



# PRODUCT CERTIFICATE

## Stria™ Cladding by James Hardie



### KEY INFORMATION

CERTIFICATE: GM-CM30109 RevB

<b>1</b>	<b>SUMMARY OF DESCRIPTION OF BUILDING METHOD OR PRODUCT</b>
<p>Stria™ Cladding is a cavity-based fibre cement panel wall cladding system.</p> <p>Stria™ Cladding consists of Stria™ Cladding Panel, which is a 14mm profile fibre cement panel, fixed horizontally or vertically over battens to form a nominal 20 mm cavity. Proprietary ventilated timber battens are used in the vertical application. The cladding is finished with a latex paint system.</p> <p>The cladding system incorporates a primary and secondary means of weather resistance (first and second lines of defence) against water penetration by separating the cladding from the external wall framing with a nominal 20 mm cavity. The cavity allows for any occasional ingress of water that may get past the external skin to drain to the exterior of the building, and any remaining moisture to dry by evaporation.</p>	
<b>2</b>	<b>SUMMARY OF INTENDED USE OF BUILDING METHOD OR PRODUCT</b>
<p>The system is designed to be used as part of an external cladding system on timber framed building.</p>	
<b>3</b>	<b>BUILDING CODE PROVISIONS</b>
<p>The system if designed, used, installed and maintained in accordance with this certificate will meet the following provisions of the NZBC:</p> <p>Clause B1 STRUCTURE: Performance B1.3.1, B1.3.2, B1.3.4 for the relevant physical conditions of B1.3.3 (a), (f), (h), (j) and (q).</p> <p>Clause B2 DURABILITY: Performance B2.3.1(b) 15 years and B2.3.2.</p> <p>Clause C3 FIRE AFFECTING AREAS BEYOND THE FIRE SOURCE: Performance C3.5, C3.7</p> <p>Clause E2 EXTERNAL MOISTURE: Performance E2.3.2, E2.3.5, E2.3.6 and E2.3.7</p> <p>Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1.</p>	

<b>4</b>	<b>CERTIFICATE HOLDER DETAILS</b>
<p><b>James Hardie New Zealand Limited</b>          Trading as James Hardie          1 O'Rorke Road, Penrose, Auckland          1061, New Zealand,          TechnicalTeam@jameshardie.co.nz          Tel: 0800 808 868,          www.jameshardie.co.nz</p>	

ISSUED	LAST UPDATE	RECERTIFICATION
20/08/2019	01/09/2022	01/09/2025
<b>5 SIGNATURE</b>		
		
<p>Herve Michoux, Global Mark Managing Director</p>		

<b>6</b>	<b>PRODUCT CERTIFICATION BODY</b>
<p><b>Global-Mark Pty Ltd</b>          57 Willis Street, Wellington, 6011          customer.service@global-mark.co.nz          +64 9 889 0622          www.global-mark.co.nz</p>	
<p>The complaints process for this certificate can be found here:</p>	
<p><a href="https://www.global-mark.com.au/?s=complaint">https://www.global-mark.com.au/?s=complaint</a></p>	



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CERTIFICATE V1.5

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### 7 CONDITIONS AND LIMITATIONS OF USE

