

Certificate number: CM40209

Certification Body:


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THIS IS TO CERTIFY THAT

Masterwall® M-Series® Insulated Cladding Systems

Type and/or use of product:

Non-load bearing External Insulated Façade Systems.

Description of product:

The M-Series® Insulated Cladding Systems is a non-load bearing integrated façade system for external walls comprising M Grade FR expanded polystyrene (EPS) and other proprietary components, refer A2. The system is Direct-to-Frame Fixed and the panel is available in the following core thicknesses: 50mm, 75mm, 100mm and 125mm.

COMPLIES WITH THE FOLLOWING BCA PROVISIONS AND STATE OR TERRITORY VARIATION(S) BCA 2019 (Amdt. 1)

	Volume One	Volume Two
Performance Requirement(s):	BP1.1(a)(b)(iii) Structural reliability -Wind action – Minimum panel thickness 50mm	P2.1.1(a)(b)(iii) Structural stability and resistance - Wind action – Minimum panel thickness 50mm
	FP1.4 Weatherproofing – Subject to <i>Limitation and Condition 4.</i>	P2.2.2 Weatherproofing – Subject to <i>Limitation and Condition 4.</i>
	FP1.5 Rising Damp– Subject to <i>Limitation and Condition 6.</i>	P2.2.3 Rising Damp– Subject to <i>Limitation and Condition 6.</i>
Deemed-to-Satisfy Provision(s):	G5.2 Construction in Bushfire areas – limited to external wall cladding in BAL not exceeding BAL 29 - limited to panel thickness 75mm or greater	3.10.5.0 Bushfire areas – limited to external wall cladding in BAL not exceeding BAL 29 - limited to panel thickness 75mm or greater
	J1.5 Energy Efficiency – Contributes to the total R value. Refer A3	3.12.1.4 Energy Efficiency – Contributes to the total R value. Refer A3
State or territory variation(s):	G5.2 (NSW)	P2.2.3 (SA, NSW), 3.10.5.0 (NSW, Qld), Part 3.12 (NSW, NT, SA, Qld, Tas, ACT)

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

Limitations and conditions:

- This product has not been tested to AS 1530.1-1994 and cannot be considered a non-combustible product. For Type A & B construction, the use of the Masterwall® M-Series® System must be supported by a site-specific Performance Solution where the BCA requires building elements and/or ancillary elements to be non-combustible. Acceptance or otherwise of the site-specific Performance Solution is at the discretion of the appropriate Authority subject to the regulatory framework of the relevant State or Territory.

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: 01/10/2021

Date of expiry: 01/10/2024



Certificate of Conformity

2. In order to maintain compliance with the Bushfire Attack Level (BAL), it is the responsibility of the Building Designer to ensure compliance is achieved in accordance with AS 3959:2018. The Masterwall[®] M-Series[®] System, incorporating a render system with minimum thickness 6.5mm, EPS thicknesses of 75mm or 100mm, and 160gsm fiberglass mesh, is suitable for use in designated bushfire prone areas that require a BAL-29 or less, when installed in accordance with the appropriate installation manual outline in A5 of this Certificate of Conformity and all exposed core material is encapsulated with a non-combustible covering.
3. The Masterwall[®] M-Series[®] System are suitable for wind categories from N1 to N4 and C1 & C2 where the minimum panel thickness is 75mm and the maximum stud spacing is 450mm. Consult relevant install manual for relevant construction requirements. The Masterwall[®] M-Series[®] System have not been tested and certified for impact loading from windborne debris in Region C and D as denoted in AS 1170.2:2011. The building designer should take into consideration internal pressure resulting from dominant openings.
4. The Masterwall[®] M-Series[®] System must be designed and installed in accordance with the appropriate installation manual outline in A5 of this Certificate of Conformity. Any variation from this design manuals falls outside the scope of this certification. No substitution of any component part of the Masterwall[®] M-Series[®] System is permissible.
5. To satisfy FP1.4 & P2.2.2 via verification, the relevant design is required to meet the criteria of FV1.1 and/or V2.2.1 to the satisfaction of the Appropriate Authority as defined by the NCC. The site specific building must;
 - (a)(i) has a risk score of 20 or less, when the sum of all risk factor scores is determined in accordance with Table FV1.1/V2.2.1a; and
 - (a)(ii) is not subjected to an ultimate limit state wind pressure or more than 2.5kPa; and
 - (a)(iii) includes only windows that comply with AS 2047Compliance 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.
6. No assessment has been undertaken on the product for Part F6 of Vol 1 or Part 3.8.7 of Vol 2 of the 2019 BCA 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.
7. In all installations, the minimum clearance between the underside of panel and the adjoining surface level below must comply with the specifications in Part 3.5.4.7 of Volume 2 of the NCC.
8. The structural support members are designed and engineered separately as per project requirements by building designers and engineers. The Masterwall[®] M-Series[®] System must incorporate either a timber frame constructed in accordance with AS 1684 series; or a cold-formed steel frame constructed in accordance with NASH Standard for Residential and Low-rise Steel Framing, Part 1:Design Criteria, or AS 3623-1993 (R2018) Domestic Metal Framing; or Framework compliant with other standards as applicable.
9. 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.



