

Certification Body:



ABN: 80 111 217 568
JAS-ANZ Accreditation
No. Z4450210AK
PO Box 7144, Sippy
Downs Qld 4556
+61 (07) 5445 2199
www.CertMark.org

Certificate Holder:

New Era Nominees
ABN 2141588731
18-20 Cyber Loop
Dandenong South,
Victoria 3175
Australia
www.masterwall.com.au

Certificate number: CM40209 Rev2

THIS IS TO CERTIFY THAT

Masterwall® Direct-to-Frame System

Type and/or use of product:

Non-load bearing External Insulated Façade System.

Description of product:

The MasterWall® Direct-to-Frame System is a non-load bearing integrated façade system for external walls comprising Medium (M) Grade expanded polystyrene (EPS) and proprietary components. 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

	Volume One	Volume Two
Performance Requirement(s):	<p>BP1.1(a)(b)(iii) Structural reliability - Wind action – Minimum panel thickness 75mm</p> <p>FP1.4 Weatherproofing</p> <p>GP5.1 Construction in Bushfire areas – limited to external wall cladding in BAL not exceeding BAL 29 - limited to panel thickness 75mm or greater</p>	<p>P2.1.1(a)(b)(iii) Structural stability and resistance - Wind action – Minimum panel thickness 75mm</p> <p>P2.2.2 Weatherproofing</p> <p>P2.7.5 Bushfire areas – limited to external wall cladding in BAL not exceeding BAL 29 - limited to panel thickness 75mm or greater</p>
Deemed-to-Satisfy Provision(s):	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):	GP5.1 (NSW, Qld)	P2.7.5 Tas, Part 3.12 (NSW, NT, 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:

- For Type A & B construction, the use of the Masterwall® Direct-to-Frame 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.
- The Masterwall 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 Masterwall® Direct-to-Frame System install manuals and all exposed core material is encapsulated with a non-combustible covering.
- The MasterWall® Direct-to-Frame System is 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.

Building classification/s:

1,2,3,4,5,6,7,8,9 & 10
Note: Limited to Class C buildings.


John Thorpe - CMI


Don Grehan – Unrestricted Building Certifier

Date of issue: 23/01/2020

Date of expiry: 23/10/2021



Certificate of Conformity

4. The Masterwall[®] Direct-to-Frame system must be designed and installed in accordance with the [Masterwall[®] Direct-to-Frame System Installation & Construction Details technical document dated 17/01/2020](#). Any variation from this design manual falls outside the scope of this certification.
5. No substitution of any component part of the Masterwall[®] Direct-to-Frame System is permissible.
6. This product has not been tested for non-combustibility.
7. In order to achieve compliance with weatherproofing in accordance with FV1 and V2.1.1, all windows must comply with AS 2047:2014.
8. The Thermal R values of the Masterwall[®] Direct-to-Frame System will vary with installation configurations refer Masterwall[®] Direct-to-Frame System install manuals
9. The Masterwall[®] Direct-to-Frame System is only to be installed by a suitably qualified tradesperson or a builder.
10. Other than the information referenced in this Certificate of Conformity, the remainder of the information contained in the product's literature is outside the scope of this certification.
11. 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.

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. This may result in the product being classified as a non-conforming building product.

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

MasterWall® Direct-To-Frame System is an external lightweight, reinforced, insulating wall panel, mechanically fixed to the outer face of the wall framing. The base material is a grey coloured Medium (M) Grade expanded polystyrene (EPS) with a fibreglass mesh reinforced “MasterWall®” branded cementitious-based facing, compatible with approved acrylic render and decorative finishes.

Mesh jointing tape is applied at all panel joints and at 45 degrees to the corners of all openings. MasterWall® Breather Wrap, Premium Quality Modified Liquid Sealant, Alloy-Mesh Reinforced External Corner Trims, Polyurethane Foam Sealant, MasterWall® Self Adhering Flashing Tape and decorative and waterproof coatings are integral to the performance of the system.

