Certificate of Conformity

Certification Body:

CMI CERTIFICATION

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JAS-ANZ Accreditation
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Certificate Holder:

EKOLOGIX SMART COMPOSITE MATERIALS

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Certificate number: CM40387

THIS IS TO CERTIFY THAT

Ekodeck Weatherboard Cladding System

Type and/or use of product:

External wall cladding for all Classes of buildings.

Description of product:

Ekodeck Weatherboard Cladding System is suitable for use on external walls of buildings to satisfy weatherproofing, wind strength and thermal performance requirements.
Ekodeck Weatherboard Cladding System may be installed either:

- Horizontally, (clip-fixed to studs) or
- Vertically (clip-fixed to top-hat battens).

COMPLIES WITH THE FOLLOWING BCA PROVISIONS AND STATE OR TERRITORY VARIATION(S) **BCA 2022**

	Volume One		Volume Two	
Performance Requirement(s):	B1P1(2)(c)	Structural stability and resistance – Wind actions	H1P1(2)(c)	Structural stability and resistance – Wind actions
	F3P1	Weatherproofing – Refer Limitation & Condition 2	H2P2	Weatherproofing – Refer *Limitation & Condition 2*
Deemed-to-Satisfy Provision(s):	J4D6	Energy Efficiency – External Walls - Contributes to the overall energy efficiency of the building. Refer *Limitation & Condition 6* & A3	H6D2(1)(b)(i)	Energy Efficiency – External Walls - Contributes to the overall energy efficiency of the building. Refer *Limitation & Condition 4 & 5* & A3
State or territory variation(s):	Not Applicable		Not Applicable	

SUBJECT TO THE FOLLOWING LIMITATIONS AND CONDITIONS AND THE PRODUCT TECHNICAL DATA IN APPENDIX A AND EVALUATION STATEMENTS IN APPENDIX B

Limitations and conditions:

1. Construction shall be in strict accordance with the Ekodeck Weatherboard Cladding System, Technical Guide, Version 1.3, May 2024, relevant BCA requirements, and any specific requirements of the local building authority.
2. To satisfy F3P1/H2P2 via verification, the relevant design is required to meet the criteria of F3V1/H2V1 to the satisfaction of the Appropriate Authority as defined by the BCA. The site specific building must;
   (a)(i) has a risk score of 20 or less, when the sum of all risk factor scores are determined in accordance with Table F3V1a/H2V1a; and
   (a)(ii) is not subjected to an ultimate limit state wind pressure of more than 2.5kPa; and
   (a)(iii) includes only windows that comply with AS 2047.
   For Waterproofing applications that exceed 2.5kPa Ultimate Limit State Wind Pressure, and do not exceed 3.83kPa Ultimate Limit State Wind Pressure, refer to A3.

Building classification/s:

