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Certificate Holder:

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AND
Sumimoto Forestry
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Suite 7, 395 Ferntree
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Waverley, VIC, 3149,
Australia
Tel: (03) 9574 5500

Certificate of Conformity

Certificate number: CM 30074 Rev 1

THIS TO CERTIFY THAT

KMEW CERACLAD Panels

Type and/or use of product:

Panel for external wall lining of timber or cold-formed steel framed residential buildings.

Description of product:

Ceramic coated, fibre-reinforced cementitious panels used as external wall cladding. The CERACLAD system is a ventilated cavity-based cladding system for use on timber or steel framed residential construction.

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

BCA 2019

	Volume One	Volume Two	
Performance Requirement(s)		P2.1.1	Structural stability and resistance
		P2.2.2	Weatherproofing
		P2.2.3	Rising damp
Deemed-to-Satisfy Provision(s):		3.5.4.3	Wall cladding boards
		3.10.5	Construction in bushfire prone areas
		3.12.1.4	Energy Efficiency – External walls
State or territory variation(s):		NSW P2.2.3	Rising damp

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.

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.

The purpose of Global-Mark **construction site audits** is to confirm the practicability of installing the product; and to confirm the appropriateness and accuracy of installation instructions. In placing the **CodeMark mark** on the product/system, the certificate holder makes a declaration of compliance with the certification standard(s) and confirms that the product is identical to the product certified herein. In issuing this Certificate of Approval Global-Mark has relied on the **expertise of external bodies** (laboratories, and technical experts).

Herve Michoux
Global-Mark Managing Director

Peter Gardner
Unrestricted Building Certifier

Date of issue: 22/10/2019

Date of expiry: 22/10/2022



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			SA P2.2.3	Rising damp
			Qld 3.10.5.0	Bushfire Areas – Acceptable construction manuals
			NSW 3.12	Replaced with BASIX
			NT 3.12	Replaced with BCA 2009 Part 3.12
			Qld 3.12	Building Act 1975 and Queensland Development Code MP 4.1 – Sustainable buildings
			ACT 3.12	ACT Appendix
SUBJECT TO THE FOLLOWING LIMITATIONS AND CONDITIONS AND THE PRODUCT TECHNICAL DATA IN APPENDIX A AND EVALUATION STATEMENTS IN APPENDIX B				
Limitations and conditions: <ol style="list-style-type: none"> 1. Structural resistance in respect of wind actions for non-cyclonic wind classes N1, N2 and N3 only, in accordance with AS 4055:2012 (incorporating Amendment No.1). 2. Bushfire resistance up to and including to BAL-40 when installed in accordance with: <ol style="list-style-type: none"> a. KMEW CERACLAD Panels Design/Installation Manual for Australia, 27 July 2017 Edition; and, b. The requirements of AS 3959:2018. 3. In applications where a complying thermal resistance of a wall is to be calculated, a thermal resistance of $R = 0.114 \text{ m}^2\text{K/W}$ shall be used for the 16 mm CERACLAD Panel. 				Building classification/s: 1 and 10

APPENDIX A – PRODUCT TECHNICAL DATA

A1 Type and intended use of product

See type and/or use of product on page 1.

A2 Description of product

See description of product on page 1.

CERACLAD Panels are pre-finished extruded fibre-reinforced cement wall claddings, 3030 mm in length, 466 mm in width (for an effective cover of 455 mm) and 14 mm or 16 mm in thickness. CERACLAD Panels are installed either horizontally or vertically to timber or cold-formed steel wall frame studs with proprietary brackets and fasteners providing a nominal 15 mm cavity.

Figure 1 on page 4 shows the typical construction configuration for horizontal panel layout where the B1015 clips are fixed directly to the studs. Figure 2 on page 5 shows the typical construction configuration for vertical panel layout where the B1015 clips are fixed to minimum 30 mm thick horizontal furring strips that are fixed to the studs.

A3 Product specification

Product selection, and incorporation into the building design, shall be made by a professional Architect or Engineer or other appropriately qualified person who:

- Has qualifications and experience acceptable to the relevant approval authorities; and
- Has ready access to the KMEW CERACLAD Panels Design/Installation Manual for Australia, 27 July 2017 Edition.

The product is classified as a Type B Category 2 sheet in accordance with AS/NZS 2908.2:2000.

Refer to Table 1 on page 6 for CERACLAD Panel fixing requirements by AS 4055 Wind Class.

Refer to Table 2 on page 6 for CERACLAD wall system R-Values.