1. The system is certified:
  - a. as a cavity fixed external wall cladding for buildings:
    - i. within the scope limitations of the NZBC Acceptable Solution E2/AS1, 3<sup>rd</sup> Edition, amendment 10, 5 November 2020, Paragraph 1.1,
    - ii. with a risk score of up to 20, calculated in accordance with the NZBC Acceptable Solution E2/AS1, 3<sup>rd</sup> Edition, amendment 10, 5 November 2020, Table 2,
    - iii. situated in in NZS 3604:2011 Wind Zones up to, and including Extra High, and
  - b. as a cavity fixed external wall cladding for buildings specifically engineering designed (SED):
    - i. up to 25m in height (up to 10m in height when using Hardie™ CLD™ Structural Cavity Battens), and
    - ii. with an inter-storey drift of span/180 maximum, and
    - iii. the design ultimate limit state (ULS) differential wind pressure does not exceed 3.2 kPa (2.5kPa when using Hardie™ CLD™ Structural Cavity Battens),, and
    - iv. with the stud and batten spacing no more than 600mm centres,
  - c. located:
    - i. in all exposure zones (except microclimates) as defined in NZS3604:2011 section 4.2, and
    - ii. anywhere in relation to the relevant boundary for Importance Levels 1 to 4 buildings within the scope of:
      1. C/AS1, amendment 5, 5 November 2020 paragraph 1.1.1 or
      2. C/AS2, amendment 2, 5 November 2020 paragraph 1.1.1
2. The system shall be specified, installed, inspected and maintained in accordance with the following sets of documents collectively referenced as the Applicable Technical Specification to the extent that their scope covers that for this Certificate:
  - a. For the Horizontal applications with timber batten,
    - i. Stria™ Cladding Timber Cavity Batten Technical Specification, August 2022, and
    - ii. James Hardie Fire & Acoustic Design Manual (November 2020) section 4:16 Control of External Fire Spread, figures No's. 1 to 8 and 12 to 20, specifically details JHETGS30h and JHETGS60h.
  - b. For the Horizontal applications with Hardie™ CLD™ Structural Cavity Batten,
    - i. Stria™ Cladding Hardie™ CLD™ Structural Cavity Batten Technical Specification, August 2022, and
    - ii. James Hardie Fire & Acoustic Design Manual (November 2020) section 4:16 Control of External Fire Spread, figures No's. 1 to 8 and 12 to 20, specifically details JHETGS30h and JHETGS60h.
  - c. For the Vertical Application,
    - i. Stria™ Cladding Vertical Installation Technical Specification, August 2022
    - ii. James Hardie Fire & Acoustic Design Manual (November 2020) section 4:16 Control of External Fire Spread, figures No's. 1 to 8 and 12 to 20, specifically details JHETGS30v, JHETGS60v and JHETSS60v.

(Note: Provisions within the documents above related to the use of the system with steel-frame construction are outside the scope of this certification).
  - d. James Hardie Fire & Acoustic Design Manual (November 2020) section 4:16 "Control of External Fire Spread", Figure No's 1 to 8 and 12 to 20, in particular the installation details JHETGS30h, JHETGS30v, JHETGS60h and JHETGS60v. These details have only been assessed and certified with respect to external fire spread via Stria™ Cladding. For walls located within 1.0 m of a relevant boundary, Stria™ Cladding may be used as an external façade/cladding attached to the exterior of fire rated wall systems as depicted within the Fire and Acoustic Design Manual (November 2020). Fire Resistance rating performance of the wall assembly falls outside the scope of this certificate

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3. In wind zones greater than Very High a rigid air barrier which complies with Table 23 of E2/AS1 shall be used. In Buildings exceeding 10 m in height RAB™ Board must be used including horizontal control joints in accordance with the requirements of the Codemark certificate for RAB™ Board. (Refer to GM-CM30130)
4. The system is certified for use:
  - a. with the ancillary components as described in this certificate,
  - b. with aluminium window and door joinery that is installed with vertical jambs and horizontal heads and sills. Only joinery compliant with the requirements of NZS 4211:2008 including amendment 1 for the relevant Wind Zone or wind pressure shall be used or have a current CodeMark.
5. Stria™ Cladding shall only be installed horizontally or vertically on vertical surfaces.
6. All exposed faces, including top edges at sills and all bottom edges of Stria™ Cladding panel and fibre cement ancillary components shall be finished with a latex exterior paint system complying with any of Parts 7, 8, 9, or 10 of AS 3730
7. E2.3.5 and E2.3.6 compliance is limited to cavities created between the internal surface of the panels and the underlay or RAB™ boards.

### 8 HEALTH AND SAFETY INFORMATION

Standard industry safety practices and manufacturer safety requirement as detailed in the technical literature including the applicable SDS must be observed at all time. Please refer to James Hardie SDS Fibre Cement Products Nov 2020

### 9 SUPPORTING INFORMATION ABOUT DESCRIPTION

The Stria™ Cladding panels are pre-primed with an acrylic primer on the front face and edges. The Stria™ Cladding panels are 14 mm thick and are available 325 mm or 405 mm wide by 4200 mm long.

They are manufactured from a reduced density cellulose fibre cement formulation. The panels are formed, cut to length and then cured by high-pressure autoclaving. After autoclaving, a profile is machined on the top edge of the front face, and a rebated lap is machined on the bottom of the back face of the panel. The front edge at the bottom of the board and the board ends are finished square. The Stria™ Cladding panels are manufactured to meet the requirements of AS/NZS 2908.2.

