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Certificate Holder:



James Hardie Australia
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Certificate number: CM40222

THIS IS TO CERTIFY THAT

Axon™ Cladding

Type and/or use of product:

Intended as external cladding on residential and commercial facades.

Description of product:

Fibre-cement cladding with vertical shiplap joint.

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

BCA 2022

	Volume One	Volume Two
Performance Requirement(s):	<p>B1P1(2)(a)&(c) Structural reliability – Permanent and wind actions</p> <p>F3P1 Weatherproofing - External walls subject to Limitation and Condition No. 2.</p> <p>G5P1 Construction in bushfire prone areas (BAL Low-40)</p>	<p>H1P1(2)(a)&(c) Structural reliability – Permanent and wind actions</p> <p>H2P2 Weatherproofing – External walls subject to Limitation and Condition No. 2.</p> <p>H7P5 Construction in bushfire prone areas (BAL Low-40)</p>
Deemed-to-Satisfy Provision(s):	<p>C2D10(6)(d) Non-combustible building elements – Fibre-reinforced cement sheeting – Panel Only</p>	<p>H1D7(4)(b) Wall cladding – Fibre cement</p> <p>H3D2(1)(d) Non-combustible building elements – Fibre-reinforced cement sheeting – Panel Only</p>
State or territory variation(s):	G5P1 NSW, QLD, TAS & VIC	H7P5 TAS

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

Limitations and conditions:

- Axon™ Cladding must only to be installed in accordance with the [Axon™ Cladding Installation Guide August 2024](#).
- To satisfy F3P1 & H2P2 via verification requires the site specific evaluation of the relevant design against F3V1 and/or H2V1 to the satisfaction of the Appropriate Authority as defined by the NCC:
 - (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.

Compliance with Weatherproofing is limited to the tested specimen detailed in A3, deviations from this specimen, is subject to site specific design and approval by the regulatory authority.

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: 16/08/2024

Date of expiry: 20/08/2027



Certificate of Conformity

3. 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.
4. No assessment has been undertaken on the product for Part F8 of Vol 1 or Part 10.8 of the ABCB Housing Provisions for Condensation management. A pliable building membrane complying with AS/NZS 4200.1:2017 must be installed in accordance with AS/NZS 4200.2:2017 to separate the wall cladding panels from any water sensitive materials.
5. Compliance with B1P1(2)(c) & H1P1(2)(c) excludes resistance to impact loading from windborne debris.
6. Axon™ Cladding must be fixed to a structurally adequate external wall frame in accordance with the appropriate tables in section A5.
7. Axon™ Cladding complies with H1D7(4)(b) as cladding that satisfies the following sections of Part 7.5 of the ABCB Housing Provisions:
 - a. 7.5.3(a) for wall cladding boards; and
 - b. 7.5.4(1)(a) for sheet wall cladding; and
 - c. 7.5.5(a) for eaves and soffit linings.
8. The structural certification is limited to the cladding only and does not include the sub-structure. The structural support members are designed and engineered separately as per project requirements by building designers and engineers.
9. In order to maintain compliance with BAL Low – 40, it is the responsibility of the Building Designer to ensure compliance is achieved in accordance with AS 3959-2018.
10. This certificate is limited to the details within this certificate including the above compliance elements, product description, purpose or use.
11. Other than the items and information listed, the remainder of the information contained in the product's literature is outside the scope of this certification.
12. 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.

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

Axon™ External Cladding panels are used as an external wall cladding in alterations and additions and residential single and medium density dwellings where a uniform, broadwall cladding is required. Ideal for full wrap or composite construction design on either timber or steel framed homes.

A2 Description of product

Axon™ panels are pre-primed with vertical grooves. There is a ship lap edge joint along the two long edges and square edges along the short edges. The grooves are nominally 2mm deep and 10mm wide. Sheet weighs approximately 12kg/m² in equilibrium.

