



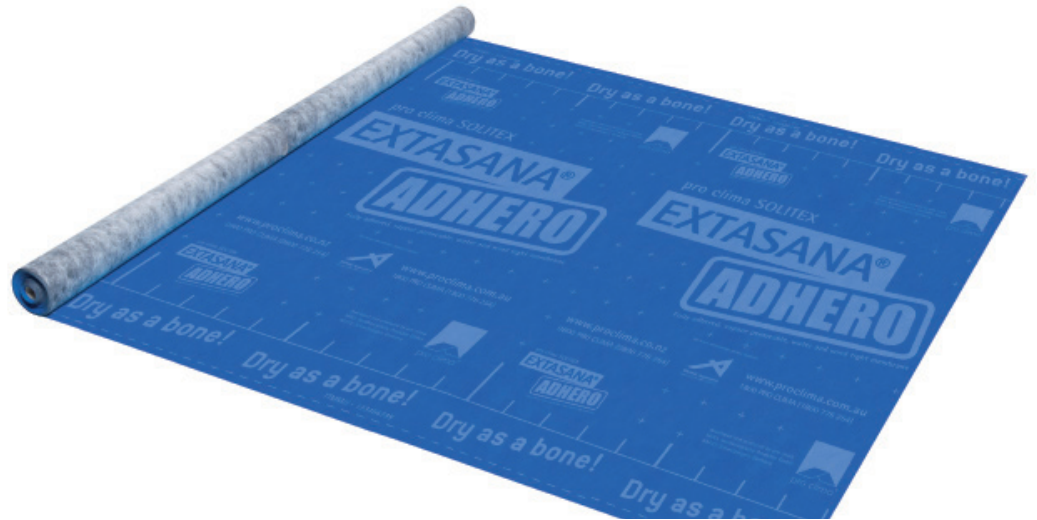
BRANZ Appraised

Appraisal No. 989 [2023]

SOLITEX EXTASANA ADHERO® SELF-ADHESIVE UNDERLAY

Appraisal No. 989 [2023]

Amended 16 July 2024



BRANZ Appraisals

Technical Assessments of products for building and construction.



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Product

- 1.1 SOLITEX EXTASANA ADHERO® is a self-adhesive, synthetic underlay for use over rigid wall underlays under cavity or direct fixed wall claddings or over rigid sarking on pitched roofs.
- 1.2 SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay is also suitable for use as a roof and wall underlay on Cross Laminated Timber (CLT) construction.

Scope

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

- 2.1 SOLITEX EXTASANA ADHERO® Self-Adhesive 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.

Proprietary Rigid Wall Underlays

- 2.2 SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay has also been appraised for use as a flexible underlay when used over proprietary rigid wall underlays. Refer to Paragraphs 2.3 and 2.4 for substrates covered by this Appraisal. Also refer to the relevant BRANZ Appraisal for scope limitations and to the system proprietor to confirm the suitability of SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay with their system.
- 2.3 SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay may be used over the following proprietary rigid wall underlay systems:
 - 4.5 mm thick HomeRAB™ Pre-Cladding and 6 and 9 mm thick RAB™ Board - refer to BRANZ Appraisal No. 611.
 - Ecoply Barrier® - refer to BRANZ Appraisal No. 827.
 - 10 and 13 mm thick GIB Weatherline® - refer to BRANZ Appraisal No. 1048.

Plywood Roof Sarking

- 2.4 SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay has also been appraised for use as a roof underlay over plywood roof sarking on timber and steel-framed buildings within the following scope:
- with minimum 17 mm thick CD grade H3.1 LOSP treated or H3.2 CCA treated plywood complying with AS/NZS 2269 installed at the same pitch as the roof cladding; and,
 - the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and floor plan area; and,
 - the scope limitations of NASH Building Envelope Solutions, Paragraph 1.1 for steel-framed buildings; and,
 - with roof claddings in accordance with NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions, Paragraphs 8.1–8.4; and,
 - situated in NZS 3604 Wind Zones up to, and including, Extra High.

