

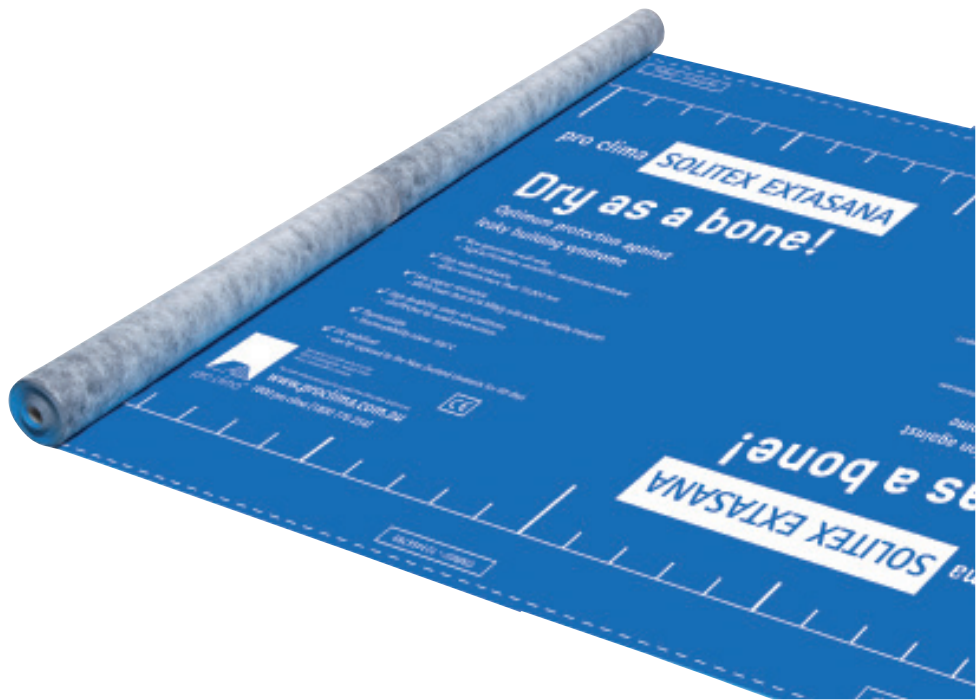


**BRANZ Appraised**  
Appraisal No. 822 [2020]

## **SOLITEX EXTASANA® WALL WEATHER RESISTIVE BARRIER**

**Appraisal No. 822 [2020]**

This Appraisal replaces BRANZ  
Appraisal No. 822 [2013]



### **BRANZ Appraisals**

Technical Assessments of products  
for building and construction.



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## **Product**

- 1.1 SOLITEX EXTASANA® Wall Weather Resistive Barrier is a fire retardant, synthetic wall membrane for use under masonry veneer and other direct fixed and cavity-based wall claddings on timber and steel-framed buildings.

## **Scope**

- 2.1 SOLITEX EXTASANA® Wall Weather Resistive Barrier has been appraised for use as a wall membrane 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 absorbent wall claddings directly fixed to framing; and,
  - with non-metallic, non-absorbent wall claddings directly fixed to framing; and,
  - with absorbent and non-absorbent wall claddings installed over an 18 mm minimum drained cavity; and,
  - with masonry veneer in accordance with the BCA; and,
  - situated in non-cyclonic wind zones up to, and including N3.

### **Specific Design**

- 2.2 SOLITEX EXTASANA® Wall Weather Resistive Barrier 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 EXTASANA® Wall Weather Resistive Barrier into their design in accordance with the declared properties and the instructions of Pro Clima Australia Pty Ltd.

## Building Regulations

### Building Code of Australia (BCA):

- 3.1 In the opinion of BRANZ, SOLITEX EXTASANA® Wall Weather Resistive Barrier, 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 2019 Building Code of Australia - Volume One (NCC Volume One)**

**Part C1 - FIRE RESISTANCE AND STABILITY:** Deemed-to-satisfy Provision C1.9 [e] [vi]. SOLITEX EXTASANA® Wall Resistive Barrier will meet this requirement. See Paragraphs 10.1 and 10.2.

**Part F1 - DAMP AND WEATHERPROOFING:** Performance Requirement FP1.4 SOLITEX EXTASANA® Wall Resistive Barrier will contribute to meeting this requirement. Deemed-to-satisfy Provision F1.6. SOLITEX EXTASANA Wall Resistive Barrier will meet this requirement. See Paragraphs 13.1 and 13.2.