Axon™ Cladding Sheet Sizes

Product	Length (mm)	Width (mm)	Thickness (mm)	Mass (kg)	Sheets per pack	Product Code
Axon™ cladding 133 Smooth	2450	1200	9	36	30	403931
	2750	1200	9	40	30	403932
	3000	1200	9	44	30	403933
	3600	1200	9	52	30	404979
Axon™ cladding 133 Grained	3000	1200	9	44	30	404512
Axon™ cladding 400 Smooth	2450	1200	9	36	30	404417
	2750	1200	9	40	30	404418
	3000	1200	9	44	30	404419

Note: All dimensions and masses are approximate and subject to manufacturing tolerances.

Components:

Hardie™ Joint Sealant – General purpose polyurethane exterior grade sealant.

Hardie™ Weather Barrier – Water barrier and vapour permeable membrane compliant to AS/NZS 4200.1:2017.

RAB™ Board – Airtight, weatherproof, vapour permeable and non-combustible rigid 6mm fibre-cement sheeting compliant to AS/NZS 4200.1:2017 & AS/NZS 2908.2:2000.

Hardie™ 9mm Aluminium Recessed Horizontal Jointer - A recessed horizontal jointer that creates a 6mm horizontal shadow line.

Hardie™ Horizontal h Flashing – Aluminium extrusion used along horizontal control joints.

Hardie™ Edge Trim – Powder coated aluminium architectural slab edge solution.

Hardie™ 9mm Internal Corner – Aluminium extrusion to be used in internal corners.

Hardie™ 9mm External Square Corner - Aluminium extrusion to be used in external corners.

Hardie™ Corner Flashing – Colorbond® steel used behind cladding at internal and external corners.

Hardie™ Axent™ Trim – Material composite trim used for box corners and around windows and doors.

Hardie™ Foam Back Sealing Tape – Installed under sheet vertical joints to improve water tightness.

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A3 Product specification

Material The basic composition is Portland cement, ground sand, cellulose fibre and water. James Hardie building products are manufactured to Australian/New Zealand Standard AS/NZS 2908.2:2000 'Cellulose-cement products-Flat sheet.' Axon™ External cladding panels are classified Type A, Category 3 in accordance with AS/NZS 2908.2:2000.

Physical Property	Saturated Condition	Equilibrium Condition 23°C – 50% RH	Standard
Minimum Bending Strength	>7.0 MPa		
Category	3		AS/NZS 2908.2:2000
Type	A		
Average Density in kg/m ³ (Oven Dry)	1180		ISO 8336:2009
Watertightness	Watertightness Passes AS/NZS 2908.2:2000		AS/NZS 2908.2:2000
Dimensional Conformance		Passes	ISO 8336:2009
Heat-Rain Durability			
Warm Water Resistance		Passes	AS/NZS 2908.2:2000
Freeze-Thaw Resistance			
Combustibility	Suitable where non-combustible materials are required in accordance with C1.9(e)(iv) of the BCA Deemed to comply with BCA		

Non-combustible Axon™ External cladding panel is suitable where non-combustible materials are required in accordance with as it compliance with C2D10(6)(d) and H3D2(1)(d) of the Building Code of Australia as fibre-reinforced cement sheeting that complies with AS/NZS 2908.2:2000. Non-combustible does not extend to include the joiners for the purpose of C2D10.

Weatherproofing Axon™ Fibre Cement Cladding System – Direct Fixed

Testing was conducted in accordance with the Verification Method FV1. Current against 2022 Verification Method F3V1 'Weatherproofing' (Volume 1) and H2V1 'Weatherproofing' (Volume 2) test procedure as contained within Building Code of Australia.

Results

Test Type	Criteria	Result
Structural Test	100% Serviceability Limit State Pressure of 1.230kPa for 1 minute in both positive and negative directions.	Pass
Static Water Penetration	30% Serviceability Limit State Pressure 369Pa for 15 minutes Pass Criteria: No presence of water on the inside surface of the façade.	Pass
Cyclic Water Penetration	Cyclic @ 15-30% SLS – 184 to 369Pa Duration: 5 minutes Cyclic @ 20-40% SLS – 246 to 492Pa Duration: 5 minutes Cyclic @ 30-60% SLS – 369 to 738Pa Duration: 5 minutes Pass Criteria: No presence of water on the inside surface of the façade.	Pass

Source: Test Report No. TS035-17, Weathertightness in accordance with FV1 & V2.2.1; dated 16 April 2018.