Class 1, 2, 3, 4, 5, 6, 7, 8, 9 & 10

Richard Donarski – CMI

Don Grehan – Unrestricted Building Certifier

Date of issue: 17/05/2024

Date of expiry: 17/05/2027

ABCB

JAS-ANZ

3. Ekodeck Weatherboard Cladding Systems are not suitable for use in Cyclonic Regions.
4. To satisfy the requirements of NCC Volume Two, H6D2(1), applicable to the thermal performance of Ekodeck Weatherboard Cladding System; the thermal performance of the building shall comply with
    a. The H6D2(1)(a) star-rating requirements of S42C2 e.g. 7-stars; and
    b. S42C4 where only S42C42(1)(a) is applicable to Ekodeck Weatherboard Cladding System, where external wall insulation must comply with ABCB Housing Provisions 13.2.2 including compliance with AS/NZS 4859.1
5. The thermal performance of external wall insulation shall comply with ABCB Housing Provisions 13.2 where:
    a. external wall insulation must comply with ABCB Housing Provisions 13.2.2 including compliance with AS/NZS 4859.1; and
    b. ABCB Housing Provisions 13.2.5 is applicable to Ekodeck Weatherboard Cladding System, requiring external wall insulation to achieve those minimum R-values in accordance with AS/NZS 4859.1 for lightweight construction, as determined by variables including Climate Zone, Overhang, Height, Storeys and Solar Absorptance.
6. These J4D6 deemed-to-satisfy requirements do not apply to a Class 2 sole-occupancy unit or a Class 4 part of a building.
7. This product has not been tested to AS 1530.1-1994 (R2016) and cannot be considered a non-combustible product.
8. In all cases, it is a requirement that the Ekodeck Weatherboard Cladding System incorporates either:
    a. A timber frame constructed in accordance with AS 1684 or AS 1720.1; or
    b. A cold-formed steel frame constructed in accordance with NASH Standard for Residential and Low-rise Steel Framing, Part 1: Design Criteria; or
    c. Framework compliant with the above minimum requirements and other standards, and the Building Code of Australia as applicable.
9. In all installations the minimum clearance between the underside of panel and the adjoining ground surface level below must comply with the specifications in Part 7.5.7 of the ABCB Housing Provisions.
10. A pliable building membrane complying with AS 4200.1:2017 must be installed in accordance with AS 4200.2:2017 to separate the wall cladding panels from any water sensitive materials as per Part F8 of Vol 1 or Part 10.8 of the ABCB Housing Provisions for Condensation management.
11. This certificate is limited to the details within this certificate including the above compliance elements, product description, purpose or use.
12. Other than the BCA provisions and State or Territory variation(s) listed, the remainder of the information contained in the product's literature is outside the scope of this certification.
13. The use of the certified product/system is subject to these Limitations and Conditions and must be read in conjunction with the Scope of certification below.

Certificate of Conformity

Scope of certification: The CodeMark Scheme is a building product certification scheme. The rules of the Scheme are available at the ABCB website www.abcb.gov.au. This Certificate of Conformity is to confirm that the relevant requirements of the Building Code of Australia (BCA) as claimed against have been met. The responsibility for the product performance and its fitness for the intended use remain with the Certificate Holder. The certification is not transferrable to a manufacturer not listed on Appendix A of this certificate.

Only criteria as identified within this Certificate of Conformity can be used for CodeMark certification claims. Where other claims are made in a client's Installation Manual, Website or other documents that are outside the criteria on this Certificate of Conformity, such criteria cannot be used or claimed to meet the requirements of this CodeMark certification.

The NCC defines a Performance Solution as one that complies with the Performance Requirements by means other than a Deemed-to-Satisfy Solution. A Building Solution that relies on a CodeMark Certificate of Conformity that certifies a product against the Performance Requirements cannot be considered as Deemed-to-Satisfy Solution.

This Certificate of Conformity may only relate to a part of a Performance Solution. In these circumstances other evidence of suitability is needed to demonstrate that the relevant Performance Requirements have been met. The relevant provisions of the Governing Requirements in Part A of the NCC will also need to be satisfied.

This Certificate of Conformity is issued based on the evidence of compliance as detailed herein. Any deviation from the specifications contained in this Certificate of Conformity is outside of this document's scope and the installation of the certified product will not be covered by this Certificate of Conformity.

Disclaimer: The Scheme Owner, Scheme Administrator and Scheme Accreditation Body do not make any representations, warranties or guarantees, and accept no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of any material contained within this certificate; and the Scheme Owner, Scheme Administrator and Scheme Accreditation Body disclaim to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this certificate.
When using the CodeMark logo in relation to or on the product/system, the Certificate Holder makes a declaration of compliance with the Scope of Certification and confirms that the product is identical to the product certified herein. In issuing this Certificate of Conformity, CMI Certification Pty Ltd (CMI) has relied on the experience and expertise of external bodies (laboratories and technical experts).
Nothing in this document should be construed as a warranty or guarantee by CMI, and the only applicable warranties will be those provided by the Certificate Holder.

