



**BRANZ Appraised**  
Appraisal No. 1134 [2020]

## VENTIA IRON ROOF UNDERLAY

**Appraisal No. 1134 [2020]**

Amended 27 January 2021



### BRANZ Appraisals

Technical Assessments of products  
for building and construction.



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## Product

- 1.1 Ventia Iron Roof Underlay is a synthetic building underlay [sarking] for use under roof claddings. The product consists of a micro-porous water resistant film laminated between two layers of spun-bonded polyolefin.

## Scope

- 2.1 Ventia Iron Roof Underlay has been appraised for use as a self-supporting roof underlay on buildings within the following scope:
  - Class 1 and Class 10 buildings; and,
  - Class 2 to Class 9 buildings subject to specific weathertightness design; and,
  - constructed with timber or steel framing in accordance with the Building Code of Australia [BCA]; and,
  - with masonry tile, metal tile or profiled metal roof cladding; and,
  - situated in non-cyclonic wind zones up to, and including N3.
- 2.2 Building designers are responsible for the building design and for the incorporation of Ventia Iron Roof Underlay into their design in accordance with the declared properties and the instructions of E PRODUCTS GLOBAL LIMITED.

## Building Regulations

### Building Code of Australia [BCA]

- 3.1 In the opinion of BRANZ, Ventia Iron Roof Underlay, if used, designed, installed and maintained in accordance with the statements and conditions of this Appraisal, will contribute to meeting the following provisions of the National Construction Code [NCC] :

#### NCC Building Code of Australia - Volume One [NCC Volume One]

**Part F1 DAMP AND WEATHERPROOFING:** Performance Requirement FP1.4. Ventia Iron Roof Underlay will contribute to meeting this requirement. See Paragraphs 13.1 and 13.2.

#### NCC Building Code of Australia - Volume 2 [NCC Volume Two]

**Part 2.2 DAMP AND WEATHERPROOFING:** Performance Requirement P2.2.2. Ventia Iron Roof Underlay will contribute to meeting this requirement. See Paragraphs 13.1 and 13.2.

## Technical Specification

- 4.1 Ventia Iron Roof Underlay is a synthetic building underlay for use under roof claddings. The product consists of a micro-porous water resistant film laminated to two layers of non-woven spun-bonded polyolefin. Ventia Iron Roof Underlay is coloured grey and/or white on the top and bottom faces.
- 4.2 The product is supplied in rolls 2.74 m wide x 36.5 m long [100 m<sup>2</sup>] and 1.5 m x 50 m [75 m<sup>2</sup>]. The product is printed with the Ventia Iron Roof Underlay logo repeated along the length of the roll. The rolls are wrapped in clear polythene film.

### Accessories

- 4.3 Accessories used with Ventia Iron Roof Underlay which are supplied by the installer are:
  - **Fixings** - stainless steel staples, clouts, screws or proprietary underlay fixings, or other temporary fixings to attach the roof underlay to the framing.

## 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 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for Ventia Iron Roof Underlay. 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 Ventia Iron Roof Underlay must not be exposed to the weather or ultraviolet (UV) light for a total of more than 7 days before being covered by the roof cladding system.
- 7.2 Ventia Iron Roof Underlay is intended for use as an alternative to conventional roof sarkings, which are fixed over timber or steel-framed roofs in order to limit the entry of wind into the roof cavity, and to assist in the moisture management of the roof cladding system.
- 7.3 The material also provides a degree of temporary weather protection during early construction. However, the product will not make the roof weathertight and some wetting of the underlying structure is always possible before the roof cladding is installed. Hence, the entire building must be closed-in and made weatherproof before moisture sensitive materials such as ceiling linings and insulation materials are installed.
- 7.4 Ventia Iron Roof Underlay is suitable for use under roof claddings on buildings as a roof underlay or sarking as called up in NCC Volume One Part F1.6 and NCC Volume Two Part 3.5.1.
- 7.5 Refer to Table 1 for details of the material properties of Ventia Iron Roof Underlay and the relevant AS/NZS 4200.1 classifications.

**Table 1: Ventia Iron Roof Underlay Material Properties**

AS/NZS 4200.1 Properties	Property Performance Requirement	Actual Property Performance	AS/NZS 4200.1 Classification
Shrinkage	≤ 0.5%	Pass	Not Applicable
Absorbency	≥ 100 g/m <sup>2</sup>	Pass	High
Vapour Barrier	≤ 7 MN s/g	Pass	Low
Water Barrier	≥ 100 mm	Pass	High
Emittance			Non-reflective
Edge Tear and Tensile Strength		<b>Edge tear:</b> Machine direction [average] > 247 N Cross direction [average] > 92 N <b>Tensile strength:</b> Machine direction [average] > 9.6 kN/m Cross direction [average] > 4.0 kN/m	Extra Heavy  Extra Heavy  Medium  Extra Light
Flammability	≤ 5	Pass	Low

7.6 Ventia Iron Roof Underlay is suitable for use at pitches less than 10° [minimum 3°]. When used at pitches less than 10°, Ventia Iron Roof Underlay must be installed horizontally. At pitches greater than 10°, Ventia Iron Roof Underlay can be installed vertically or horizontally and must span no greater than 1,200 mm in one direction.

### Structure

8.1 Ventia Iron Roof Underlay is suitable for use on buildings situated in non-cyclonic wind zones up to, and including, N3.

### Durability

#### Serviceable Life

9.1 Ventia Iron Roof Underlay is expected to have a serviceable life equal to that of the roof cladding provided it is not exposed to the weather or UV light for a total of more than 7 days. Ventia Iron Roof Underlay must be continuously protected from the weather and UV light in-service by a roof cladding that is maintained in accordance with the cladding manufacturer's instructions.