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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, CertMark International 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

As per page 1.

A2 Description of product

Direct-to-Frame System: Direct-to-Frame System comprises Masterwall® M-Series® M Grade expanded polystyrene (EPS) external wall panels, mechanically fixed direct to the frame of the building and includes the application of a three-layer polymer modified render system of minimum 6.5mm thickness, reinforced with fibreglass mesh embedded into the first layer of render.

Masterwall® M-Series® Components:

- EPS M Grade Fire Retardant 50mm, 75mm, 100mm and 125mm Panels
- Fibreglass Mesh 160gsm – 55mm x 5mm
- Masterwall® Breathable Sarking
- Tremco illbruck FM 330 - Polyurethane Foam
- Tremco EZY BOND - Construction Adhesive
- Fulaflex 650FC - Sealant
- Single Sided Butyl Nonwoven Fabric 0.75mm
- ABELROD – Closed Cell Polyethylene Foam Rod
- Aluminium Angle 30mm x 30mm x 0.42mm
- Wall Screws Galvanised Class 3, 10 Gauge Square Drive External Wall Screws
- Masterwall 48mm red washers
- M-Tex – Pro Render or Macrender HBS (High Bond Strength)
- M-Tex – Rendercoat Primer
- M-Tex – Texture Coating
- M-Tex – Flex Coat

A3 Product specification

Structure **Masterwall® M-Series® Direct Fixed System – Minimum 75mm thick Panels**

Non-Cyclonic limited to external wall applications where the design ultimate limit state wind pressure, calculated in accordance with AS/NZS 1170.2:2011(R2016) Structural Design Actions Part 2: Wind Actions, does not exceed +2.01 kPa and -3.01 kPa. This is deemed to include AS 4055-2012 wind classifications N1, N2, N3 & N4 and excludes AS 4055-2012 wind classifications N5, N6, C1, C2, C3 & C4.

Masterwall® M-Series® Direct Fixed System – Minimum 75mm thick Panels with maximum stud spacing of 450mm

Cyclonic limited to external wall applications where the design ultimate limit state wind pressure, calculated in accordance with AS/NZS 1170.2:2011(R2016) Structural Design Actions Part 2: Wind Actions, does not exceed +2.68 kPa and -4.02 kPa. This is deemed to include AS 4055-2012 wind classifications C1 & C2 and excludes AS 4055-2012 wind classifications C3 & C4.

Source: Acronem Consulting Pty Ltd; Appraisal No. ACA 190423; Masterwall Direct-to-Frame System; Dated 16/07/2020.

Fire Hazard Properties **Regulatory Indices of Expanded Polystyrene (EPS) with fire retardant when tested in accordance with AS/NZS 1530.3-1999**

Ignitability Index	5	Range 0-20
Spread of Flame Index	0	Range 0-10
Heat Evolved Index	1	Range 0-10
Smoke Index	4	Range 0-10

Source: AWTA; NATA Accreditation No. 1356; Report No. 18-003571 dated 09/07/2018.

Bushfire **Testing and assessments have been completed in accordance with AS 1530.8.1:2007 for Masterwall® M-Series® completed by Exova Warringtonfire which confirm BAL – 29 compliance. Compliance is achieved by incorporating a render system with minimum thickness 6.5mm, EPS thicknesses of 75mm or 100mm, and 160gsm fiberglass mesh.**

Source: Exova Warringtonfire, Report No. FAS180357.3 Bushfire Assessment dated 02/10/2018.