APPENDIX A – PRODUCT TECHNICAL DATA

A1 Type and intended use of product

Ekodeck Weatherboard Cladding System, developed by Ekologix, is suitable for use on external walls of buildings to satisfy weatherproofing, wind strength and thermal performance requirements. Ekodeck Weatherboard Cladding System may be installed either horizontally, (clip-fixed to studs) or vertically (clip-fixed to top-hat battens).

A2 Description of product

Ekodeck Weatherboard Cladding System incorporates Ekodeck Weatherboard Cladding in horizontal or vertical orientations to satisfy wind strength, weatherproofing, and thermal performance requirements of external walls of BCA, Class 1 to 10 buildings.

Ekodeck Weatherboard Cladding System components supplied by Ekologix:

- Ekodeck Weatherboard Cladding, 164mm wide (150 visible), 6mm thick, Composite
- Ekodeck Weatherboard Cladding J-Section, 40x27x60mm, 6mm thick, Composite
- Ekodeck Weatherboard Cladding Clip, 34x13mm, 1.5mm thick, Aluminium

Other key system components by others:

- Framing to provide structural support to the system at a maximum stud spacing of 600mm, and must consist of either; timber framing, designed and constructed in accordance with AS 1684; or a cold-formed steel frame in accordance with NASH Standard for Residential and Low-rise Steel Framing, Part 1: Design Criteria, or framing to other standards as applicable (see Condition & Limitation 8c).
- R2.5 x 90mm glasswool insulation within the framing cavity.
- AS 4200.1 compliant Light Wall Duty, Class 4 VCM wall wrap, installed in accordance with AS 4200.2 with wall wrap compatible tape to all joins, edges and
- penetrations.
- Ekodeck Weatherboard Cladding compatible adhesive sealant, Sikaflex – 111 with Sika 206 G+P Primer.
- Screws for Ekodeck Weatherboard Cladding Clip to timber framing, 7g x 35mm exterior use.
- Screws for Ekodeck Weatherboard Cladding Clip to steel top-hats, Buildex 10-16 Smooth Top Teks.
- Steel top-hat battens (for vertical Ekodeck Weatherboard installation), G550, 25mm, 0.55BMT top-hat batten.

A3 Product specification

Structural	**Ekodeck Weatherboard Support Spacing (mm)**	**AS 4055 Wind Classification**	**AS/NZS 1170.2 Max. Design Wind Pressure (kPa)**	
			Serviceability (SLS)	**Strength (ULS)**
	450	N1, N2, N3, N4	+0.82 / -1.23	3.83
	600	N1, N2, N3		2.87

Source: *Ian Bennie Associates Pty Ltd, Ekodeck Weatherboard Cladding, Static Serviceability limit state & Strength limit state Wind Load Tests by the methods of AS:4040.2- 1992(R2016) for Ekologix Australia Pty Ltd, Report No. 2023-005-S1, Dated 26/06/2023 & Acronem Consulting Australia Pty Ltd, Ekologix – Ekodeck Wall Cladding System, Wind Strength Test Report 2023-005-S1, SLS & ULS Testing, Dated 12/07/2023*

Weatherproofing

Ekodeck Weatherboard Cladding System is limited to external wall applications where the Design Serviceability Limit State Wind Pressure calculated in accordance with AS/NZS 1170.2:2021 does not exceed of +0.82 kPa and -1.23 kPa. This includes AS 4055-2021 Wind Classifications N1, N2, N3 and N4 and excludes N5, N6, C1, C2, C3 and C4.

