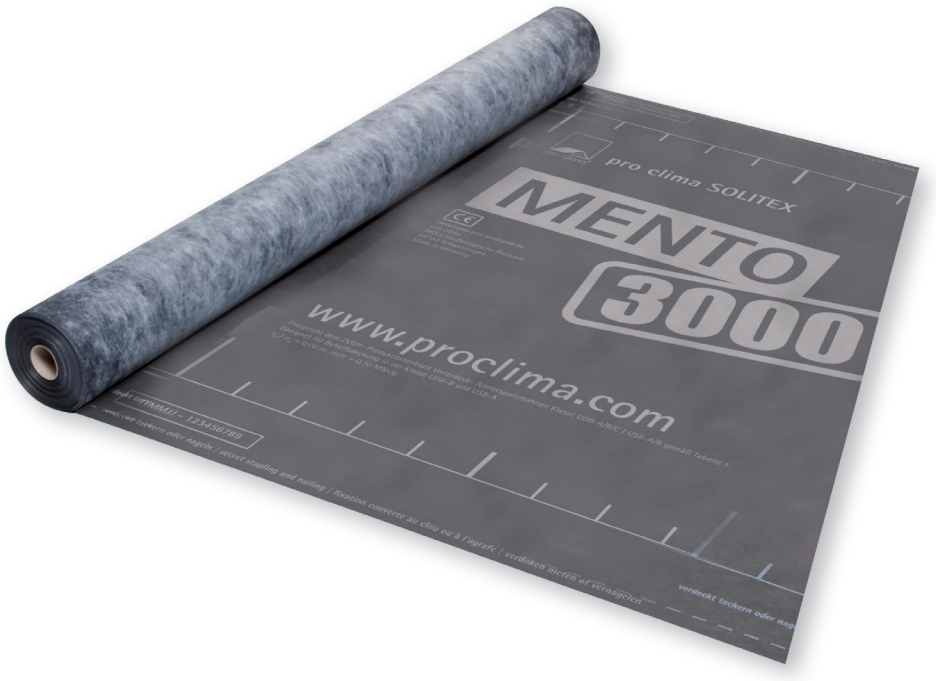
BRANZ Appraised

Appraisal No. 855 (2025)

SOLITEX MENTO® 3000 ROOF AND WALL UNDERLAY



Appraisal No. 855 (2025)

This Appraisal replaces BRANZ Appraisal No. 855 (2019)

BRANZ Appraisals

Technical Assessments of products for building and construction.

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WFTAO
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Product

1.1 SOLITEX MENTO® 3000 is a synthetic building underlay for use under roof and wall claddings.

Scope

Roof Underlay

2.1 SOLITEX MENTO® 3000 has been appraised for use as a self-supporting roof underlay on buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1 for timber-framed buildings; or,
- the scope limitations of NASH Building Envelope Solutions for steel-framed buildings; and,
- with masonry tile roof cladding; and,
- with metal tile and profiled metal roof cladding; and,
- situated in NZS 3604 and NASH Standard Part 2 Wind Zones up to, and including, Extra High.

Wall Underlay

2.2 SOLITEX MENTO® 3000 has also been appraised for use as a flexible wall underlay for buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1 for timber-framed buildings; or,
- the scope limitations of NASH Building Envelope Solutions for steel-framed buildings; and,
- with direct-fixed absorbent and non-absorbent wall claddings; or,
- with absorbent and non-absorbent 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 to NASH Building Envelope Solutions for steel-framed buildings; and,
- situated in NZS 3604 and NASH Standard Part 2 Wind Zones up to, and including, Very High; or,
- situated in NZS 3604 and NASH Standard Part 2 Wind Zones up to, and including, Extra High when used over a rigid wall underlay in accordance with NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions.

Specific Design

2.3 SOLITEX MENTO® 3000 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 SOLITEX MENTO® 3000 into their design in accordance with the declared properties and the instructions of Pro Clima (NZ) Ltd.

Building Regulations

New Zealand Building Code (NZBC)

3.1 **In the opinion of BRANZ, SOLITEX MENTO® 3000, 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 NZBC:**

Clause B2 DURABILITY: Performance B2.3.1 (a) not less than 50 years, B2.3.1 (b) 15 years and B2.3.2. SOLITEX MENTO® 3000 meets these requirements. See Paragraphs 10.1-10.3.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.2. When used as part of the roof or wall cladding system, SOLITEX MENTO® 3000 will contribute to meeting this requirement. See Paragraphs 13.1 and 13.2.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. SOLITEX MENTO® 3000 meets this requirement.