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Horizontal Installation

Additional Reinforcing Nails for Wind Class N3

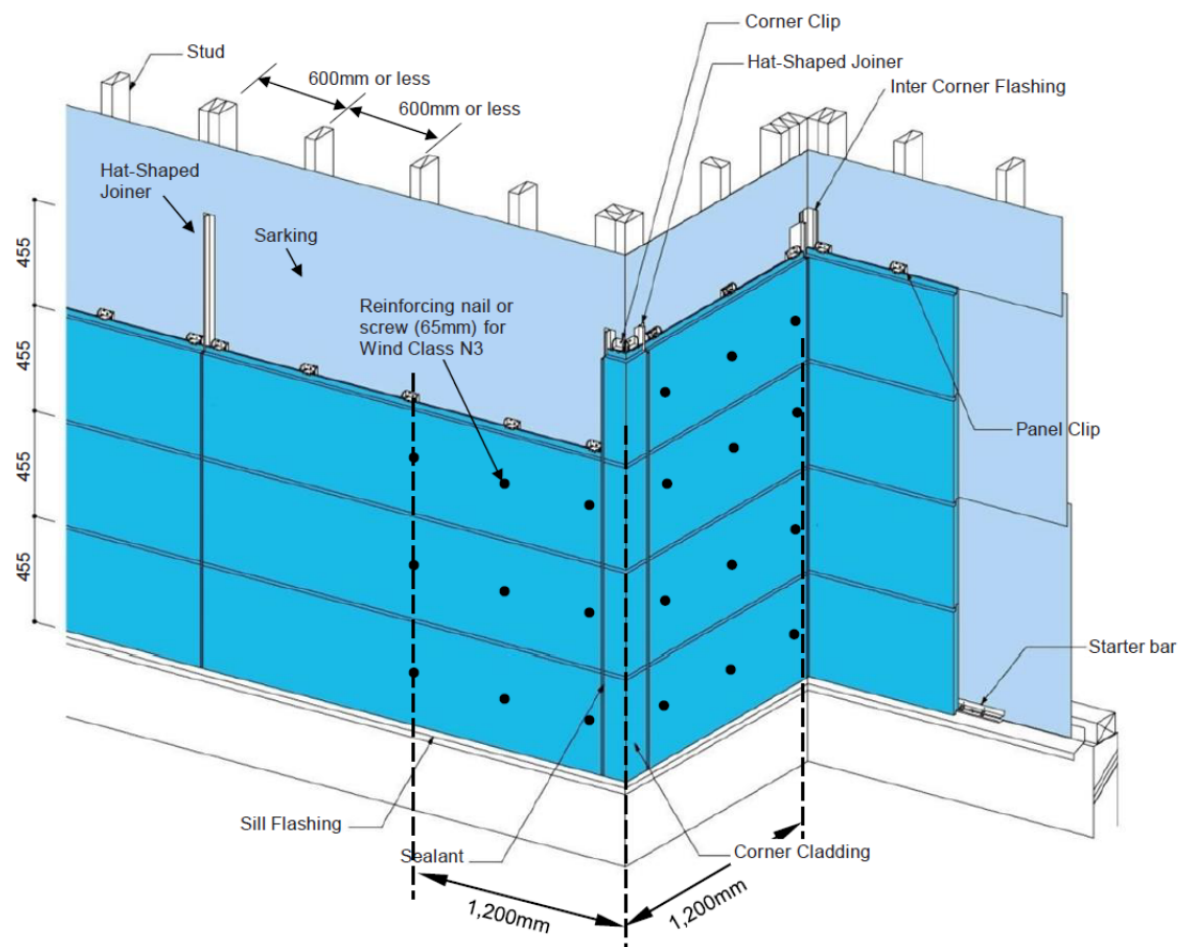


Figure 1

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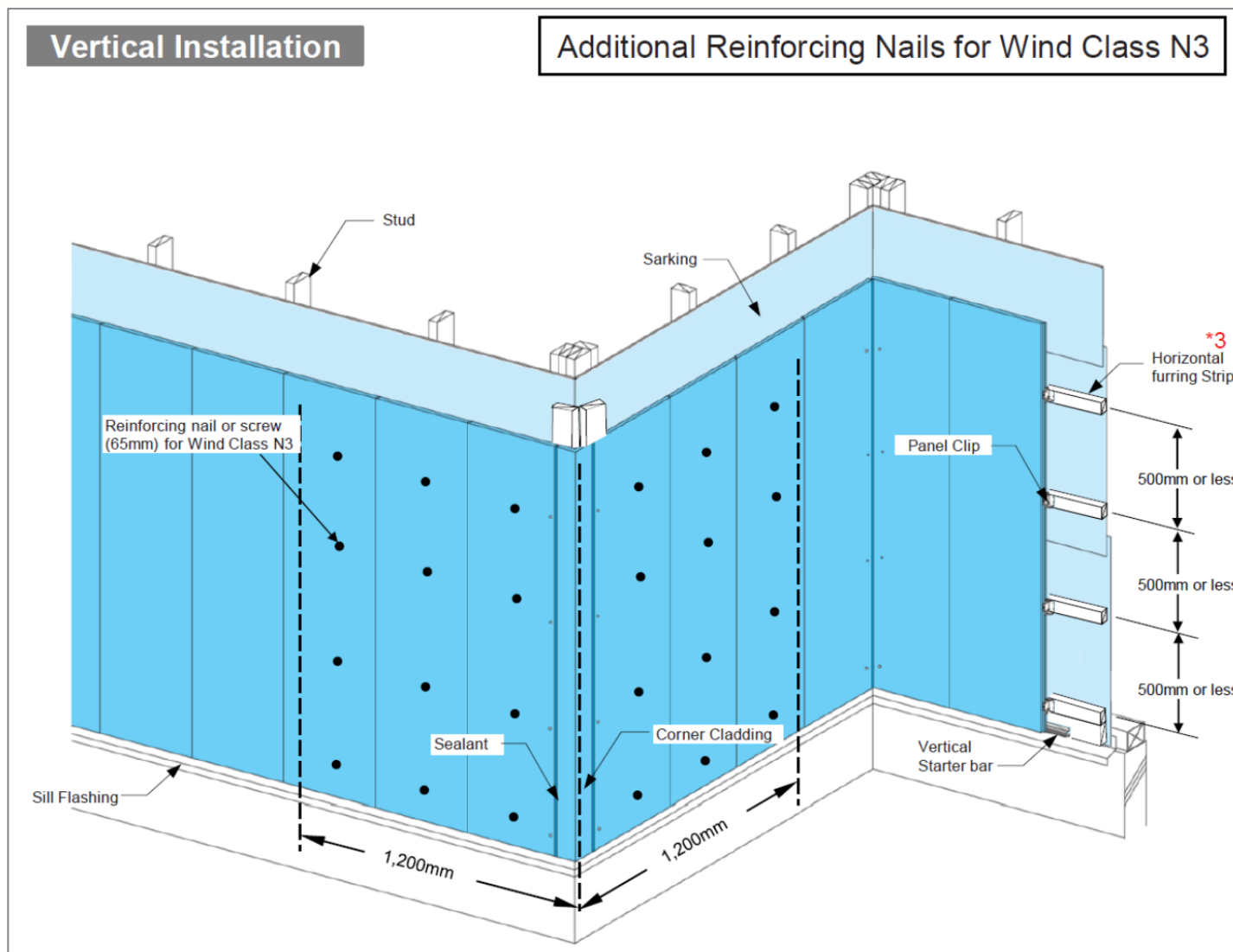


Figure 2

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Table 1: CERACLAD Panel Fixing Requirement

Wind Class to AS4055	Minimum CERACLAD Panel Fixing Requirement	
	General Areas	Corner Zones
N1	Panel clip at 600 mm ctrs.	Panel clip at 600 mm ctrs.
N2	Panel clip at 600 mm ctrs.	Panel clip at 600 mm ctrs.
N3	Panel clip at 600 mm ctrs.	Panel clip + face fix at 600 mm ctrs.

Notes to Table 1:

1. Corner zone is within 1,200 mm of an external corner of a building.
2. Face fix is an additional mid width panel fixing to each stud with the following fasteners:
 - a. Timber frame – dia. 3 mm x 65 mm nail
 - b. Cold-formed steel frame – 50 mm countersunk head screw

Table 2: Wall System R-Value – 16 mm CERACLAD Panel

Stud Cavity Width (mm)	Stud Cavity Added Insulation R-Value ($\text{m}^2\text{K/W}$)	Wall System R-Value ($\text{m}^2\text{K/W}$)	
		Winter	Summer
70	None	1.6	1.3
70	1.4	2.3	2.0
75	1.5	2.4	2.1
90	2.0	2.9	2.6

Notes to Table 2:

1. System R-Value includes air films and non-ventilated cavity air space in accordance with AS/NZS 4859.1:2002 (incorporating Amendment No.1).
2. Minimum 9 mm thick plasterboard lining internal.
3. 15 mm cavity between CERACLAD Panel and the stud frame.
4. R 0.2 $\text{m}^2\text{K/W}$ may be added to the system R-Value when the vapour barrier is reflective.