**Part F6 - CONDENSATION MANAGEMENT:** Performance Requirement FP6.1. SOLITEX EXTASANA® Wall Weather Resistive Barrier will contribute to meeting this requirement. See Paragraphs 14.1 - 14.3.

**Part G5 - CONSTRUCTION IN BUSHFIRE PRONE AREAS:** Performance Requirement GP5.1. SOLITEX EXTASANA® Wall Weather Resistive Barrier will contribute to meeting this requirement. Deemed-to-satisfy Provision G5.2. SOLITEX EXTASANA® Wall Resistive will contribute to meeting this requirement. See Paragraph 12.1.

#### **NCC 2019 Building Code of Australia - Volume Two (NCC Volume Two)**

**Part 2.2 DAMP AND WEATHERPROOFING:** Performance Requirement P2.2.2. SOLITEX EXTASANA® Wall Weather Resistive Barrier will contribute to meeting this requirement. See Paragraphs 13.1 and 13.2.

**Part 2.4 HEALTH AND AMENITY:** Performance Requirement P2.4.7. SOLITEX EXTASANA® Wall Weather Resistive Barrier will contribute to meeting this requirement. See Paragraphs 14.1 and 14.2.

**Part 2.7 ANCILLARY PROVISIONS AND ADDITIONAL CONSTRUCTION REQUIREMENTS:** Performance Requirement P2.7.5. SOLITEX EXTASANA® Wall Weather Resistive Barrier will contribute to meeting this requirement. See Paragraph 12.1.

**Part 3.7 FIRE SAFETY:** Deemed-to-satisfy Provision 3.7.1.1 [f]. SOLITEX EXTASANA® Wall Weather Resistive Barrier will meet this requirement. See Paragraph 10.1.

**Part 3.8 HEALTH AND AMENITY:** Deemed-to-satisfy Provision 3.8.7.2. SOLITEX EXTASANA® Wall Weather Resistive Barrier will meet this requirement. See Paragraphs 14.1 and 14.3.

## Technical Specification

- 4.1 SOLITEX EXTASANA® Wall Weather Resistive Barrier is a monolithic, non-porous, synthetic membrane for use under wall claddings. The product consists of a water-resistant Thermoplastic Elastomer Ether Ester (TEEE) film laminated between two layers of non-woven spun-bonded polypropylene. SOLITEX EXTASANA® Wall Weather Resistive Barrier is coloured blue on the top face and grey on the bottom face.
- 4.2 The product is 0.6 mm thick and supplied in rolls 1.5 m wide x 36.5 m long and 2.74 m wide x 36.5 m long. The product is printed with the SOLITEX EXTASANA® logo and other product information [including batch number] repeated along the length of the roll. The rolls are wrapped in clear polythene film.



### Accessories

- 4.3 Accessories used with SOLITEX EXTASANA® Wall Weather Resistive Barrier which are supplied by the installer are:
- **Fixings** - staples, clouts, screws or proprietary membrane fixings, or other temporary fixings to attach the wall membrane to the framing. For steel framing, Pro Clima recommend Pro Clima DUPLEX double sided tape.
  - **TESCON EXTORA® Sealing Tape** - for sealing laps where required and to repair rips and tears in the membrane.
  - **KAFLEX and ROFLEX Grommets** - seals for cable and pipe penetrations.

## Handling and Storage

- 5.1 Handling and storage of the product, whether on 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 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for SOLITEX EXTASANA® Wall Weather Resistive Barrier. 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

### Timber and Steel Framing

- 7.1 Studs must be provided at maximum 600 mm centres. Noggings must be fitted flush between the studs at maximum 1,200 mm centres.