Use over Roofs and Walls of CLT Construction

- 2.5 SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay has also been appraised for use as a wall and roof underlay when used on buildings within the following scope:
- used on buildings constructed of CLT from H1.2 Boron or H3.2 CCA treated radiata pine; and,
 - with absorbent and non-absorbent wall claddings installed over an 18 mm minimum drained cavity; or,
 - with masonry veneer to a specific design; and,
 - with roof claddings in accordance with NZBC Acceptable Solution E2/AS1 or NASH Building Envelope Solutions, Paragraphs 8.1–8.4; and,
 - situated in NZS 3604 Wind Zones up to, and including, Extra High.

[Note: CLT construction systems have not been assessed and are outside the scope of this Appraisal. Refer to Paragraph 7.13.]

Specific Design

- 2.6 Designers are responsible for confirming the suitability of SOLITEX EXTASANA ADHERO® Self-Adhesive 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, SOLITEX EXTASANA ADHERO® Self-Adhesive 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 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 EXTASANA ADHERO® Self-Adhesive 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, SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay contributes to meeting this requirement. See Paragraphs 12.1 and 12.2.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay meets this requirement.



Technical Specification

- 4.1 System components and accessories supplied by Pro Clima NZ Ltd are:
- **SOLITEX EXTASANA ADHERO®** consists of a TEEE [Thermoplastic Elastomer Ether Ester] water-resistant film laminated between two layers of polypropylene microfibre cover fleece. SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay is coloured blue on the top surface and the bottom surface has a clear adhesive layer and a release backing paper which is split along the length of the roll, 250 mm from the top edge. The product is supplied in rolls 1.5 m wide and 30 m long. The product is printed with the SOLITEX EXTASANA ADHERO® logo repeated along the length of the roll. The rolls are wrapped in clear polyethylene film.
 - **TESCON EXTONSEAL Sill Tape** is used as a flexible flashing tape around joinery openings. Refer to BRANZ Appraisal No. 815.
 - **TESCON EXTORA Sealing Tape** is used to repair small tears and holes. Refer to BRANZ Appraisal No. 838.
 - **KAFLEX and ROFLEX Grommets** are used to seal service penetrations. Refer to BRANZ Appraisal No. 953.
 - **TESCON® PRIMER RP** is a white acrylic primer supplied in 1 L bottles.
 - **PRESSFIX XL application tool** to aid installation of the underlay and tapes.

Rigid Wall Underlays

- 4.2 Systems used with SOLITEX EXTASANA ADHERO®, 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.
 - Proprietary wall underlays - refer to Paragraphs 2.3 and 7.7.

Plywood Roof Sarking

- 4.3 Plywood must comply with AS/NZS 2269, be a minimum 17 mm thick CD grade and H3.1 LOSP treated or H3.2 CCA treated in accordance with NZS 3602.

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:
- SOLITEX EXTASANA ADHERO® Application Guide, dated 23 April 2021.
 - SOLITEX EXTASANA ADHERO® Mass Timber Application Guide, pages 4-10, dated 29 May 2024.
 - ADHERO® Roofing Application Guide, pages 1, 3, 5, 6-17, dated 29 May 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 SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay must not be exposed to the weather or ultraviolet (UV) light for a total of more than 180 days before being covered by the wall cladding or roofing.

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 SOLITEX EXTASANA ADHERO® 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 Acceptable Solution E2/AS1 or NASH Building Envelope Solutions Rigid Wall Underlays

- 7.5 SOLITEX EXTASANA ADHERO® Self-Adhesive 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.
- 7.6 SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay, when used over a rigid wall underlay of fibre cement or plywood (in accordance with Paragraph 7.5), may be used as a temporary weather protection sheathing to allow the internal lining of framed buildings to proceed before the wall cladding is installed. To achieve temporary weather protection:
- the fibre cement and plywood must be fixed to the framing as a temporary wall cladding in accordance with the rigid wall underlay supplier instructions appropriate to the Wind Zone; and,
 - all joints, internal and external corners of the rigid wall underlay must be sealed e.g. by covering the substrate with SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay; and,
 - the roof claddings and soffit linings must be installed; and,
 - the flexible sill and jamb flashing tape systems must be installed around the window and door openings; and,
 - the window and door joinery must be installed complete with head flashings and air seals; and,
 - timber wall framing must have a maximum moisture content as specified by the internal lining systems supplier at the time of insulation installation and internal lining application

Walls with Proprietary Rigid Wall Underlays

- 7.7 SOLITEX EXTASANA ADHERO® can also be used on proprietary rigid wall underlay systems as listed in Paragraph 2.3. Refer to the relevant BRANZ Appraisal and the proprietor's Technical Literature for specific requirements. Sheet joints do not need to be taped as SOLITEX EXTASANA ADHERO® provides the weather protection to the joint.

