



BRANZ Appraised

Appraisal No. 1265 [2024]

OMEGA LIGHT WALL UNDERLAY



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BRANZ Appraisals

Technical Assessments of products for building and construction.



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Product

- 1.1 Omega Light Wall Underlay is a vapour permeable synthetic building underlay for use under wall claddings.

Scope

- 2.1 Omega Light Wall Underlay is a pliable building membrane for use as a sarking on walls of 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 National Construction Code [NCC]; and,
 - with masonry veneer in accordance with the NCC; and,
 - with absorbent and non-absorbent wall claddings directly fixed to framing; or,
 - with absorbent and non-absorbent wall claddings installed over an 18 mm minimum drained cavity; 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 Omega Light Wall Underlay into their design in accordance with the declared properties and the instructions of Siegware Australia Pty Ltd.

Building Regulations

National Construction Code (NCC)

- 3.1 In the opinion of BRANZ, Omega Light Wall Underlay, if used, designed, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet or contribute to meeting the following provisions of the NCC:

NCC 2022 Volume One - Building Code of Australia

Part C2 FIRE RESISTANCE AND STABILITY: Deemed-to-Satisfy Provision C2D10 [6] [f]. Omega Light Wall Underlay meets this requirement. See Paragraph 10.1.

Part F3 ROOF AND WALL CLADDING: Performance Requirement F3P1 and Deemed-to-Satisfy Provision F3D3. Omega Light Wall Underlay contributes to meeting these requirements. See Paragraphs 13.1 and 13.2.

Part F8 CONDENSATION MANAGEMENT: Performance Requirement F8P1, Deemed-to-Satisfy Provision F8D3 and State Variation F8P1 [TAS]. Omega Light Wall Underlay contributes to meeting these requirements. See Paragraphs 14.1-14.3.

Part G5 CONSTRUCTION IN BUSHFIRE PRONE AREAS: Performance G5P1 and State Variations G5P1 (NSW, QLD, TAS, VIC). Omega Light Wall Underlay contributes to meeting these requirements. See Paragraph 12.1.

NCC 2022 Volume Two – Building Code of Australia

Part H2 DAMP AND WEATHERPROOFING: Performance Requirement H2P2. Omega Light Wall Underlay contributes to meeting this requirement. See Paragraphs 13.1 and 13.2.

Part H3 FIRE SAFETY: Deemed-to-Satisfy Provision H3D2 [1] [f]. Omega Light Wall Underlay meets this requirement. See Paragraph 10.1.

Part H4 HEALTH AND AMENITY: Performance Requirement H4P7, Deemed-to-Satisfy Provision H4D9 and State Variation H4D9 (TAS). Omega Light Wall Underlay contributes to meeting these requirements. See Paragraphs 14.1-14.3.

Part H7 ANCILLARY PROVISIONS AND ADDITIONAL CONSTRUCTION REQUIREMENTS: Performance Requirement H7P5 and State Variation H7P5 (TAS). Omega Light Wall Underlay contributes to meeting these requirements. See Paragraph 12.1.

Technical Specifications

- 4.1 Omega Light Wall Underlay is a vapour permeable synthetic wall underlay. It is supplied in rolls either 1.5 or 3.0 m wide and 50 m long, coloured dark grey on the top surface, with a light grey underside.
- 4.2 Accessories used with Omega Light Wall Underlay, which are supplied by the installer are:
 - **Fixings** – staples, clouts, screws or proprietary fixings, or other temporary fixings to attach the pliable building membrane to the wall framing.
 - **Pliable building membrane support** – polypropylene strap, 75 mm galvanised mesh or galvanised wire, or vertical cavity battens where required to support the wall underlay (refer to Paragraph 7.5).

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 under cover, in clean, dry conditions and must not be crushed.

