are responsible for the building design and for the incorporation of ISOCell Air Seal into their design in accordance with the declared properties and the instructions of TransNet NZ Ltd.

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Building Regulations

New Zealand Building Code (NZBC)

3.1 **In the opinion of BRANZ, ISOCell Air Seal, 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. ISOCell Air Seal meets these requirements. See Paragraphs 8.1 and 8.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. When used as part of the wall cladding system, ISOCell Air Seal contributes to meeting this requirement. See Paragraphs 7.1-7.4 and 11.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. ISOCell Air Seal meets this requirement.

Technical Specification

4.1 ISOCell Air Seal is an EPDM sleeve, bonded to a carrier material of spun-bonded high density polyethylene film 150 micron thick. The carrier material is backed with a self-adhesive layer. The ISOCell Air Seal is available with various diameter EPDM sleeve sizes to accommodate different size wall penetrations.

Handling and Storage

5.1 ISOCell Air Seal must be protected from damage and weather. It must be stored under cover in clean, dry conditions away from direct exposure to sunlight, heat or flame. ISOCell Air Seals should not be removed from the packaging until they are ready to use.

5.2 Handling and storage of the ISOCell Air Seal, 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 ISOCell Air Seal. 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 ISOCell Air Seal, when used with BRANZ appraised flexible and rigid wall underlays, provides an Alternative Solution to the pipes and services penetrations specified in NZBC Acceptable Solution E2/AS1, Paragraph 9.1.9.3 and Figure 68.

7.2 ISOCell Air Seal is primarily designed to prevent moisture ingress at pipes and services penetrations through walls.

7.3 The performance of ISOCell Air Seal is reliant on it being the correct size for the pipe or service penetration and being fully adhered to the flexible or rigid wall underlay. ISOCell Air Seal must be protected from ultraviolet (UV) light when installed.

7.4 ISOCell Air Seal can be applied to either side of the flexible or rigid wall underlay to provide a seal for pipes and services penetrations.

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 for compliance with the NZBC.

Durability

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

Serviceable Life

8.2 Provided the selected flexible and rigid wall underlay is not exposed to the weather or UV light for longer than stated in the relevant Appraisal, [a maximum of 90 days applies to the ISOCell Air Seal] and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather-resistant, ISOCell Air Seal is expected to have a serviceable life equal to that of the cladding.

Maintenance

9.1 No maintenance is required for ISOCell Air Seal, however regular checks must be made of the cladding system to ensure it is sound and will not allow moisture penetration.

Prevention of Fire Occurring

10.1 Separation or protection must be provided to the ISOCell Air Seal from heat sources such as fireplaces, heating appliances and chimneys. Part 7 of NZBC Verification Method C/VM1 and 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 ISOCell Air Seal provides suitable flashing and sealing around pipe and service penetrations when used in conjunction with BRANZ appraised wall underlays and will contribute to the wall cladding meeting code compliance with NZBC Clause E2.3.2.

Installation Information

Installation Skill Level Requirement

12.1 All design and building work must be carried out in accordance with the ISOCell Air Seal Technical Literature and this Appraisal by competent and experienced tradespersons conversant with ISOCell Air Seal. 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 appropriate diameter ISOCell Air Seal must be used. There must be a tight fit around the pipe or service penetration, but ISOCell Air Seal should not be forced over the pipe or service penetration.

13.2 The flexible and rigid wall underlays to receive the ISOCell Air Seal must be clean and dry. ISOCell Air Seal must be rotated a quarter turn so the point of the ISOCell Air Seal flange is upwards before adhering it to the substrate. This will assist moisture run off. The flange is smoothed over to ensure a good bond to the flexible or rigid wall underlay.

13.3 The ISOCell Air Seal collar extension can be trimmed to ensure the best fit to the penetration after application.

13.4 When the ISOCell Air Seal is used in a retrofit installation, the collar extension is pushed through from the inside.

Basis of Appraisal

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

Tests

14.1 Adhesion testing after various forms of accelerated aging has confirmed the adhesion of ISOCell Air Seal to a range of flexible and rigid wall underlays. The results have been reviewed by BRANZ experts and found to be satisfactory.

Other Investigations

15.1 Assessment of the composition of the materials used to make ISOCell Air Seal has been completed and a durability opinion has been provided by BRANZ experts.

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

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

Quality

16.1 The manufacture of ISOCell Air Seal has not been examined by BRANZ but details of the quality and composition of the materials used were obtained and found to be satisfactory.

16.2 The quality of supply to the market is the responsibility of TransNet NZ Ltd.

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

16.4 Designers are responsible for the building design, and building contractors are responsible for the quality of the installation of the framing system, the wall underlay and cladding system.

16.5 Building owners are responsible for the maintenance of the cladding system over the ISOCell Air Seal.

Sources of Information

- 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.

BRANZ

In the opinion of BRANZ, ISOCell Air Seal Pipe and Services Penetration Seal 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 TransNet NZ 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. TransNet NZ 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 TransNet NZ 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 TransNet NZ Ltd or any third party.

For BRANZ

Chelydra Percy
Chief Executive

Date of Issue:
14 April 2022