James Hardie supplies the following ancillary components:

- For the horizontal and vertical applications
  - Rigid wall underlay – HomeRAB™ and RAB™ Board
  - Hardie™ 14 mm Trimline Joint Flashing The joint flashings are available in extruded aluminium in 3000 mm lengths.
  - Hardie™ 14 mm External Box Corner - Anodised aluminium extrusion used to create external corners in 2700 and 4000 mm lengths.
  - Cavity vent strip – Hardie™ 28 mm aluminium cavity closure or Hardie™ uPVC vent strip, available in 3000 mm lengths.
  - External corner mouldings – 90° anodised aluminium external box corner available in 2700 and 4000 mm lengths
  - Hardie™ 9mm Panel Aluminium External Box Corner- A box corner mould to form the external joints. 9mm etch primed available in 2450, 2700, 3000 and 4000 mm
- For the horizontal applications
  - Vertical Joint Flashing. The joint flashings are available in extruded aluminium in 3000 mm lengths.
  - Hardie™ 14 mm Internal Corner Flashing - Anodised aluminium extrusion used to create internal corners in 3000 mm lengths
  - Hardie™ 14 mm Aluminium Window Jamb Flashing - Aluminium moulding used beside window opening to end butt the Stria Cladding in 3000 mm lengths
  - Hardie™ CLD™ Structural Cavity Batten - 19mm x 70mm fibre cement cavity batten in 2450mm and 3000mm

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- For the vertical applications
  - Hardie™ horizontal cavity battens – 45 x 20 mm thick Radiata pine batten treated to Hazard Class H3.1. The top edge is bevelled with an 18° slope. The back face is grooved with 22 mm wide x 5 mm deep rebates at 50 mm centres, and the front face is grooved with 6 mm wide x 6 mm deep rebates at 150 mm centres. The grooves are offset on each face.
  - Hardie™ Internal 'W' Corner - Anodised aluminium extrusion used to create internal corners 2700 mm.
  - Trimline Horizontal Jointer - A jointer to cover the butt joint of Hardie™ 14 mm Trimline Joint Flashing in 100 mm
  - Trimline External Corner Jointer and Trimline Internal Corner Jointer - Joins Hardie™ 14 mm Trimline Joint Flashing at corner

Other components not supplied by James Hardie but meet the following requirements

- For the horizontal and vertical applications
  - Flexible wall underlay – building underlay complying with NZBC Acceptable Solution E2/AS1, Table 23, or breather-type membranes covered by a valid Codemark Certification for use as wall underlays
  - Flexible wall underlay support – polypropylene strap, 75 mm galvanised mesh, galvanised wire, or additional vertical battens for securing the flexible wall underlay in place and preventing bulging of the bulk insulation into the drainage cavity. (Note: mesh and wire galvanising must comply with AS/NZS 4534.)
  - Flexible sill, head and jamb flashing tape - flexible flashing tapes complying with NZBC Acceptable Solution E2/AS1, Paragraph 4.3.11, or flexible flashing tapes covered by a valid Codemark Certification for use around window and door joinery openings.
  - Cavity batten fixings - 40 x 2.8 mm flat head hot-dip galvanised nails.
  - Stria™ Cladding fixings (with flexible wall underlays) – 75 x 3.15 mm Hardie™ Flex hot-dip[ galvanised or stainless steel nails
  - Stria™ Cladding fixings (with flexible wall underlays) - 65 x 2.87 mm D-head or RounDrive hot-dip galvanised or stainless steel ring shank nails.
  - Stria™ Cladding fixings (with rigid wall underlays up to 10 mm thick) 75 x 3.06 mm D-head or RounDrive hot-dip galvanised or stainless steel ring shank nails (Note: Stainless steel fixings must be Grade 316 and hot-dip galvanising must comply with AS/NZS 4680).
  - Joinery head flashings - extruded or folded from aluminium or galvanised steel to suit the window or door trim opening. Refer to NZS 3604, Section 4 and NZBC Acceptable Solution E2/AS1, Table 20 for durability requirements.
  - Flexible sealant - sealant complying with NZBC Acceptable Solution E2/AS1, or sealant covered by a valid Codemark Certification for use as a weather sealing sealant for exterior use.
- For the horizontal applications
  - Cavity battens - nominal 50 mm wide by 25 mm thick (minimum finished size of 45 mm wide by 18 mm thick) timber treated to Hazard Class H3.1.
  - Timber trim and moulding for use around windows and door. Timber trim and moulding must be finished in accordance with their manufacturer specifications to achieved the required durability
  - Planted sill and scribes - timber treated to Hazard Class H3.1, pre-primed before installation. Window and door trim cavity air seal - air seals complying with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.6, or self-expanding, moisture cure polyurethane foam air seals covered by a valid Codemark Certification suitable for use around window, door and other wall penetration openings.
  - Hardie™ CLD™ Structural Cavity Battens fixings - 65 x 2.87mm RounDrive Ring Shank Nail -For fixing Hardie™ CLD™ Structural Cavity Battens to the framing.
  - Stria™ Cladding fixings- 30 x 1.6mm C Series Brad Nails -304SS brad nails used to install Stria™ Cladding to the Hardie™ CLD™ Structural Cavity Batten.