### Flammability

10.1 Ventia Iron Roof Underlay has an AS 1530 Part 2 flammability index of not greater than 5 and therefore has a flammability index classification of low in accordance with AS/NZS 4200.1.

### Heating Appliances, Fireplaces, Chimneys and Flues

11.1 Ventia Iron Roof Underlay must be separated from flues and chimneys in accordance with the requirements of the BCA for the protection of combustible materials.

## Fire Safety

### Bush Fire Areas

- 12.1 AS 3959 is cited as a means of demonstrating compliance for Bushfire Prone Areas. Clause 3.10 specifies that where sarking is required, that it shall have a flammability index of not more than 5. Ventia Iron Roof Underlay meets this requirement.

### Damp and Weatherproofing

- 13.1 Roof claddings installed over Ventia Iron Roof Underlay must meet the performance requirements of the BCA, e.g. Deemed-to-Satisfy roof claddings covered by the BCA, or roof claddings covered by a valid BRANZ Appraisal.
- 13.2 Ventia Iron Roof Underlay, when installed in accordance with the Technical Literature and this Appraisal will assist in the total cladding systems compliance with the Damp and Weatherproofing performance clauses of the BCA.

## Installation Information

### Installation Skill Level Requirements

- 14.1 Installation must always be carried out in accordance with the Ventia Iron Roof Underlay Technical Literature and this Appraisal, by competent tradespersons with an understanding of roof underlay installation.

### Underlay Installation

- 15.1 Ventia Iron Roof Underlay must be fixed at maximum 300 mm centres to all framing members. The membrane must be pulled taut over the framing before fixing.
- 15.2 Ventia Iron Roof Underlay may be run vertically or horizontally at roof pitches greater than 10° and must be laid horizontally at roof pitches less than 10°. It must extend from the ridge and overhang the fascia board by 20-25 mm. Vertical laps must be no less than 150 mm wide. Horizontal laps must also be no less than 150 mm, with the direction of the lap ensuring that water is shed to the outer face of the underlay. End laps must be made over framing and be no less than 150 mm wide. To assist with achieving the correct lap dimension, Ventia Iron Roof Underlay has a 150 mm lap line printed continuously along the top face.
- 15.3 When fixing the product in windy conditions, care must be taken due to the large sail area created.
- 15.4 Any damaged areas of Ventia Iron Roof 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 and taping, or by taping small tears.

### Inspections

- 15.5 The Technical Literature must be referred to during the inspection of Ventia Iron Roof 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 Roof Underlay in accordance with AS/NZS 4200.1: tensile strength, edge-tear resistance and resistance to water vapour transmission in accordance with AS/NZS 4200.1, shrinkage in accordance with AS/NZS 4201.3, resistance to water penetration in accordance with AS/NZS 4201.4, surface water absorbency in accordance with AS/NZS 4201.6 and pH of extract in accordance with AS/NZS 1301.421s. A range of these tests were completed before and after Ventia Iron Roof Underlay was exposed to UV light.
- 16.2 The flammability index of Ventia Iron Roof Underlay has been evaluated in accordance with AS 1530.2.

### Other Investigations

- 17.1 A durability opinion has been given by BRANZ technical experts.
- 17.2 An evaluation of the expected performance of Ventia Iron Roof Underlay in direct contact with metal roof cladding has been completed by BRANZ.
- 17.3 The practicability of installation of Ventia Iron Roof Underlay has been assessed by BRANZ and found to be satisfactory.
- 17.4 The Technical Literature, including installation instructions, has been examined by BRANZ and found to be satisfactory.

### Quality

- 18.1 The manufacture of Ventia Iron Roof Underlay has been examined by BRANZ, including methods adopted for quality control. Details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.
- 18.2 The quality of supply to the market is the responsibility of E PRODUCTS GLOBAL LIMITED.
- 18.3 Building designers are responsible for the design of the building, and for the incorporation of the roof underlay into their design in accordance with the instructions of E PRODUCTS GLOBAL LIMITED.
- 18.4 Quality of installation is the responsibility of the installer in accordance with the instructions of E PRODUCTS GLOBAL LIMITED.

## Sources of Information

- AS 1530.2: 1993 Test for Flammability of Materials.
- AS 3959: 2009 Construction of buildings in bushfire-prone areas.
- AS/NZS 1301.421s: 1998 Determination of the pH value of aqueous extracts of paper, board and pulp - cold extraction method.
- AS/NZS 4200.1: 2017 Pliable building membranes and underlays - materials.
- AS/NZS 4201.3: 2017 Pliable building membranes and underlays - Methods of test - Shrinkage.
- AS/NZS 4201.4: 2017 Pliable building membranes and underlays - Methods of test - Resistance to water penetration.
- AS/NZS 4201.6: 1994 Pliable building membranes and underlays - Methods of test - Surface water absorbency.
- National Construction Code Series, Building Code of Australia 2019, Australian Building Codes Board.

## Amendments

### Amendment No. 1, dated 27 January 2021

This Appraisal has been amended to update the company details.



In the opinion of BRANZ, **Ventia Iron Roof 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.

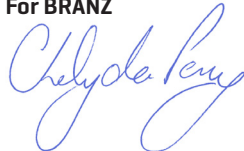
The Appraisal is issued only to **E PRODUCTS GLOBAL LIMITED**, and is valid until further notice, subject to the Conditions of Appraisal.

### 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. **E PRODUCTS GLOBAL 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 **E-PRODUCTS GLOBAL 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 **E PRODUCTS GLOBAL LIMITED** or any third party.

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For BRANZ



**Chelydra Percy**

Chief Executive

Date of Issue:

17 December 2020