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Weatherproofing

Axon™ Fibre Cement Cladding System – Cavity Fixed

Testing was conducted in accordance with the Verification Method E2/VM1 which has been confirmed to be equivalent to the NCC FV1.1/V2.2.1 test methodology for cavity wall systems and current against 2022 Verification Method F3V1 'Weatherproofing' (Volume 1) and H2V1 'Weatherproofing' (Volume 2) test procedure as contained within Building Code of Australia.

Results

Test Type	Criteria	Result
Structural Test	Serviceability Limit State Pressure of 1.51 kPa for 1 minute in both positive and negative directions	Pass
Series 1	455 Pa for 15 minutes	Pass
Static Water Penetration	Pass Criteria: No water on building wrap.	Pass
Series 1	Cyclic @ 455 to 910 Pa for 5 minutes	Pass
Cyclic Water Penetration	Pass Criteria: No water on building wrap.	Pass
Series 2	455 Pa for 15 minutes	Pass
Water Management Test	Pass Criteria: No water on building wrap.	Pass
Series 2	Cyclic @ 455 to 910 Pa for 5 minutes	Pass
Water Management Test	Pass Criteria: No water on building wrap	Pass
Series 3	Static pressure of 50 Pa for 15 minutes	Pass
"Wetwall Test"	Pass Criteria: No water on building wrap.	Pass

Source: Test Report No. TS033-13, Weathertightness - NZ Axon on CLD Battens; dated 8 January 2014 and Equivalence report from James Hardie Research Pty Ltd dated 21/10/2022.

Bushfire

An assessment of the Axon™ Cladding Lightweight fibre-reinforced cement sheeting wall system has been completed by Ignis Labs Pty Ltd. AS 3959:2018 allows external wall cladding for BAL 12.5 to BAL 40 to be non-combustible material or fibre cement a minimum 9mm in thickness and the total wall system is at least 90mm in thickness. Axon™ Cladding satisfies the requirement of fibre cement a minimum 9mm in thickness.

The following list details the various PVC joiners used within the Axon™ Cladding. These joiners have been assessed and are considered suitable for use and have the ability to satisfy the requirements of AS 3959:2018 and maintain compliance with BAL – 40 areas.

- 305555 Hardie™ 18mm PVC Cavity Vent Strip 3000mm

Source: Ignis Labs Pty Ltd Report No. IGNL-6249-16-01 I02R05 BBV3.0 JH Bushfire 05102023 dated 05/10/2023.

A4 Manufacturer and manufacturing plant(s)

Axon™ Cladding Panels are manufactured in Australia by James Hardie Australia Pty Ltd. Contact Certificate Holder for details.

A5 Installation requirements

Axon™ Cladding Panels must only to be installed in accordance with the [Axon™ Cladding Installation Guide August 2024](#).

A suitable weather barrier must be installed behind Axon™ cladding in accordance with the relevant requirements of the BCA and the AS/NZS 4200.2:2017 Pliable building membranes and underlays – Installation. James Hardie recommends HardieWrap™ Weather Barrier – refer to the building designer, certifier, or other relevant expert, for suitability.

Refer to the [Axon™ Cladding Installation Guide August 2024](#) for Stud Spacings and fixing requirements.

A6 Other relevant technical data

When installing Axon™ Cladding Panels in combination with other CodeMark certified Hardie™ Cladding Products, refer to the Hardie™ Architectural Collection Joints and Junctions Application Guide on James Hardie's [website](#). The construction drawings presented on the Application Guide have been reviewed, based on the requirements of NCC 2022 Vol 1 and 2 as described on the 080920230905 – JHR Advisory Note – HAC Opinion Based Upon Tested Prototype Compliance Note V1.1. Compliance to Weatherproofing provision is subject to Limitation and Conditions No. 2 as outlined on this Certificate of Conformity.