For buildings with designs of more than ±2.5kPa up to ±3.83kPa

The weatherproofing performance of *Ekodeck Weatherboard Cladding System* System installed in applications where an external wall;

(i) has a risk score of 20 or less, when the sum of all risk factor scores are determined in accordance with BCA Volume 2 Table H2V1a ; and
(ii) is subjected to an absolute ultimate limit state wind pressure of more than 2.5 kPa but not more than ±3.83kPa (Refer Section 4.1.1 Wind Actions of ACA report 230616, dated 28/07/2023 for the specific configuration requirements applicable to this case); and
(iii) includes only windows that comply with AS 2047;

has been verified by a combination of prototype testing in accordance with the requirements of AS/NZS 4284 to NCC verification methods, wind strength testing of the *Ekodeck Weatherboard Cladding System* System and a report from a professional engineer.

In all cases, applications are limited to maximum design serviceability limit state wind pressures equal to the tested values of +0.82 kPa and -1.23 kPa.

Based on these results, the *Ekodeck Weatherboard Cladding System* System is limited to external wall applications where the design serviceability limit state wind pressure, calculated in accordance with AS/NZS 1170.2 Structural Design Actions Part 2: Wind Actions, does not exceed +0.82 kPa and -1.23 kPa. This is deemed to include AS 4055 Wind Classifications:

- N1, N2, N3 & N4, and excludes AS 4055 Wind Classifications, N5, N6, C1, C2, C3 & C4.

Source: *Acronem Consulting Australia Pty Ltd, report 230616, dated 28/07/2023*

Thermal Performance

Thermal R Value Ratings

Ekodeck Cladding System	Wall Framing	Wall Batt (m^2K/W)	$R_{T(Winter)}$ (m^2K/W)	$R_{T(Summer)}$ (m^2K/W)
Horizontal	Timber Framing (90x35 @ 600mm c/c)	R2.5	2.45 (U_T=0.41)	2.32 (U_T=0.43)
	R0.2 Thermal Break, Steel Framing (90x35x0.55 @ 600mm c/c)	R2.5	1.97 (U_T=0.51)	1.89 (U_T=0.53)
Vertical	Steel top-hat (25mm), Timber Framing (90x35 @ 600mm c/c)	R2.5	2.65 (U_T=0.38)	2.49 (U_T=0.40)
	Steel top-hat (25mm), Steel Framing (90x35x0.55 @ 600mm c/c)	R2.5	2.00 (U_T=0.50)	1.88 (U_T=0.53)

These insulation R-values and Total R-values may be used:

- as inputs into an analysis for determining heating and cooling load limits using house energy rating software in accordance with S42C2 for demonstrating compliance with Clause H6D2(1)(a), or
- to satisfy the requirements of 13.2.5, where lightweight walls are required to include minimum insulation R-values or Total R-values.

For the purposes of determining the NCC 2022 Volume One, J4D6 Total System U-Value of wall-glazing construction as a combination of wall and glazing components comprising the envelope of a building, the contributions of UT in the above table may be used for this purpose. J4D6(4) requires wall components of a wall-glazing system to achieve a minimum Total R-value of:

- R1.0 where the wall is less than 80% of the wall-glazing construction, or
- The Total R-value specified in Table J4D6a where the wall is 80% or more of the wall-glazing construction.

Source: Acronem Consulting Australia Pty Ltd, report 230616, dated 28/07/2023, Acronem Consulting Australia Pty Ltd, Calculation W230608aWS, dated 9/06/2023, Acronem Consulting Australia Pty Ltd, Calculation W230608bWS, dated 9/06/2023, Acronem Consulting Australia Pty Ltd, Calculation W230608cWS, dated 9/06/2023 & Acronem Consulting Australia Pty Ltd, Calculation W230608dWS, dated 9/06/2023.

A4 Manufacturer and manufacturing plant(s)

This field is optional. Contact the Certificate Holder for details.

