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Certificate number: CM40242

THIS IS TO CERTIFY THAT

Masterwall® X-Series® Insulated Cladding Systems

Type and/or use of product:

Non-load bearing External Insulated Façade Systems.

Description of product:

The X-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 systems can be either Batten Fixed or Direct-to-Frame Fixed. 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 2022

| | Volume One | Volume Two | |
|-----------------------------------------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Performance Requirement(s): | B1P1(1),(2)(c) | Structural reliability -Wind action – Minimum panel thickness 50mm | H1P1(1),(2)(c) Structural stability and resistance - Wind action – Minimum panel thickness 50mm |
| | F1P4 | Rising Damp– Subject to <i>Limitation and Condition 6</i> . | H2P2 Weatherproofing – Subject to <i>Limitation and Condition 4</i> . |
| | F3P1 | Weatherproofing – Subject to <i>Limitation and Condition 4</i> . | H2P3 Rising Damp– Subject to <i>Limitation and Condition 6</i> . |
| Deemed-to-Satisfy Provision(s): | G5D3 | Construction in Bushfire areas – limited to external wall cladding in BAL not exceeding BAL 29 - limited to panel thickness 75mm or greater | H6D2(1)(b)(i) Bushfire areas – limited to external wall cladding in BAL not exceeding BAL 29 - limited to panel thickness 75mm or greater |
| | J4D6 | Energy Efficiency – Contributes to the total R value. Refer A3 | H7D4 Energy Efficiency – Contributes to the total R value. Refer A3 |
| State or territory variation(s): | F1P4 (SA), G5D3 (NSW), J4D6 (NSW) | | H2P3 (NSW & SA), H6D2 (VIC), H7D4 (NSW, QLD & SA) |

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® X-Series® Systems 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: 20/06/2024

Date of expiry: 01/10/2027



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[®] X-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[®] X-Series[®] Systems 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[®] X-Series[®] System has not been tested and certified for impact loading from windborne debris in Region C and D as denoted in AS 1170.2:2021. The building designer should take into consideration internal pressure resulting from dominant openings.
4. The Masterwall[®] X-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 manual falls outside the scope of this certification. No substitution of any component part of the Masterwall[®] X-Series[®] System is permissible.
5. To satisfy F3P1 & H2P2 via verification, the relevant design is required to meet the criteria of F3V1 and/or H2V1 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 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 2047Compliance with Weatherproofing is limited to the tested specimen, any 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 F8 of Volume 1 or H4P7 of Volume 2 of the BCA for Condensation and water vapour 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 7.5.7 of the ABCB Housing Provisions.
8. The structural support members are designed and engineered separately as per project requirements by building designers and engineers. The Masterwall[®] X-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.



Certificate of Conformity

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

As per page 1.

A2 Description of product

Masterwall[®] X-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

Batten Fixed System:

Batten Fixed Systems comprises Masterwall[®] X-Series[®] M Grade expanded polystyrene (EPS) external wall panels, mechanically fixed to the outer face of the building incorporating a cavity between the Breather Wrap and the polystyrene panels to allow potential water ingress to drain from behind the cladding. The system 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.

Direct-to-Frame System:

Direct-to-Frame Systems comprises Masterwall[®] X-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.

A3 Product specification

Structure **Masterwall® X-Series® Direct & Batten Fixed System**

Limited to external wall applications where the design ultimate limit state wind pressure, calculated in accordance with AS/NZS 1170.2:2021 Structural Design Actions Part 2: Wind Actions, does not exceed +2.01 kPa and -3.01 kPa. This is deemed to include AS 4055-2021 wind classifications N1, N2, N3 & N4 and excludes AS 4055-2021 wind classifications N5, N6, C1, C2, C3 & C4.

Bushfire Testing and assessments have been completed in accordance with AS 1530.8.1:2007 for Masterwall® X-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® X-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 |
| | | Pass |

Source: Acronem Consulting Pty Ltd; Appraisal No. ACA 180716; Masterwall X-Series® Direct-to-Frame System; Dated 16/07/2020.

Masterwall® X-Series® Batten 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 | 245 to 490 Pa | Duration: 5 minutes |
| Cyclic Pressure Water Test with 6mm Holes in Cladding | 245 to 490 Pa | Duration: 5 minutes |
| Static Pressure Water Test with Internal Lining Removed | 50 Pa | Duration: 15 minutes |
| | | Pass |

Source: Acronem Consulting Pty Ltd; Appraisal No. ACA 180810; Masterwall X-Series® Batten fix System; Dated 05/08/2020.

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 180716; Masterwall X-Series® Direct-to-Frame System; Dated 16/07/2020.

Energy Efficiency – Masterwall® X-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.