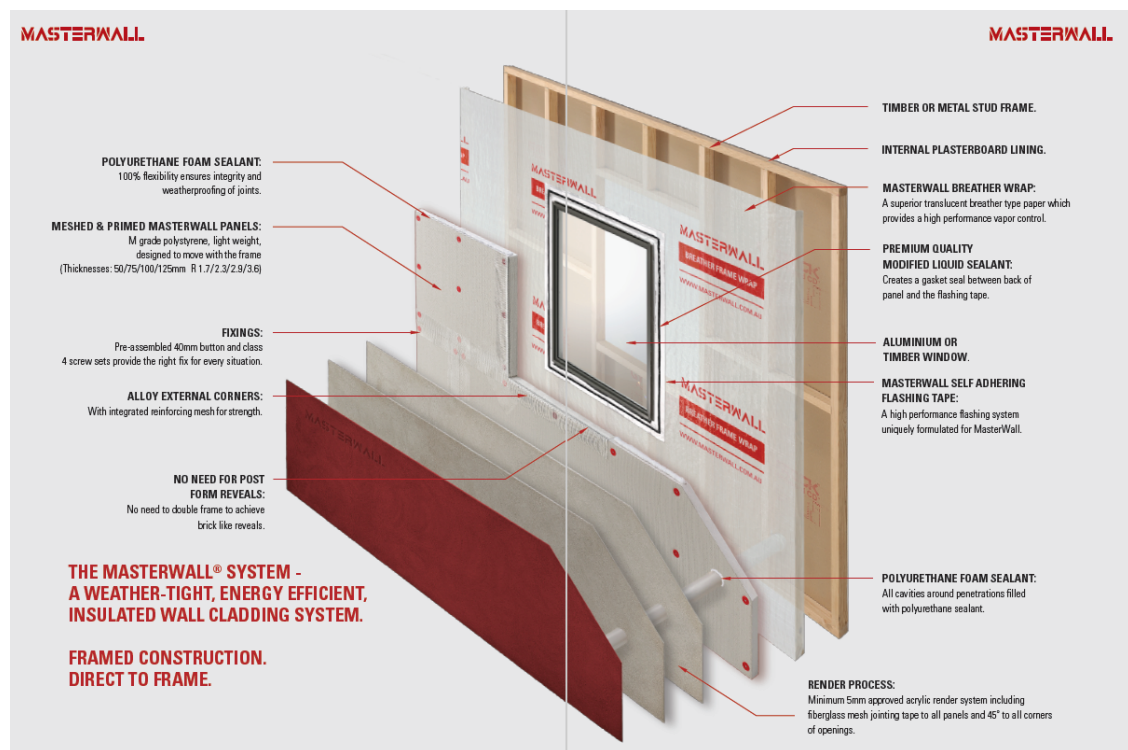


Image Source: Masterwall® Direct-to-Frame System Installation & Construction Details technical document dated 15/01/2020.

Structure

Limited to external wall applications where the design serviceability limit state wind pressure, calculated in accordance with AS/NZS 1170.2:2011(R2016) Structural Design Actions Part 2: Wind Actions, does not exceed +0.82 kPa and -1.23 kPa. This is deemed to include AS 4055-2012 Wind Classifications N1, N2, N3, N4, C1 & C2 (and excludes AS 4055-2012 Wind Classifications, N5, N6, C3 & C4).

Bushfire

BAL-29 compliance is achieved by incorporating a render system with minimum thickness 6.5mm, EPS thicknesses of 75mm or 100mm, and 160gsm fiberglass mesh.

System Components

No.	Item	Description
Substrate		
1	Product	Optionally 75mm thickness MasterWall™ Polystyrene M-Grade Foam or 10mm thick.
	Material	M-Grade EPS (Expanded Polystyrene)
	Size	2400mm long x 1200mm wide x 75mm thick (nominal uncut, measured) or 100mm equivalent thickness
	Density	19.3 kg/m ³ (measured)
	Location/ Fixing	One layer across both exposed face levels and up north and south return walls. 105mm Galvanized Class 3, 10 Gauge square drive external wall screws with 48mm diameter (nominal) nylon plastic washers (longer fixings to be used for 100mm thickness panels).
	Optional alternative pre-coated EPS with Master Art render system	
	Product	MasterWall™ EPS System
	Material	M-Grade EPS (Expanded Polystyrene) pre-meshed and primed with a cementitious skim coat
	Size	600mm wide x 1200mm high x 75mm thick (measured) or optionally 100mm thick
	Density	29.3 kg/m ³ (EPS only)
	Location/ Fixing	One layer on the eastern side of the exposed face. 105mm Galvanized Class 3, 10 Gauge square drive external wall screws with 48mm diameter nylon plastic washers were used to fix the panels to the timber framing (longer fixings to be used for 100mm thickness panels).