Technical Specification

4.1 System components and accessories for SOLITEX MENTO® 3000, which are supplied by Pro Clima (NZ) Ltd are:

- **SOLITEX MENTO® 3000** is a monolithic, non-porous, synthetic building underlay for use under roof and wall claddings. The product consists of a TEEE (Thermoplastic Elastomer Ether Ester) water-resistant film laminated to two layers of polypropylene microfibre cover fleece. SOLITEX MENTO® 3000 is coloured black on the top face and grey on the bottom face.
- SOLITEX MENTO® 3000 is supplied in rolls 1.5 and 3 m wide x 50 m long. 'Connect' versions are available with two integrated self-adhesive strips. The products are printed with the MENTO® 3000 name repeated along the length of the roll. The rolls are wrapped in clear polythene film.
- **TESCON EXTORA® Sealing Tape** is used where required to seal the laps of SOLITEX MENTO® 3000 and to repair rips and tears in the underlay. Refer to BRANZ Appraisal No. 838 for further information.
- **DUPLEX** is a double-sided adhesive tape for bonding laps in low pitch roofs.
- **TESCON® NAIDECK** is a double-sided butyl rubber tape for sealing between counter battens and roof underlay.

4.2 Accessories used with SOLITEX MENTO® 3000 which are supplied by the installer are:

- **Fixings** - galvanised or stainless steel staples, clouts, screws or proprietary underlay fixings, or other temporary fixings to attach the roof underlay to the framing.
- **Wall underlay restraint (timber frame)** – polypropylene strap, 75 mm galvanised mesh or galvanised wire, or vertical cavity battens where required to restrain the wall underlay in accordance with NZBC Acceptable Solution E2/AS1.
- **Wall underlay restraint (steel frame)** – polypropylene strap, 75 mm galvanised mesh or galvanised wire, or vertical cavity battens where required to restrain the wall underlay in accordance with NASH Building Envelope Solutions.
- **Thermal break sheathing (steel framing)** – in accordance with NASH Building Envelope Solutions.

Handling and Storage

5.1 Handling and storage of the products, 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 their side, under cover, in clean, dry conditions and must not be crushed.

Technical Literature

6.1 This Appraisal must be read in conjunction with:

- SOLITEX MENTO® Application Guide, dated 24.06.2025.
- SOLITEX EXTASANA®Application Guide - Timber Frame, dated 30 September 2025.

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

Timber and Steel Framing

7.1 Timber and steel framing must be provided in accordance with the requirements of the NZBC and the cladding manufacturer.

General

8.1 SOLITEX MENTO® 3000 is intended for use as an alternative to conventional kraft paper underlays, which are fixed over timber or steel-framed roofs or walls in order to limit the entry of wind into the roof and wall cavities. For roofs, the underlay assists in the moisture management of the roof cladding system and for walls it acts as a secondary barrier to wind-driven rain. Refer to Table 1 for material properties.

Table 1: Material Properties

NZBC E2/AS1 Properties	Roof Property Performance Requirement	Wall Property Performance Requirement	Results
Absorbency	≥ 150 g/m^2	≥ 100 g/m^2	Pass
Vapour Resistance	≤ 7 MN s/g	≤ 7 MN s/g	Pass
Water Resistance	≥ 100 mm	≥ 20 mm	Pass
pH of Extract	≥ 5.5 and ≤ 8	≥ 5.5 and ≤ 8	Pass
Shrinkage	≤ 0.5%	≤ 0.5%	Pass
Mechanical	Edge tear and tensile strength	Edge tear and tensile strength	**Edge tear (Average):*** Machine direction: >180 N Cross direction: >120 N **Tensile strength (Average):*** Machine direction: > 4.0 kN/m Cross direction: > 2.5 kN/m
Air Barrier	Not applicable	≥ 0.1 MN s/m^3	Pass

**Values are for product tested after equivalent of 90 days UV exposure.*

8.2 The material 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 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.

8.3 SOLITEX MENTO® 3000 must not be exposed to the weather or ultraviolet (UV) light for a total of more than 90 days before being covered by the cladding.