Technical Literature

- 6.1 This Appraisal must be read in conjunction with:
 - C.I.02 Omega Light Timber Frame Wall Installation
- 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

- 7.1 Omega Light Wall Underlay is a pliable building membrane for use as a wall sarking, which is fixed over timber or steel-framed walls in order to limit the entry of wind into building cavities, and to act as a secondary barrier to wind-driven rain. Refer to Table 1 for material properties.
- 7.2 Omega Light Wall Underlay also provides a degree of temporary weather protection during early construction. However, the product will not make the building weathertight, and some wetting of the underlying structure is always possible before the building is closed in. Hence, the building must be closed-in and made weatherproof before moisture sensitive materials such as wall or ceiling linings and insulation materials are installed.
- 7.3 Omega Light Wall Underlay must not be exposed to the weather or ultraviolet (UV) light for a total of more than 60 days before being covered by the wall cladding.
- 7.4 Omega Light Wall Underlay is deemed to be a satisfactory sarking material for the waterproofing of walls in accordance with NCC Volume One, Deemed-to-Satisfy Provision F3D3.

- 7.5 In masonry veneer installations and wall cladding installations over a cavity, where the studs or cavity battens are installed at greater than 450 mm centres, the sarking must be supported to prevent it bulging into the cavity space when bulk insulation is installed in the wall frame cavity.

Table 1: Omega Light Wall Underlay Properties

AS/NZ 4200.1 Properties	Property Performance	Actual Property Performance	AS/ NZS 4200.1 Classification
Resistance to dry delamination		Pass	Not Applicable
Resistance to wet delamination		Pass	Not Applicable
Shrinkage	≤0.5%	Pass	Not Applicable
Folding Endurance [machine direction]	≥2.00	Pass	Not Applicable
Folding Endurance [cross direction]	≥ 1.70	Pass	Not Applicable
Absorbency	≥ 150 g/m ²	Pass	High
Vapour Barrier	≤ 7 MN s/g	Pass	Low
Water Barrier	≥ 100 mm	Pass	High
Emittance			Non-reflective
Duty Classification [light wall]	Edge Tear Resistance: ≥ 45 N Burst Strength: ≥ 200 N in accordance with AS 2001.2.19	Pass	Light Wall
Flammability	≤5	Pass	Low

Structure

- 8.1 Omega Light Wall Underlay is suitable for use on buildings situated in non-cyclonic wind zones up to, and including, N3.

Durability

Serviceable Life

- 9.1 Provided it is not exposed to the weather or UV light for a total of more than 60 days, and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather-resistant, Omega Light Wall Underlay is expected to have a serviceable life equal to that of the cladding.

Flammability

- 10.1 Omega Light Wall Underlay is less than 1 mm in thickness and has an AS 1530 Part 2 flammability index of less than 5. It is therefore deemed non-combustible in accordance with NCC Volume One Deemed-to-Satisfy Provision C2D10 [6] [F] and NCC Volume Two Deemed-to-Satisfy Provision H3D2 [1] [f].

Heating Appliances, Fireplaces, Chimneys and Flues

- 11.1 Omega Light Wall Underlay must be separated from fireplaces, heating appliances, flues and chimneys in accordance with the requirements of the NCC for the protection of combustible materials.

Bushfire Prone Areas

- 12.1 Australian Standard AS 3959 is cited as a means of demonstrating compliance for Bushfire Prone Areas. This standard specifies in Clause 3.10 that where a membrane is required, that it shall have a flammability index of not more than 5. Omega Light Wall Underlay meets this requirement.

Damp and Weatherproofing

- 13.1 Wall claddings installed over Omega Light Wall Underlay must meet the performance requirements of the NCC, e.g. Deemed-to-Satisfy wall claddings covered by the NCC, or wall claddings covered by a valid BRANZ Appraisal.
- 13.2 Omega Light Wall Underlay, when installed in accordance with the Technical Literature and this Appraisal, will assist in the total cladding system's compliance with the Damp and Weatherproofing performance clauses of the NCC.

Condensation and Water Vapour Management

- 14.1 Omega Light Wall Underlay is classified as a vapour permeable membrane in accordance with AS/NZS 4200.1.
- 14.2 In a sole-occupancy unit of a Class 2 building or a Class 4 part of a building, Omega Light Wall Underlay meets the requirements of NCC Volume One, Deemed-to-Satisfy Provision F8D3 (1) [a] and [2] [b] and is therefore suitable for use in climate zones 6, 7 and 8.
- 14.3 Omega Light Wall Underlay meets the requirement of Deemed-to-Satisfy Provision H4D9 for a Class 1 Building and is therefore suitable for use in climate zones 6, 7 and 8.