### General

- 8.1 SOLITEX EXTASANA® Wall Weather Resistive Barrier is intended to be fixed over timber or steel-framed walls in order to limit the entry of wind and water into framing cavities, and to act as a secondary barrier (weather resistive barrier) to wind-driven rain.
- 8.2 The membrane also provides a degree of temporary weather protection during early construction. However, the membrane 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.
- 8.3 Refer to Table 1 for details of the material properties of SOLITEX EXTASANA® Wall Weather Resistive Barrier and the relevant AS/NZS 4200.1 classifications.
- 8.4 SOLITEX EXTASANA® Wall Weather Resistive Barrier is deemed to be a satisfactory membrane material for the waterproofing of walls in accordance with NCC Volume One Deemed-to-Satisfy Provision F1.6.
- 8.5 When used in conjunction with bulk insulation installed in the framed wall cavity and a wall cladding installed over a cavity (e.g. brick veneer), the designer must allow for adequate restraint to prevent the insulation/membrane from bulging into the drainage cavity. Reference should be made to AS 3999 and the relevant cladding supplier's requirements.



**Table 1: SOLITEX EXTASANA® Material Properties**

AS/NZS 4200.1 Properties	Property Performance Requirement	Actual Property Performance	AS/NZS 4200.1 Classification
Resistance to dry delamination		Pass	Not Applicable
Resistance to wet delamination		Pass	Not Applicable
Moisture Shrinkage	≤ 0.5%	Pass	Not Applicable
Folding Endurance [machine direction]	≥ 2.00	Pass	Not Applicable
Folding Endurance [cross direction]	≥ 1.70	Pass	Not Applicable
Electrical Conductivity	Insulation Resistance > 10 MΩ	Insulation Resistance > 10 MΩ	Electrically Non-conductive
Edge Tear [machine direction]		> 250 N [un-aged] > 180 N [aged]*	Extra Heavy
Edge Tear [cross direction]		> 180 N [un-aged] > 110 N [aged]*	Extra Heavy
Tensile Strength [machine direction]	Not applicable	> 4.8 kN/m [un-aged] > 3.7 kN/m [aged]*	Unclassified
Tensile Strength [cross direction]	Not applicable	> 3.7 kN/m [un-aged] > 2.5 kN/m [aged]*	Unclassified
Absorbency	≥ 100 g/m <sup>2</sup>	Pass	High
Emittance			Non-reflective
Vapour Control	≥ 0.1429 µg/N.s	1.35 µg/N.S	Class 4 - Vapour Permeable
Water Control	≥ 100 mm	Pass	High
Flammability	≤ 5	Pass	Low
Heat Shrinkage		Machine direction: 0.0% Cross direction: 0.0%	
Burst Strength [AS 2001.2.19]	≥ 200 N	> 370 N [un-aged] > 290 N [aged]*	Light Wall

\*Aged values are for product tested after the equivalent of 180 days UV exposure.

## Durability

### Serviceable Life

- 9.1 Provided it is not exposed to the weather or ultraviolet (UV) light for a total of more than 180 days, and provided the exterior cladding is maintained in accordance with the cladding manufacturer's instructions and the cladding remains weather resistant, SOLITEX EXTASANA® Wall Weather Resistive Barrier is expected to have a serviceable life equal to that of the cladding.
- 9.2 SOLITEX EXTASANA® 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 wall claddings.

## Flammability

- 10.1 SOLITEX EXTASANA® Wall Weather Resistive Barrier has an AS 1530 Part 2 flammability index of less than 5 and therefore has a flammability index classification of low, in accordance with AS/NZS 4200.1.
- 10.2 SOLITEX EXTASANA® Wall Weather Resistive Barrier is a membrane-type material less than 1 mm thick and has a flammability index not greater than 5. It is therefore deemed non-combustible in accordance with NCC Volume One Deemed-to-Satisfy Provision C1.9 [e][vi] and NCC Volume Two Acceptable Construction Practice Paragraph 3.7.1.1 [f].

## Heating Appliances, Fireplaces, Chimneys and Flues

- 11.1 SOLITEX EXTASANA® Wall Weather Resistive Barrier must be separated from fireplaces, heating appliances, flues and chimneys in accordance with the requirements of the BCA for the protection of combustible materials.

## Bushfire Resistance

### Bush Fire Zones

- 12.1 Australian Standard AS 3959 is cited as a means of demonstrating compliance for Bushfire Prone Areas. The standard specifies in clause 3.10 that where membrane is required that it shall have a flammability index of not more than 5. SOLITEX EXTASANA® Wall Weather Resistive Barrier meets this requirement.

