



BRANZ Appraised

Appraisal No. 1258 [2025]

VENTIA IRON BLACK SELF ADHESIVE WALL UNDERLAY



Appraisal No. 1258 [2025]

BRANZ Appraisals

Technical Assessments of
products for building and
construction.



E Built NZ Ltd

1B/89 Ellice Road
Wairau Valley

Auckland 0629

Tel: 09 916 6750

Email: orders@ebuilt.co.nz

Web: www.ebuilt.co.nz



BRANZ

BRANZ

1222 Moonshine Rd,
RD1, Porirua 5381

Private Bag 50 908
Porirua 5240,

New Zealand

Tel: 04 237 1170

branz.co.nz



Product

- 1.1 Ventia Iron Black Self Adhesive Wall Underlay is a self-adhesive, synthetic underlay for use over rigid wall underlays under cavity or direct-fixed wall claddings.

Scope

Use over NZBC E2/AS1 or NASH Building Envelope Solutions Rigid Wall Underlays

- 2.1 Ventia Iron Black Self Adhesive Wall Underlay has been appraised for use as a flexible wall underlay when installed over fibre cement or plywood rigid wall underlays in accordance with NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions, Paragraph 9.1.7.2 and when used on 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 or NASH Building Envelope Solutions, Table 2; and,
 - with absorbent and non-absorbent direct fix wall claddings or wall claddings installed over an 18 mm minimum drained cavity; or,
 - with masonry veneer in accordance with NZBC Acceptable Solution E2/AS1 for timber-framed buildings or NASH Building Envelope Solutions for steel-framed buildings; and,
 - situated in NZS 3604 Wind Zones up to, and including, Extra High.

Specific Design

- 2.2 Designers are responsible for confirming the suitability of Ventia Iron Black Self Adhesive Wall Underlay for their specific design when used on other construction types or buildings outside the scope of this Appraisal. *[Note: These have not been assessed and are outside the scope of this Appraisal].*

Building Regulations

New Zealand Building Code [NZBC]

- 3.1 In the opinion of BRANZ, Ventia Iron Black Self Adhesive Wall Underlay, 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 [a] not less than 50 years, B2.3.1 [b] 15 years and B2.3.2. Ventia Iron Black Self Adhesive Wall Underlay meets these requirements. See Paragraphs 9.1 and 9.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. When used as part of the wall cladding system, Ventia Iron Black Self Adhesive Wall Underlay contributes to meeting this requirement. See Paragraphs 12.1 and 12.2.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Ventia Iron Black Self Adhesive Wall Underlay meets this requirement.

Technical Specification

General

- 4.1 Ventia Iron Black Self Adhesive Wall Underlay is a self-adhesive synthetic building underlay for use under wall claddings. The product consists of a micro-porous water-resistant polypropylene film laminated between two layers of spun-bonded polypropylene with a self-adhesive backing. Ventia Iron Black Self Adhesive Wall Underlay is coloured black on the top and bottom faces.
- 4.2 Ventia Iron Black Self Adhesive Wall Underlay is supplied in rolls 1.5 m wide x 50 m long [75 m²].
- 4.3 Ventia Iron Black Self Adhesive Wall Underlay is 0.5 mm thick.

Rigid Wall Underlays

- 4.4 Products used with Ventia Iron Black Self Adhesive Wall Underlay, which are supplied by the installer are:
- **Plywood** - must comply with AS/NZS 2269, be a minimum 7 mm thick and H3 treated in accordance with NZS 3602.
 - **Fibre cement sheet** - must be minimum 6 mm thick and comply with AS/NZS 2908.2.

Handling and Storage

- 5.1 Handling and storage of the product, whether on-site or off-site, is under the control of the installer. The rolls must be protected from damage and weather. They must be stored on end, under cover, in clean, dry conditions and must not be crushed.

Technical Literature

- 6.1 This Appraisal must be read in conjunction with:
- Ventia Iron Black Self Adhesive Underlay Installation Procedure, Version No. 1, dated October 2024.
- 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 Ventia Iron Black Self Adhesive Wall Underlay must not be exposed to the weather or ultraviolet (UV) light for a total of more than 30 days before being covered by the wall cladding.

Movement Joints

- 7.2 The designer is responsible for designing movement joints to accommodate thermal and moisture movement in the structure and cladding. This may require movement joints to be incorporated in the rigid underlay. Refer to BRANZ Bulletin No. 531 Designing for Thermal and Moisture Movement for further information.