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- Adhesive Sealant -Sikaflex® 11FC Polyurethane adhesive sealant manufactured by Sika® for applying between the Stria™ cavity panels and Hardie™ CLD™ Structural Cavity Battens.
- For the vertical applications
  - Window and door trim cavity air seal - air seals complying with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.6, or self-expanding, moisture cure polyurethane foam air seals covered by a valid Codemark Certification suitable for use around window, door and other wall penetration openings.

10 SUPPORTING INFORMATION ABOUT INTENDED USE			
Nil			
11 SUPPORTING INFORMATION ABOUT CONDITIONS AND LIMITATIONS OF USE			
Stria™ Cladding can be used to provide fire resistance rated construction, but this aspect has not been assessed and is outside the scope of this certificate.			
12 BASIS FOR CERTIFICATION			
The certification decision is based on independent technical review(s) of test report(s), engineering opinion(s) and other documented evidence(s), factory audit(s) and site review(s)			
Code Clause	Compliance pathway		Evidence
B1 STRUCTURE	Alternative solution -Expert judgement		001, 012, 013, 014, 015, 016, 017, 018, 019, 020, 021, 022, 023, 025, 026, 027 and 028
B2 DURABILITY	Alternative solution -Expert judgement		001, 024, 026, 027 and 028
C3 FIRE AFFECTING AREAS BEYOND THE SOURCE	Alternative solution -Expert judgement		001, 002, 003, 004, 005, 006, 007, 008, 010, 011, 026, 027, 028 and 029
E2 EXTERNAL MOISTURE	Alternative solution -Expert judgement		001, 009, 012, 013, 014, 015, 016, 017, 018, 019, 020, 021, 022, 023, 026, 027 and 028
F2 HAZARDOUS BUILDING MATERIALS	Alternative solution -Expert judgement		001, 021, 026, 027, 028 and 030
13 SUPPORTING DOCUMENTATION FOR CERTIFICATION			
Ref	Author	Title	Date and/or revision
001	GLOBAL-MARK	Codemark Certification GM-CM30130 HomeRAB™ Pre-Cladding and RAB™ Board by JAMES HARDIE	Rev A
002 *	BRANZ	Fire Assessment Report based Cone calorimeter test.	FH3182 21 November 2002
003 *	BRANZ	Fire Assessment Report based Cone calorimeter test.	FH 2976 15 May 2001
004 *	BRANZ	Fire Assessment Report based Cone calorimeter test (BRANZ Project No. FC10254-001).	FSR 4206 Issue2 7 November 2018
005*	BRANZ	Fire technical Opinion: Technical opinion based on NFPA 285 Compliance with NZBC C/AS2, clause 5.8.2 (b) and C/VM2 Part A (a).	FC12172-001 1 November 2019
006*	BRANZ	Fire Assessment Report Review of James Hardie Fire and Acoustic Manual	FAR 4620 – 04 November 2016