Weatherproofing **Masterwall® M-Series® Direct Fixed System**

Weatherproofing testing conducted to AS/NZS 4284:2008 with performance is limited to SLS wind pressures of +0.82kPa and -1.23kPa and design ultimate limit state wind pressure of ± 2.5 kPa. Wind classifications N1, N2, N3 & N4.

Test Type	Criteria	Result
Static Pressure Wind Load Test	Positive and negative serviceability limit state pressures of + 820 Pa and -1230 Pa were applied for 1 minute.	Pass
Static Pressure Water Test	300 Pa for 15 minutes	Pass
Cyclic Pressure Water Test	125 to 250 Pa	Duration: 5 minutes
	165 to 330 Pa	Duration: 5 minutes
	245 to 490 Pa	Duration: 5 minutes

Source: Acronem Consulting Pty Ltd; Appraisal No. ACA 190423; Masterwall Direct-to-Frame System; Dated 16/07/2020.

Rising Damp **Damp-proofing is achieved by a minimum 50mm clearance to well drained open ground or finished concrete or concrete/tiled level.**

Source: Acronem Consulting Pty Ltd; Appraisal No. ACA 190423; Masterwall Direct-to-Frame System; Dated 16/07/2020.

Energy Efficiency

Masterwall® M-Series® Direct Fixed System

Determined in accordance with AS/NZS 4859.1:2018 & AS/NZS 4859.2:2018 as follows:

Description	Frame	Total R Value		Total U Value	
		Summer	Winter	Summer	Winter
50mm thick Masterwall® M Grade EPS panel with Masterwall Breather Wall Wrap (non-reflective), 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render	90 x 35mm x 0.75mm bmt Steel	1.67	1.76	0.60	0.57
50mm thick Masterwall® M Grade EPS panel with Masterwall Breather Wall Wrap (non-reflective), 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render	90 x 45mm Pine	1.74	1.83	0.57	0.55
75mm thick Masterwall® M Grade EPS panel with Masterwall Breather Wall Wrap (non-reflective), 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render	90 x 35mm x 0.75mm bmt Steel	2.31	2.43	0.43	0.41
75mm thick Masterwall® M Grade EPS panel with Masterwall Breather Wall Wrap (non-reflective), 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render	90 x 45mm Pine	2.39	2.51	0.42	0.40
100mm thick Masterwall® M Grade EPS panel with Masterwall Breather Wall Wrap (non-reflective), 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render	90 x 35mm x 0.75mm bmt Steel	2.96	3.11	0.34	0.32
100mm thick Masterwall® M Grade EPS panel with Masterwall Breather Wall Wrap (non-reflective), 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render	90 x 45mm Pine	3.04	3.19	0.33	0.31
125mm thick Masterwall® M Grade EPS panel with Masterwall Breather Wall Wrap (non-reflective), 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render	90 x 35mm x 0.75mm bmt Steel	3.60	3.78	0.28	0.26
125mm thick Masterwall® M Grade EPS panel with Masterwall Breather Wall Wrap (non-reflective), 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render	90 x 45mm Pine	3.69	3.87	0.27	0.26

Source: James Fricker; Report i367d; Masterwall Direct Fix System Thermal Performance Calculations to AS/NZS 4859.1 & AS/NZS 4859.2:2018; Dated 16/12/2019.



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A4 Manufacturer and manufacturing plant(s)

This field is voluntary. Contact Certificate Holder for details.

A5 Installation requirements

The Masterwall® M-Series® installation shall be in strict accordance with [MASTERWALL M-SERIES INSTALLATION & CONSTRUCTION DETAILS DIRECT-TO-FRAME SYSTEM MANUAL 08062021](#).

A6 Other relevant technical data

No other relevant technical data.

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

1. Structural Provisions A5.2(1)(e). Reports from a professional engineer.
2. Fire Safety Provisions A5.2(1)(d)&(e). Reports from Accredited Testing Laboratories and a professional engineer.
3. Thermal Provisions A5.2(1)(e). Reports from a professional engineer.
4. Weatherproofing Provision A5.2(1)(d)&(e). Reports from Accredited Testing Laboratories and a professional engineer.

B2 Reports

1. Acronem Consulting Pty Ltd; Appraisal No. ACA 190423; Masterwall Direct-to-Frame System; Dated 16/07/2020.

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