Energy Efficiency - Masterwall® X-Series® Batten 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, Vertical H Grade EPS Batten (45 x 25mm) with Masterwall Breather Wall Wrap (non-reflective), 25mm (non-reflective) air space, 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render | 90 x 35mm x 0.55mm bmt Steel | 1.85 | 1.95 | 0.54 | 0.51 |
| 50mm thick Masterwall® M Grade EPS panel, Vertical H Grade EPS Batten (45 x 25mm) with Masterwall Breather Wall Wrap (non-reflective), 25mm (non-reflective) air space, 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render | 90 x 45mm Pine | 1.92 | 2.02 | 0.52 | 0.49 |
| 75mm thick Masterwall® M Grade EPS panel, Vertical H Grade EPS Batten (45 x 25mm) with Masterwall Breather Wall Wrap (non-reflective), 25mm (non-reflective) air space, 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render | 90 x 35mm x 0.55mm bmt Steel | 2.49 | 2.62 | 0.40 | 0.38 |
| 75mm thick Masterwall® M Grade EPS panel, Vertical H Grade EPS Batten (45 x 25mm) with Masterwall Breather Wall Wrap (non-reflective), 25mm (non-reflective) air space, 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render | 90 x 45mm Pine | 2.55 | 2.69 | 0.39 | 0.37 |
| 100mm thick Masterwall® M Grade EPS panel, Vertical H Grade EPS Batten (45 x 25mm) with Masterwall Breather Wall Wrap (non-reflective), 25mm (non-reflective) air space, 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render | 90 x 35mm x 0.55mm bmt Steel | 3.13 | 3.30 | 0.32 | 0.30 |
| 100mm thick Masterwall® M Grade EPS panel, Vertical H Grade EPS Batten (45 x 25mm) with Masterwall Breather Wall Wrap (non-reflective), 25mm (non-reflective) air space, 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render | 90 x 45mm Pine | 3.20 | 3.37 | 0.31 | 0.30 |
| 125mm thick Masterwall® M Grade EPS panel, Vertical H Grade EPS Batten (45 x 25mm) with Masterwall Breather Wall Wrap (non-reflective), 25mm (non-reflective) air space, 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render | 90 x 35mm x 0.55mm bmt Steel | 3.77 | 3.98 | 0.26 | 0.25 |
| 125mm thick Masterwall® M Grade EPS panel, Vertical H Grade EPS Batten (45 x 25mm) with Masterwall Breather Wall Wrap (non-reflective), 25mm (non-reflective) air space, 90mm (non-reflective) air space, 10mm plasterboard, Outside air film, Indoor still air film (unreflective surface), 5mm polymer render | 90 x 45mm Pine | 3.84 | 4.05 | 0.26 | 0.25 |

Source: Acronem Consulting Pty Ltd; Appraisal No. ACA 180810; Masterwall X-Series® Batten Fixed System; Dated 05/08/2020.

A4 Manufacturer and manufacturing plant(s)

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

A5 Installation requirements

The Masterwall® X-Series® installation shall be in strict accordance with relevant the installation manual:

- Batten Fixed: [MASTERWALL X-SERIES INSTALLATION & CONSTRUCTION DETAILS BATTEN FIXED SYSTEM MANUAL 08062021](#); or
- Direct-To-Frame Fixed: [MASTERWALL X-SERIES INSTALLATION & CONSTRUCTION DETAILS DIRECT-TO-FRAME SYSTEM MANUAL 08062021](#).

A6 Other relevant technical data

| 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.

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

1. Energy Efficiency Provisions A5G3(1)(e). Reports from a professional engineer.
2. Fire Safety Provisions A5G3(1)(d)&(e). Reports from Accredited Testing Laboratories and a professional engineer.
3. Structural Resistance Provisions A5G3(1)(e). Reports from a professional engineer.
4. Weatherproofing and Damp Rising Provisions A5G3(1)(d)&(e). Reports from Accredited Testing Laboratories and a professional engineer.

B2 Reports

1. Acronem Consulting Pty Ltd; Appraisal No. ACA 180716; Masterwall X-Series® Direct-to-Frame System; Dated 16/07/2020. Report outlines compliance of the Masterwall X-Series® Direct-to-Frame with B1P1(1),(2)(c), F1P4, F3P1, G5D3, J4D6, H1P1(1),(2)(c), H2P2, H2P3, H7D4 and H6D2(1)(b)(i).
2. Acronem Consulting Pty Ltd; Appraisal No. ACA 180810; Masterwall X-Series® Batten Fixed System; Dated 05/08/2020. Report outlines compliance of the Masterwall X-Series® Batten Fixed with B1P1(1),(2)(c), F1P4, F3P1, G5D3, J4D6, H1P1(1),(2)(c), H2P2, H2P3, H7D4 and H6D2(1)(b)(i).
3. Exova Warringtonfire Aus Pty Ltd; NATA Accreditation No. 3277; Report No. FAS180357.3; Bushfire Assessment; Dated 02/10/2018. Report supports compliance with G5D3 and H7D4.
4. 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. This report contributes to compliance with J4D6 & H6D2(1)(b)(i).
5. Ian Bennie & Associates Pty Ltd, NATA Accreditation No. 2371, Test Report No. 2018-051-S1, this report provides contributes compliance with F3P1 & 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.