8.4 SOLITEX MENTO® 3000 is suitable for use under claddings on buildings as a roof or wall underlay, in accordance with NZBC Acceptable Solution E2/AS1. Refer to Table 1 for the material properties of the SOLITEX MENTO® 3000.

8.5 SOLITEX MENTO® 3000 is suitable for use at roof pitches 3° and above. When used at pitches less than 8°, SOLITEX MENTO® 3000 can be installed horizontally when spanning no greater than 1,200 mm in one direction, or it can be installed vertically when fully supported by a corrosion resistant material.

8.6 At pitches 8° and greater, SOLITEX MENTO® 3000 can be installed vertically or horizontally and must span no greater that 1,200 mm in one direction.

Pro Clima Roof Installation Method

8.7 Pro Clima (NZ) Ltd offers an optional installation method where the SOLITEX MENTO® 3000 is separated from the roofing to provide additional ventilation to the roof space. This method requires that SOLITEX MENTO® 3000 is installed horizontally and that the underlay is fixed direct to the top of the rafter or truss top chord and is secured with a minimum 20 mm thick counter batten fixed directly over the rafter or truss member. The length of fixings used to secure purlins and tile battens to the rafter or truss must be increased by the counter batten thickness. Pro Clima (NZ) Ltd recommend for this installation method that, in addition to all laps being a minimum of 150 mm, all laps are sealed with TESCON EXTORA® Sealing Tape.

8.8 For roof pitches 15° or less, Pro Clima (NZ) Ltd recommend that SOLITEX MENTO® 3000 'Connect' with the integrated sealing tape systems is used where possible. On laps where a connection with the integrated sealing tape system is not possible, the lap should be connected with DUPLEX double-sided tape and the overlap taped with TESCON EXTORA® Sealing Tape.

8.9 For roof pitches 8° or less, Pro Clima (NZ) Ltd recommend that in addition to Paragraph 8.7, the roof underlay is laid on solid sarking and that TESCON® NAIDECK tape is fixed between the counter battens and the roof underlay.

Use as a Wall Underlay

8.10 SOLITEX MENTO® 3000 is suitable for use under wall claddings as a wall underlay in accordance with NZBC Acceptable Solution E2/AS1 on timber-framed buildings and NASH Building Envelope Solutions on steel-framed buildings, including non-absorbent wall claddings such as vinyl and metal-based weatherboards in direct-fixed situations.

8.11 SOLITEX MENTO® 3000 is suitable for use as an air barrier where walls are not lined, such as attic spaces at gable ends, in accordance with NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions.

8.12 In cavity installations where the cavity battens are installed at greater than 450 mm centres, SOLITEX MENTO® 3000 must be restrained between the battens to prevent the underlay bulging into the cavity space when bulk insulation is installed in the wall frame cavity. Refer to NZBC Acceptable Solution E2/AS1 for timber frame or NASH Building Envelope Solutions for steel frame. Wall underlay restraint options include polypropylene strap, 75 mm galvanised mesh or galvanised wire, vertical cavity battens or thermal break sheathing (steel frame only).

Structure

9.1 SOLITEX MENTO® 3000 is suitable for use in all Wind Zones of NZS 3604 and NASH Standard Part 2 up to, and including, Extra High.

Durability

10.1 SOLITEX MENTO® 3000 meets code compliance with NZBC Clause B2.3.1 (a), not less than 50 years for roof underlays used where the roof cladding durability requirement or expected serviceable life is not less than 50 years, e.g. under masonry roof tile cladding or masonry veneer. It also meets code compliance with NZBC Clause B2.3.1 (b), 15 years for underlays used where the roof or wall cladding durability requirement is 15 years.

10.2 SOLITEX MENTO® 3000 has been tested in accordance with AS/NZS 4200.1 for heat shrinkage. It will not shrink under high temperatures and is therefore suitable for use under dark coloured sheet metal roofing.

Serviceable Life

10.3 Provided it is not exposed to the weather or UV light for a total of more than 90 days, and provided the cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather resistant, SOLITEX MENTO® 3000 is expected to have a serviceable life equal to that of the cladding.

Control of Internal Fire and Smoke Spread

11.1 SOLITEX MENTO® 3000 has an AS 1530 Part 2 flammability index of not greater than 5 and therefore meets the requirements of NZBC Acceptable Solutions C/AS2, for the surface finish requirements of suspended flexible fabric used as an underlay to exterior cladding that is exposed to view in occupied spaces.