A5 Installation requirements

Ekodeck Weatherboard Cladding System only to be installed in accordance with Ekodeck Weatherboard Cladding System, Technical Guide, Version 1.3, May 2024

A6 Other relevant technical data

Hardness Test: As per ASTM D1037-12 (Reapproved 2020) - Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle, the submitted samples were subjected to the following tests. Sample description: Co-Extruded WPC (Ekodeck Cladding, Ekodeck Designer Series Screening and Ekodeck Designer Series Decking)

Initial inspection: No damage was found

No.	Test Item	Test parameter	Test Result
1	Janka-ball Hardness	Test method: ASTM D1037 – 12 (Reapproved 2020) - Clause 17 Specimen: 96mm×49mm×29.1mm (6 layers piled up) "Ball" diameter: 11.3mm Testing speed: 6mm/min	10500N

Source: *Intertek Testing Services Shenzhen Limited, Guangzhou Branch, report GZHH00477736, dated 16/12/2022.*

Fire Indices AS/NZS 1530.3:1999 Methods for fire tests on building materials, components, and structures Part 3: Simultaneous determination of ignitability, flame propagation, heat release and smoke release.

Items	Regulatory Indices
Ignitability index (Range 0 to 20)	0
Spread of flame index (Range 0 to10)	0
Heat evolved index (Range 0 to 10)	0
Smoke developed index (Range 0 to 10)	7

Source: *Source: Intertek Testing Services Shenzhen Limited, Guangzhou Branch, report AJFS2210008766FF, dated 1/12/2022.*

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

1. Energy Efficiency Provisions A5G3(1)(e). Reports from a professional engineer.
2. Structural Resistance Provisions A5G3(1)(d)&(e). Reports issued by Accredited Testing Laboratories and a professional engineer.
3. Weatherproofing Provisions A5G3(1)(d)&(e). Reports issued by Accredited Testing Laboratories and a professional engineer.

B2 Reports

1. Ian Bennie Associates Pty Ltd, NATA Accreditation No. 2371, Report Number 2023-005-S1 dated 26/06/2023. Report provides AS 4040.2 wind load test results used to provide data for compliance with B1P1(2)(c) & H1P1(2)(c).
2. Acronem Consulting Australia Pty Ltd, Wind Strength Report 2023-005-S1, dated 12/07/2023. Report provides SLS & ULS data for compliance with B1P1(2)(c) & H1P1(2)(c).
3. Acronem Consulting Australia Pty Ltd, Report No. 230616, dated 28/07/2023. Report confirms compliance with B1P1(2)(c), H1P1(2)(c), F3P1, H2P2, J4D6 & H6D2(1).
4. Ian Bennie Associates Pty Ltd, NATA Accreditation No. 2371, Report Number 2022-079-S1 dated 13/6/2023. Report confirms compliance with F3P1 & H2P1 through the Verification method F3V1/H2V1 for the Horizontal orientation.
5. Ian Bennie Associates Pty Ltd, NATA Accreditation No. 2371, Report Number 2022-079-S2 dated 13/6/2023. Report confirms compliance with F3P1 & H2P1 through the Verification method F3V1/H2V1 for the Vertical orientation.
6. Acronem Consulting Australia Pty Ltd, Report No. W230608aWS, dated 9/06/2023. Report provides AS/NZS 4859 Parts 1 & 2:2018 calculations used to provide data for compliance with J4D6 & H6D2(1).
7. Acronem Consulting Australia Pty Ltd, Report No. W230608bWS, dated 9/06/2023. Report provides AS/NZS 4859 Parts 1 & 2:2018 calculations used to provide data for compliance with J4D6 & H6D2(1).
8. Acronem Consulting Australia Pty Ltd, Report No. W230608cWS, dated 9/06/2023. Report provides AS/NZS 4859 Parts 1 & 2:2018 calculations used to provide data for compliance with J4D6 & H6D2(1).
9. Acronem Consulting Australia Pty Ltd, Report No. W230608dWS, dated 9/06/2023. Report provides AS/NZS 4859 Parts 1 & 2:2018 calculations used to provide data for compliance with J4D6 & H6D2(1).

The Certificate Holder has chosen not to make the above evidence of compliance publicly available, due to the documents being considered commercial in confidence.