Framing

- 7.3 Timber and steel framing must be provided in accordance with the requirements of the NZBC and the rigid wall underlay and cladding suppliers.
- 7.4 When Ventia Iron Black Self Adhesive Wall Underlay is used in conjunction with LOSP (light organic solvent preservative) treated timber, the solvent from the timber treatment must be allowed to evaporate prior to the installation of the underlay. This will generally be at least one week after the treated timber is incorporated into the building.

Walls with NZBC E2/AS1 or NASH Building Envelope Solutions Rigid Wall Underlays

- 7.5 Ventia Iron Black Self Adhesive Wall Underlay is suitable for use under wall claddings on timber or steel-framed buildings as a flexible wall underlay fixed over rigid underlays of plywood and fibre cement. The plywood and fibre cement must be in accordance with NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions, Paragraph 9.1.7.2.

Structure

- 8.1 Ventia Iron Black Self Adhesive Wall Underlay is suitable for use in all Wind Zones of NZS 3604 up to, and including, Extra High when used as an overlay for rigid wall underlays.

Durability

- 9.1 Ventia Iron Black Self Adhesive Wall Underlay meets code compliance with NZBC Clause B2.3.1 (a) not less than 50 years for wall underlays used where the cladding durability requirement or expected serviceable life is not less than 50 years, e.g. behind masonry veneer, and code compliance with NZBC Clause B2.3.1 (b) 15 years for wall underlays used where the cladding durability requirement is 15 years.

Serviceable Life

- 9.2 Provided it 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, Ventia Iron Black Self Adhesive Wall Underlay is expected to have a serviceable life equal to that of the cladding.

Control of Internal Fire and Smoke Spread

- 10.1 As Ventia Iron Black Self Adhesive Wall Underlay is not exposed to view in occupied spaces, the product does not need to meet the requirements of NZBC Acceptable Solutions C/AS2, Paragraph 4.17.8 b), for the surface finish requirements of suspended flexible fabric.

Prevention of Fire Occurring

- 11.1 Separation or protection must be provided to Ventia Iron Black Self Adhesive Wall Underlay 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

- 12.1 Ventia Iron Black Self Adhesive Wall Underlay must only be used behind wall claddings that meet the requirements of the NZBC, e.g. such as those covered by NZBC Acceptable Solution E2/AS1, NASH Building Envelope Solutions or wall claddings covered by a valid BRANZ Appraisal. Refer to Table 1 for material properties.
- 12.2 Ventia Iron Black Self Adhesive Wall Underlay, when installed in accordance with the Technical Literature and this Appraisal, will assist in the total cladding system's compliance with NZBC Clause E2.

Table 1: NZBC E2/AS1 and NASH Building Envelope Solutions, Table 23 (NZS 2295) Requirements

NZBC E2/AS1, Table 23 Roof and Wall Underlay Properties	Property Performance Requirement	Actual Property Performance*
Absorbency	$\geq 150 \text{ g/m}^2$	Pass
Vapour Resistance	$\leq 7 \text{ MN s/g}$	Pass
Water Resistance	$\geq 100 \text{ mm}$	Pass
pH of Extract	≥ 6.0 and ≤ 9.0	Pass
Shrinkage	$\leq 0.5\%$	Pass
Edge Tear Resistance	$\geq 150 \text{ N}$ Machine direction $\geq 100 \text{ N}$ Cross direction	Pass Pass
Tensile Strength	$\geq 3 \text{ kN/m}$ Machine direction $\geq 1 \text{ kN/m}$ Cross direction	Pass Pass
Air Barrier	Air resistance: $\geq 0.1 \text{ MN s/m}^3$	Pass

* Properties in Table 1 are for Ventia Iron Black Self Adhesive Wall Underlay only and do not include the substrate to which it is applied.

Installation Information

Installation Skill Level Requirement

- 13.1 Installation must always be carried out in accordance with the Ventia Iron Black Self Adhesive Wall Underlay Technical Literature and this Appraisal by, or under the supervision of, a Licensed Building Practitioner [LBP] with the relevant Licence Class.