Prevention of Fire Occurring

12.1 Separation or protection must be provided to SOLITEX MENTO® 3000 from heat sources such as fireplaces, heating appliances and chimneys. NZBC Acceptable Solutions C/AS1 and C/AS2 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

13.1 SOLITEX MENTO® 3000 must only be used under claddings that meet the requirements of the NZBC, such as those covered by NZBC Acceptable Solution E2/AS1, or claddings covered by a valid BRANZ Appraisal.

13.2 SOLITEX MENTO® 3000, when installed in accordance with the Technical Literature and this Appraisal, will assist in the total cladding system's compliance with NZBC Clause E2.

Installation Information

Installation Skill Level Requirement

14.1 All design and building work must be carried out in accordance with the Technical Literature and this Appraisal by competent and experienced tradespeople conversant with SOLITEX MENTO® 3000. 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.

Underlay Installation

General

15.1 SOLITEX MENTO® 3000 must be fixed at maximum 150 mm centres to all framing members with large-head clouts 20 mm long, 8-12 mm galvanised or stainless steel staples, self-drilling screws or proprietary underlay fixings. The membrane must be pulled taut over the framing before fixing.

15.2 When fixing the product in windy conditions, care must be taken due to the large sail area created.

15.3 Any damaged areas of SOLITEX MENTO® 3000, 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 with TESCON EXTORA® Sealing Tape. Small tears and holes may also be repaired with TESCON EXTORA® Sealing Tape.

Roof Underlay

15.4 SOLITEX MENTO® 3000 may be run horizontally or vertically. Refer to Paragraphs 8.5 and 8.6 for further requirements. The roof underlay must extend from the ridge and overhang the fascia board by 20-25 mm.

15.5 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, SOLITEX MENTO® 3000 has a 150 mm lap line printed continuously along the top face.

Pro Clima Installation Method

15.6 Pro Clima (NZ) Ltd offers an optional installation method. Refer to Paragraphs 8.7 to 8.9 for more detail. In this installation method Pro Clima (NZ) Ltd recommends that SOLITEX MENTO® 3000 is fixed directly to the top of the rafter or truss and that counter battens are fixed over the rafter or truss member to secure the underlay.

Wall Underlay

15.7 SOLITEX MENTO® 3000 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 underlay. End laps must be made over framing and be no less than 150 mm wide.

15.8 SOLITEX MENTO® 3000 should be run over openings and these left covered until windows and doors are ready to be installed. Openings are formed in the underlay by cutting on a 45 degree diagonal from each corner of the penetration. The flaps of the cut underlay must be folded inside the opening and stapled to the penetration framing. Excess underlay may be cut off flush with the internal face of the wall frame.

15.9 SOLITEX MENTO® 3000 can be added as a second layer over head flashings in accordance with the requirements of NZBC Acceptable Solution E2/AS1 for timber framing or NASH Building Envelope Solutions for steel framing.

Inspections

15.10 The Technical Literature must be referred to during the inspection of SOLITEX MENTO® 3000 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 SOLITEX MENTO® 3000 in accordance with NZBC Acceptable Solution E2/AS1; 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 SOLITEX MENTO® 3000 was exposed to UV light.

16.2 The flammability index of SOLITEX MENTO® 3000 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 SOLITEX MENTO® 3000 in direct contact with metal roof cladding has been completed by BRANZ.

17.3 The practicability of installation of SOLITEX MENTO® 3000 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 SOLITEX MENTO® 3000 has been examined on behalf of BRANZ, including methods adopted for quality control. Details of the quality and composition of the materials used were obtained and found to be satisfactory.

18.2 The quality of supply to the market is the responsibility of Pro Clima (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 Pro Clima (NZ) Ltd.

18.4 Quality of installation is the responsibility of the installer in accordance with the instructions of Pro Clima (NZ) Ltd.

Sources of Information

- AS 1530.2:1993 Test for Flammability of Materials.
- 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 4201.3:1994 Pliable building membranes and Underlays - Methods of test - Shrinkage.
- AS/NZS 4201.4:1994 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.
- AS/NZS 4534:2006 Zinc and zinc/aluminium-alloy coatings on steel wire.
- 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, SOLITEX MENTO® 3000 Roof and 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 Pro Clima (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. Pro Clima (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 Pro Clima (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 Pro Clima (NZ) Ltd or any third party.

For BRANZ

Claire Falck
Chief Executive
Date of Issue:
27 November 2025