## Damp and Weatherproofing

- 13.1 Wall claddings installed over SOLITEX EXTASANA® Wall Weather Resistive Barrier must meet the performance requirements of the BCA, e.g. Deemed-to-Satisfy wall claddings covered by the BCA, or wall claddings covered by a valid BRANZ Appraisal.
- 13.2 SOLITEX EXTASANA® Wall Weather Resistive Barrier, 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.

## Condensation and Water Vapour Management

- 14.1 SOLITEX EXTASANA® Wall Weather Resistive Barrier 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, SOLITEX EXTASANA® Wall Weather Resistive Barrier meets the requirements of NCC Volume One Deemed-to-Satisfy Provision F6.2 [a][i] and [iii] and is therefore suitable for use in climate zones 6, 7 and 8.
- 14.3 SOLITEX EXTASANA® Wall Weather Resistive Barrier meets the requirements of NCC Volume Two Acceptable Construction Practice Paragraph 3.8.7.2 [a][i] and [iii] for a Class 1 Building and is therefore suitable for use in climate zones 6, 7 and 8.

## Installation Information

### Installation Skill Level Requirements

- 15.1 Installation must always be carried out in accordance with the SOLITEX EXTASANA® Wall Weather Resistive Barrier Technical Literature and this Appraisal, by competent tradespersons with an understanding of wall membrane installation.

### Membrane Installation

- 16.1 SOLITEX EXTASANA® Wall Weather Resistive Barrier 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 membrane fixings. The membrane must be pulled taut over the framing before fixing.
- 16.2 SOLITEX EXTASANA® Wall Weather Resistive Barrier 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 wall 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 degree 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 horizontally over the membrane at 300 mm centres. Alternatively, 75 mm galvanised wire mesh can be installed over the entire membrane surface.
- 16.5 SOLITEX EXTASANA® Wall Weather Resistive Barrier 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 SOLITEX EXTASANA® Wall Weather Resistive Barrier, such as tears, holes or gaps around service penetrations, must be repaired using TESCON EXTORA Sealing Tape. 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.
- 16.9 Pipe or cable penetrations through the SOLITEX EXTASANA® Wall Protection Membrane, must be sealed using KAFLEX or ROFLEX Grommets in accordance with their Technical Literature.

### Inspections

- 16.10 The Technical Literature must be referred to during the inspection of SOLITEX EXTASANA® Wall Weather Resistive Barrier 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 SOLITEX EXTASANA® Wall Weather Resistive Barrier in accordance with AS/NZS 4200.1: Resistance to dry delamination, resistance to wet delamination, moisture and heat shrinkage, folding endurance, electrical conductivity, 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 SOLITEX EXTASANA® was exposed to UV light.
- 17.2 The flammability index of SOLITEX EXTASANA® Wall Weather Resistive Barrier has been evaluated in accordance with AS 1530.2.

### Other Investigations

- 18.1 A durability opinion has been given by BRANZ technical experts.
- 18.2 The practicability of installation of SOLITEX EXTASANA® Wall Weather Resistive Barrier 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 SOLITEX EXTASANA® Wall Weather Resistive Barrier has not been examined by BRANZ, but details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory. BRANZ has taken note of CodeMark Certificate GM-CM30032 covering quality aspects associated with the product.
- 19.2 The quality of supply to the market is the responsibility of Pro Clima Australia Pty Ltd.
- 19.3 Building designers are responsible for the design of the building, and for the incorporation of the wall membrane into their design in accordance with the instructions of Pro Clima Australia Pty Ltd.
- 19.4 Quality of installation is the responsibility of the installer in accordance with the instructions of Pro Clima Australia Pty Ltd.

### Sources of Information

- AS 1530.2: 1993 Test for flammability of materials.
- AS 3959: 2018 Construction of buildings in bushfire-prone areas.
- AS 3999: 2015 Bulk thermal insulation - installation.
- AS/NZS 4200.1: 2017 Pliable building membranes and underlays - materials.
- National Construction Code 2019 Building Code of Australia - Australian Building Codes Board.



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09 November 2020

SOLITEX EXTASANA® WALL  
WEATHER RESISTIVE BARRIER



In the opinion of BRANZ, **SOLITEX EXTASANA® Wall Weather Resistive Barrier** 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 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. **Pro Clima 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 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 **Pro Clima 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 **Pro Clima Australia Pty Ltd** or any third party.

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For BRANZ

**Chelydra Percy**

Chief Executive

Date of Issue:

09 November 2020