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007*	BRANZ	Fire technical Opinion: Fire resistance of James Hardie Wall Systems with Service Penetrations	FC12040-004 -03 December 2019
008*	BRANZ	Technical Assessment "Fire Resistance of External Wall and Soffit" _ Various JH Products	FAR 2597- 5th October 2005
009*	BRANZ	E2 Weathertightness Opinion for the Appraisal of Linea Oblique Weatherboard (Vertical) Cavity Cladding	TP2355-02, dated 19 November 2015
010*	Intertek B&C	JH cavity fix wall assembly fire test as per NFPA 285	J6706.01-121-24 - 20th August 2019
011*	Intertek B&C	JH cavity fix wall assembly fire test as per NFPA 285	J6707.01-121-24 - 21st August 2019
012*	Clarkson Consulting Services	JH NZ_RAB_Weathertightness Assessment_200626_R2.1	August 2022
013*	James Hardie Building Product	Weathertightness Testing of Residential Façade Fibre Cement Cladding System On Cavity Battens to the requirement of Verification Method E2/VM1	TS061-05, dated 15 February 2006
014*	James Hardie Building Product	TESTING OF A TITAN RESIDENTIAL FIBRE CEMENT CLAD FAÇADE FOR COMPLIANCE WITH THE REQUIREMENTS OF AS/NZS 4284:1985 "TESTING OF BUILDING FACADES"	TS010-06, dated 14 November 2006
015*	James Hardie Technical Support group	Weathertightness (E2/VM1)	TS003-13, dated 4 December 2013
016*	James Hardie Technical Support group	Weathertightness (E2/VM1)	TS022-13, dated 12 November 2013
017*	James Hardie Technical Support group	Weathertightness (E2/VM1)	TS033-13, dated 8 January 2014
018*	James Hardie Technical Support group	Weathertightness & Façade System (E2/VM1)	TS009-15, dated 14 October 2015
019*	James Hardie Technical Support group	Weathertightness & Façade System (E2/VM1)	TS052-11, dated 16 December 2011
020*	Façade Testing New Zealand Limited,	Testing of James Hardie NZ ExoTec Façade panel top hat rainscreen façade system in accordance with AS/NZS 4284:2008	FT-R1005, dated May 2017
021*	Façade Lab Ltd	Testing of James Hardie Linea – Weatherboard on RAB Board in accordance with E2/VM2 (BRANZ – EM7)	20-15 dated 10/3/2021
022*	Façade Lab Ltd	Testing of James Hardie Linea Oblique vertical weatherboard on rigid wall underlay to E2/VM2 (BRANZ EM7) using tests from AS/NZS 4284:2008 'Testing of Building Facades'	20-16 dated 11/12/2020
023*	BRANZ	BRANZ Assessment – Face Load Strength of James Hardie Linea Weatherboard Clad Walls and Variations of Sheet thickness and Nail type (reviews STO483)	STO102/SM30/SJT dated 11 November 2002
024*	BRANZ	Durability Opinion on the Linea Weatherboard System	DA 0220 dated 24/09/2017
025*	BRANZ	Face Loading Testing of Low Density Thick Weatherboard	Report ST483 dated 20 February 2001
026	James Hardie New Zealand Limited	Stria™ Cladding Timber Cavity Batten Technical Specification	August 2022
027	James Hardie New Zealand Limited	Stria™ Cladding Vertical Installation Technical Specification	August 2022



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028	James Hardie New Zealand Limited	Stria™ Cladding Hardie™ CLD™ Structural Cavity Batten Technical Specification	August 2022
029	James Hardie New Zealand Limited	James Hardie Fire & Accoustic Design Manual. Section 4:16 Control of External Fire Spread, figures No's. 1 to 9 8 and 12 to 20, specifically details JHETGS30h, JHETGS30v, JHETGS60h, JHETGS60v, JHETSS60h and JHETSS60vJHETGL30, JHETGL60 and JHETLL60	November 2020
030	James Hardie New Zealand Limited	LQA8N - SAFETY DATA SHEET- JAMES HARDIE FIBRE CEMENT SHEETS PRODUCTS	Version No.: 1.0 ISSUED Date : 18/06/2020

\* These documents were provided commercial in confidence and are not publicly available

### 14 CONDITIONS RELATING TO NOTIFICATION

- (a) the certificate holder notifies the product certification body in writing of any intended change to any of the following particulars:
- (i) the name, address, or contact details of the certificate holder:
  - (ii) any address of a location where a certified product is produced or manufactured:
- (b) the certificate holder notifies the product certification body in writing of any intended change, modification, or alteration to any of the following:
- (i) the certified building method or product:
  - (ii) the method of its production or manufacture:
  - (iii) the product quality plan prepared in respect of the certified building method or product:
  - (iv) the application or installation instructions for the certified building method or product:
  - (v) any documentation relating to the use and maintenance of the certified building method or product:
- (c) if the certificate holder has any reason to suspect that the certified building method or product does not comply with the Building Code, the certificate holder notifies the product certification body in writing of the reason for that suspicion:
- (d) if the certificate holder or the product certification body finds that a certified building method or product that has been released on the market does not comply with the Building Code, the certificate holder discloses that fact in disclosure statements published in a form that is acceptable to the product certification body and to the chief executive:
- (e) if the certificate is suspended or revoked, the certificate holder—
- (i) notifies all customers to whom the building method or product is regularly supplied; and
  - (ii) immediately ceases using the certificate, the mark of conformity, and any reference to the number of the certificate.

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