Underlay Installation

- 14.1 Ventia Iron Black Self Adhesive Wall Underlay may be fixed horizontally or vertically.
- 14.2 For walls, the product must extend from the upper-side of the top plate to the under-side of the bearers or wall plates supporting ground floor joists, or below bottom plates on concrete slabs.
- 14.3 For horizontal installation, it is recommended that the height for the bottom layer of underlay is marked at regular intervals along the length of the substrate. The first [narrow] release paper is removed and the underlay is adhered to the substrate evenly along the element length. The second release paper is removed and the underlay is smoothed down and along the substrate.
- 14.4 For vertical installation, it is recommended that a vertical line is marked on the rigid substrate. Both release papers are removed from the top down and the underlay adhered to the rigid substrate.
- 14.5 For both installation orientations, care must be taken to avoid wrinkles or folds.
- 14.6 Horizontal, vertical and end laps must be no less than 150 mm wide, with the direction of the lap ensuring that water is shed to the outer face of the underlay.
- 14.7 After initial application of Ventia Iron Black Self Adhesive Wall Underlay, it must be smoothed down with a 150 mm wide hard roller or plastic spreader to ensure adhesion to the substrate.
- 14.8 The underlay should be run over windows and doors openings and these left covered until the joinery is ready to be installed. Openings are formed in the underlay by cutting on a 45° diagonal from each corner of the penetration. The flaps of the cut underlay must be folded inside the opening and adhered to the exposed penetration framing. Excess underlay may be cut off flush with the internal face of the wall frame. Openings must be finished with flashing tape in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.5 b).
- 14.9 Any damaged areas of Ventia Iron Black Self Adhesive Wall Underlay, such as tears, holes or gaps around service penetrations, must be repaired. Damaged areas can be repaired by covering with new material lapping the damaged area by at least 150 mm, or by taping small tears using flashing tape.

- 14.10 Service penetrations, such as electrical cables and pipes, that pass through the Ventia Iron Black Self Adhesive Wall Underlay must be sealed.

Inspections

- 15.1 The Technical Literature must be referred to during the inspection of Ventia Iron Black Self Adhesive Wall Underlay installations.

Basis of Appraisal

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

Tests

- 16.1 The following tests have been carried out on Ventia Iron Black Self Adhesive Wall Underlay in accordance with NZBC Acceptable Solution E2/AS1, Table 23:
- tensile strength; and,
 - edge-tear resistance and resistance to water vapour transmission in accordance with AS/NZS 4200.1; and,
 - shrinkage in accordance with AS/NZS 4201.3; and,
 - resistance to water penetration in accordance with AS/NZS 4201.4; and,
 - surface water absorbency in accordance with AS/NZS 4201.6; and,
 - pH of extract in accordance with AS/NZS 1301.421s and air resistance to BS 6538.3.
- 16.2 A range of these tests were completed before and after Ventia Iron Black Self Adhesive Wall Underlay was exposed to UV light.

Other Investigations

- 17.1 A durability opinion has been given by BRANZ technical experts.
- 17.2 The practicability of installation of Ventia Iron Black Self Adhesive Wall Underlay has been assessed by BRANZ and found to be satisfactory.
- 17.3 The Technical Literature, including installation instructions, has been examined by BRANZ and found to be satisfactory.

Quality

- 18.1 The manufacture of Ventia Iron Black Self Adhesive Wall Underlay 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.
- 18.2 The quality of supply to the market is the responsibility of E Built NZ Ltd.
- 18.3 Building designers are responsible for the design of the building, and for the incorporation of the underlay into their design in accordance with the instructions of E Built NZ Ltd.
- 18.4 Quality of installation is the responsibility of the installer in accordance with the instructions of E Built NZ Ltd.



BRANZ Appraised

Appraisal No. 1258 [2025]

BRANZ Appraisal

Appraisal No. 1258 [2025]

05 February 2025

VENTIA IRON BLACK SELF ADHESIVE

WALL UNDERLAY

Sources of Information

- AS/NZS 2269.0:2008 Plywood - Structural – Specifications.
- AS/NZS 2908.2:2020 Cellulose-cement products - Flat sheets.
- AS/NZS 4200.1:1994 Pliable building membranes and underlays - Materials.
- BS 6538.3:1987 Method for determination of air permeance using the Garley apparatus.
- BRANZ Bulletin No. 531 Designing for thermal and moisture movement.
- NASH Building Envelope Solutions: 2019 Light steel-framed buildings.
- NZS 2295:2006 Pliable, permeable building underlays.
- NZS3602:2003 Timber and wood-based products for use in building.
- 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.



In the opinion of BRANZ, **Ventia Iron Black Self Adhesive Wall Underlay** 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 **E Built 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. **E Built 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 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 **E Built 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 **E Built NZ Ltd** or any third party.

For BRANZ



Claire Falck

Chief Executive

Date of Issue:

05 February 2025