Thermal	Axon™ Cladding panels will contribute to the overall thermal performance of the building; however, it is the responsibility of the building designer to ensure the minimum thermal requirements for the building envelope is achieved.
Resistance to fire	Testing has been conducted by CSIRO on the James Hardie Cladding materials in accordance with AS/NZS 3837:1998 and are classified as conforming to Group 1 material. (Average Specific Extinction Area 10.4m ² /Kg).

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

1. Ancillary Provisions A5G3(1)(e). Reports from a professional engineer.
2. Fire Safety Provision A5G3(1)(e). Reports from a professional engineer.
3. Structural Provision A5G3(1)(e). Reports from a professional engineer.
4. Weatherproofing Provision A5G3(1)(d). Reports from Accredited Testing Laboratories.

B2 Reports

1. David Beneke Consulting; Report 2019-12-LO-14; Structural compliance NCC; Dated 27/05/2020. Report provide compliance with B1P1(2)(a)&(c) and H1P1(2)(a)&(c).
2. David Beneke Consulting; Report 2024-41-LO-06; Structural compliance for the fixing of James Hardie Fibre Cement Cladding Systems on Cavity battens; Dated 27/05/2024. Report provide compliance with B1P1(2)(a)&(c) and H1P1(2)(a)&(c).
3. Cardno (NSW/ACT) Pty Ltd; Report 605726-LO-14-2; Certification of fastener and span tables; Dated 22/09/2016. Report provide compliance with B1P1(2)(a)&(c) and H1P1(2)(a)&(c).
4. Stantec Australia Pty Ltd; Reference No. 304000206_230412; Structural Certification; Dated 12/04/2023. Report provide compliance with B1P1(2)(a)&(c) and H1P1(2)(a)&(c).
5. James Hardie Research Pty Ltd; NATA Accreditation No. 14220; Compliance Notification – James Hardie Axon™ ShipLap Joint Similar to James Hardie™ EasyLap™, Hardie™ Fine Texture Cladding and Hardie™ Brushed Concrete Panel; Dated 05/04/2023. Report provides supporting evidence for compliance with B1P1(2)(a)&(c) and H1P1(2)(a)&(c) Ignis Labs Pty Ltd Report No. IGNL-6249-16-01 I02R05 BBV3.0 JH Bushfire 05102023; Compliance with AS 3959-2009 BAL Low-40; Dated 05/10/2023. Report confirms the BAL of ExoTec™ Façade Panel and Fixing System that complies with G5P1 and H7P5.
6. James Hardie Research Pty Ltd; NATA Accreditation No. 14220; Test Report Number TS032-12; Testing in accordance with AS/NZS 2908.2:2000 Products Part 2: Flat Sheets; Dated 10/02/2021. Report confirms the fibre-reinforced cement sheeting complies with AS/NZS 2908.2:2000 and meets the requirements for C2D10(6)(d), H1D7(4)(b) and H3D2(1)(d).
7. James Hardie Research Pty Ltd; NATA Accreditation No. 14220; Test Report Number TS035-17; Weathertightness (FV1/V2.1.1 'Weatherproofing'); Dated 16/04/2018. Report confirms compliance with F3P1 and H2P2.
8. James Hardie Research Pty Ltd; NATA Accreditation No. 14220; Test Report Number TS033-13; Weathertightness (E2-VM1); Dated 08/01/2014. Report supports compliance with F3P1 and H2P2.
9. James Hardie Research Pty Ltd; NATA Accreditation No. 14220; NCC 2019 Weatherproofing Compliance Equivalence; Dated 05/07/2019. Report supports compliance with F3P1 and H2P2.
10. James Hardie Research Pty Ltd; NATA Accreditation No. 14220; Equivalence of NZ E2/VM1 and NCC FV1.1/V2.2.1 test methodologies for Cavity Wall Systems; Dated 21/10/2022. Report supports compliance with F3P1 and H2P2.

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