Installation Information

Installation Skill Level Requirement

- 15.1 Installation must always be carried out in accordance with the Omega Light Wall Underlay Technical Literature and this Appraisal, by competent tradespersons with an understanding of wall sarking installation.

Pliable Building Membrane Installation

- 16.1 Omega Light Wall Underlay must be fixed to all framing members at maximum 300 mm centres with large head clouts 20 mm long, 6–8 mm staples, self-drilling screws, or proprietary fixings. The membrane must be pulled taut over the framing before fixing.
- 16.2 Omega Light Wall Underlay must be run horizontally and 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. Horizontal 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 membrane. End laps must be made over framing and be no less than 150 mm wide.
- 16.3 The pliable building membrane should be run over openings and these left covered until windows and doors are ready to be installed. Openings are formed in the membrane by cutting on a 45° diagonal from each corner of the penetration. The flaps of the cut membrane must be folded inside the opening and stapled to the penetration framing. Excess membrane may be cut off flush with the internal face of the wall frame.
- 16.4 Where the membrane needs to be supported, polypropylene strap or galvanised wire must be installed over the membrane at 300 mm centres. Alternatively, 75 mm galvanised wire mesh can be installed over the entire membrane surface.
- 16.5 Omega Light Wall Underlay can be added as a second layer over window and door joinery head flashings.
- 16.6 When used behind masonry veneer cladding, the brick ties must be fixed to the face of the stud only.
- 16.7 When fixing the product in windy conditions, care must be taken due to the large sail area created by wide roll widths.

- 16.8 Any damaged areas of Omega Light 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 and taping, or by taping small tears.

Inspections

- 16.9 The Technical Literature must be referred to during the inspection of Omega Light Wall Underlay installations.

Basis of Appraisal

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

Tests

- 17.1 The following tests have been carried out on Omega Light Wall Underlay in accordance with AS/NZS 4200.1: resistance to dry delamination, resistance to wet delamination, shrinkage, folding endurance, tensile strength, edge-tear resistance, resistance to water vapour transmission, resistance to water penetration, and surface water absorbency. A range of these tests were completed before and after Omega Light Wall Underlay was exposed to UV light.
- 17.2 The flammability index of Omega Light Wall Underlay has been evaluated in accordance with AS/NZS 1530.2.

Other Investigations

- 18.1 A durability opinion has been given by BRANZ technical experts.
- 18.2 The practicability of installation of Omega Light Wall Underlay has been assessed by BRANZ and found to be satisfactory.
- 18.3 The Technical Literature, including installation instructions, has been examined by BRANZ and found to be satisfactory.

Quality

- 19.1 The manufacture of Omega Light Wall Underlay has not been examined by BRANZ, but details of the methods adopted for quality control and the quality of materials used, have been obtained and found to be satisfactory.
- 19.2 The quality of supply to the market is responsibility of Siegware Australia Pty Ltd.
- 19.3 Building designers are responsible for the design of the building, and for the incorporation of the Omega Light Wall Underlay into their design in accordance with the instructions of Siegware Australia Pty Ltd.
- 19.4 Quality of installation is the responsibility of the installer in accordance with the instructions of Siegware Australia Pty Ltd.

Sources of Information

- AS 1530.2:1993 Test for Flammability of materials.
- AS 2001.2.19:1988 [R2016] Methods of test for textile- Physical tests – Determination of bursting force of textile fabrics – Ball burst method.
- AS 3959:2018 Construction of buildings in bushfire-prone areas.
- AS/NZS 4200.1:2017 Pliable building membranes and underlays.
- National Construction Code 2022, Australian Building Codes Board.



In the opinion of BRANZ, **Omega Light 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 **Siegware Australia Pty 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. **Siegware Australia Pty 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 **Siegware Australia Pty 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 **Siegware Australia Pty Ltd** or any third party.

For BRANZ



Claire Falck
Chief Executive
04 March 2024