A4 Manufacturer and manufacturing plant(s)

KMEW IGA plant, manufacturing the “Neorock” product series, known as “CERACLAD” in the Australian market.

410-1, Higashi-omachi, Mita-aza, Iga-City, Mie, 5108-0022, Japan

A5 Installation requirements

1. Product installation shall be carried out by a competent tradesperson under the direction of a Builder, both of whom have ready access to the KMEW CERACLAD Panels Design/Installation Manual for Australia, 27 July 2017 Edition.
2. The installer must complete, sign and send to the Certificate Holder a Certificate of Installation when installation is complete.

A6 Other relevant technical data

Any referenced documents within the technical literature identified in Appendix A, A3 and Appendix A, A5.

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

The following assessment methods have been used to determine compliance with NCC 2019:

Code Clause	Assessment Method(s)	Evidence of suitability	Evidence reference in B2
NCC Volume Two P2.1.1	NCC Volume Two A2.2(2)(a)	NCC Volume Two A5.2(1)(d) Report issued by an Accredited Testing Laboratory	Items 1, 2, 3, 4, 7, 8 and 10
		NCC Volume Two A5.2(1)(e) Certificate or report from a professional engineer or other appropriately qualified person	Items 5 and 6
		NCC Volume Two A5.2(1)(f) Another form of documentary evidence	Item 9
NCC Volume Two P2.2.2	NCC Volume Two A2.2(2)(a)	NCC Volume Two A5.2(1)(d) Report issued by an Accredited Testing Laboratory	Items 4 and 8
NCC Volume Two P2.2.3	NCC Volume Two A2.2(2)(a)	NCC Volume Two A5.2(1)(d) Report issued by an Accredited Testing Laboratory	Items 4 and 8
NCC Volume Two 3.5.4.3	NCC Volume Two A2.3(2)(a)	NCC Volume Two A5.2(1)(d) Report issued by an Accredited Testing Laboratory	Item 10
NCC Volume Two 3.10.5	NCC Volume Two A2.3(3)(a)(i)	AS 3959:2018 Construction of buildings in bushfire-prone areas	Item 9
NCC Volume Two 3.12.1.4	NCC Volume Two A2.3(2)(a)	NCC Volume Two A5.2(1)(f) Another form of documentary evidence	Item 9

B2 Reports

The following reports have been used as evidence to determine compliance with NCC 2019:

Ref	Author	Reference	Date	Description	NATA Registration
1	BRANZ	ST0875/1	20/3/2012	Face load pressure box tests on KMEW Ceradir siding 14 mm solid core nail fixed over timber battens to timber studs – in accordance with AS 4040.2.	Via ilac-MRA IANZ Accreditation No. 918
2	BRANZ	ST0875/2.R1	19/6/2012	Face load pressure box tests on KMEW Neorock siding 16 mm thick hollow core clip and nail fixed to timber framing – in accordance with AS 4040.2.	Via ilac-MRA IANZ Accreditation No. 918
3	BRANZ	ST0875/3	20/3/2012	Face load pressure box tests on KMEW Neorock siding 16 mm thick hollow core which was clip fixed to timber framing – in accordance with AS 4040.2.	Via ilac-MRA IANZ Accreditation No. 918
4	BRANZ	Appraisal No. 783	27/3/2013	KMEW NEOROCK and CERADIR 16 mm Panels Cladding System	Via ilac-MRA IANZ Accreditation No. 918
5	Parametric Developments		13/4/2015	Preliminary Test Report – KMEW Ceradir Cladding fixed to steel framing - connection	Not applicable
6	Parametric Developments		14/9/2015	Preliminary Test Report – KMEW Ceradir Cladding fixed to steel framing – shear test	Not applicable
7	BRANZ	ST1110	15/3/2016	Face load testing for KMEW	Via ilac-MRA IANZ Accreditation No. 918

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8	ICC Evaluation Service LLC	ESR-1627	12/2016	CERACLAD Rain Screen System: Fiber-Reinforce Cement Exterior Wall Panel System	Via ilac-MRA ANSI Accreditation ID# 1000
9	KMEW Co., Ltd.		27/7/2017	KMEW CERACLAD Panels Design/Installation Manual for Australia	Not applicable
10	BRANZ	DC2251	28/06/2012	AS/NZS 2908.2 Testing of KMEW Ceradir Siding 14 mm Solid Core Board	Via ilac-MRA IANZ Accreditation No. 918