Plywood Roof Sarking

- 7.8 SOLITEX EXTASANA ADHERO® may be used a roof underlay over plywood as specified in Paragraph 4.2. The plywood must be fixed to the roof framing as specified by the plywood supplier or to a Chartered Engineer's specification.

Cross Laminated Timber (CLT)

- 7.9 The product may also be used on construction utilising H1.2 Boron or H3.2 CCA treated CLT, when deemed suitable by the system proprietor. The suitability of the product for the construction must be confirmed by the CLT system proprietor.

Structure

- 8.1 SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay is suitable for use in all Wind Zones of NZS 3604 up to, and including, Extra High.

Durability

- 9.1 SOLITEX EXTASANA ADHERO® Self-Adhesive 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 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 ADHERO® Self-Adhesive Underlay is expected to have a serviceable life equal to that of the cladding.

Control of Internal Fire and Smoke Spread

- 10.1 As SOLITEX EXTASANA ADHERO® Self-Adhesive 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 the SOLITEX EXTASANA ADHERO® Self-Adhesive 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.

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	≥ 150 g/m ²	Pass
Vapour Resistance	≤ 7 MN s/g	Pass
Water Resistance	≥ 20 mm	Pass
pH of Extract	≥ 6.0 and ≤ 9.0	Pass
Shrinkage	≤ 0.5%	Pass
Edge Tear Resistance	≥ 150 N Machine direction	Pass
	≥ 100 N Cross direction	Pass
Tensile Strength	≥ 3 kN/m Machine direction	Pass
	≥ 1 kN/m Cross direction	Pass
Air Barrier	Air resistance: ≥ 0.1 MN s/m ³	Pass

* Properties in Table 1 are for SOLITEX EXTASANA ADHERO® only and do not include the substrate to which it is applied.

External Moisture

- 12.1 SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay must be used behind roof or 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 SOLITEX EXTASANA ADHERO® Self-Adhesive 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.

Installation Information

Installation Skill Level Requirement

- 13.1 Installation must always be carried out in accordance with the SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay Technical Literature and this Appraisal by, or under the supervision of, a Licensed Building Practitioner [LBP] with the relevant License Class.

Underlay Installation

- 14.1 SOLITEX EXTASANA ADHERO® Self-Adhesive 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. When used on CLT construction, SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay must be installed as directed by the CLT system proprietor and as required by NZBC Clause E2.
- 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. When used on roofs at pitches below 5 degrees, overlaps must be primed with TESCON® PRIMER RP which must be allowed to dry before application of subsequent layers of SOLITEX EXTASANA ADHERO®.
- 14.7 After initial application of SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay, it must be smoothed down with a 150 mm wide hard roller or the Pro Clima PRESSFIX XL tool 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-degree 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 TESCON EXTOSEAL Sill Tape in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.5 b).
- 14.9 Any damaged areas of SOLITEX EXTASANA ADHERO® Self-Adhesive 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 TESCON EXTORA.
- 14.10 Service penetrations, such as electrical cables and pipes, that pass through the SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay must be sealed. Pro Clima NZ Ltd recommend KAFLEX and ROFLEX Grommets.

Inspections

- 15.1 The Technical Literature must be referred to during the inspection of SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay installations.



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SOLITEX EXTASANA ADHERO®
SELF-ADHESIVE UNDERLAY



BRANZ

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 EXTASANA ADHERO® Self-Adhesive 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 SOLITEX EXTASANA ADHERO® Self-Adhesive 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 SOLITEX EXTASANA ADHERO® Self-Adhesive 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 SOLITEX EXTASANA ADHERO® Self-Adhesive Underlay 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 underlay component.
- 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 wall 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/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.



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Amendments

Amendment No. 1, dated 16 July 2024

This Appraisal has been amended to include use of the product over plywood roof sarking and CLT roof and wall construction.



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SOLITEX EXTASANA ADHERO®
SELF-ADHESIVE UNDERLAY



In the opinion of BRANZ, **SOLITEX EXTASANA ADHERO® Self-Adhesive 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 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 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:

14 September 2023