No.	Item	Description
		Note: Both pre-coated and nominal bare MasterWall™ polystyrene panels will have the same render applied to the equivalent overall final rendered panel thickness.
Render System		
2	Moisture	0.34% of dry mass (measured)
	Density	1352kg/m ³ (measured)
	Thickness (Total)	6.9mm mean thickness (measured) Specimen varied between a minimum thickness of 5.3mm to a maximum thickness of 12.4mm across 15 core samples taken from the tested specimen
a	Product	Master A-R-T Pro Render Basecoat
	Location	First layer applied directly over the M-Grade EPS Panels (Item 1) and allowed to dry for 6 days prior to applying a second coat
b	Product	Alkaline resistant, reinforced fibreglass render mesh
	Size	Mesh size 5mm x 5mm, 1000mm tall sheet, full width of wall, 160gsm
	Location	Embedded into the first render layer while wet (Item 2a).
c	Product	Master A-R-T Marble Texture Finishing Render
	Location	A single coat applied 6 days after the second layer of basecoat had dried.
Wraps and Sealants		
3	Product	MasterWall™ Breathable Sarking
	Size	2740mm tall sheet, full width of wall
	Location	Single layer with nominal 150mm overlap on exposed side of timber framing.

No.	Item	Description
4	Fixing	Stapled to the timber framing at nominal 250mm centres.
	Product	Butyl Flashing Tape
	Size	80mm wide x 061mm thick (measured)
	Location	Applied along the perimeter of the window framing prior to installing the panels (Item 1)
5	Product	Illbruck FM330 Polyurethane Foam Sealant
	Location	Sealing joins between panels (Item 1) Applied to all edge interfaces of the panels.
6	Product	H.B. Fuller Fulaflex 6501FC Sealant
	Location	Daubs of sealant applied at 300mm centres along the corners of the panel (Item 1) prior to attaching the external angles (Item 7) A bead applied over the flashing tape (Item 4) prior to installing the panels (Item 1) around the window.
7	Product	External Angle
	Material	Aluminium
	Size	30mm x 30mm x 0.42mm thick (measured), cut to length
	Location	Angles fixed to the panels (Item 1) using the PU foam (Item 6) and embedded into the first render coat; around outer perimeter edge of wall specimen and window.

System Components Continued next page

Certificate of Conformity

No.	Item	Description
Unexposed Cladding		
8	Product	Gyprock 10mm Plasterboard
	Size	1200mm wide x 3000mm long sheets cut to suit.
	Density	660kg/m ³ (measured)
	Location	Clad horizontally on the unexposed side of the timber framing.
	Fixings	6g x 32mm Bugle Head Needle Point Fine Thread ZY Plasterboard Screws at nominal 300mm centres.
Window		
9	Frame	Extruded Aluminium
	Glazing	5TF Grade A Safety Glass – 5mm thick toughened glass
	Size	OD: Nominal 800mm wide x 800mm high x 52mm deep.
Framing		
10	Product	90 x 45 MGP10 Radiata Pine
	Density	489 kg/m ³ (measured)
	Location	Refer to figures A1.1 and A1.2 of <i>Exova Warringtonfire Report No. FAS180357.3 dated 02/10/2018</i> for frame details. Contact Certificate Holder for details.
Lining		
11	Eave Cladding	4.5mm Gyprock Fibre-cement sheet
12	Sill Cladding	13mm Gyprock Fyrcheck Plasterboard
13	Sill Cladding	6mm Gyprock Fibre-cement sheet

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

Energy Efficiency

MasterWall® panel, breather wrap, stud frame cavity and 10mm plasterboard when tested in accordance with AS/NZS 4859.1:2002 achieve the following thermal values:

Thickness	Rating	Rt
50mm	1.3	1.7
75mm	2.0	2.3
100mm	2.7	2.9
125mm	3.3	3.6

Source: Acronem Consulting Pty Ltd Appraisal ACA 180929; Dated 16/10/2018.

A4 Manufacturer and manufacturing plant(s)

New Era Nominees
Trading as MasterWall Australia
18-20 Cyber Loop,
Dandenong South, Victoria 3175
Australia.

A5 Installation requirements

The Masterwall® Direct-to-Frame System must be installed in accordance with the [Masterwall® Direct-to-Frame System Installation & Construction Details technical document dated 17/01/2020](#).

A6 Other relevant technical data

Fire:

When tested in accordance with AS/NZS 1530.3-1999, the Polystyrene panel has been found to comply with Specification C1.10-7, Spread-of-Flame & Smoke-Developed Indices to AS/NZS 1530.3-1999 (where the tested performance is shown to be Spread of Flame Index = 0, Smoke Developed Index = 4).

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 180929; Technical engineering appraisal; Dated 16/10/2018.
2. Ian Bennie and Associates; NATA Accreditation No. 2371; Test Report No. 2010-120-S5; MasterWall - 75mm Cladding, with 300mm Fixing Centres (Timber Frame). Cyclonic Wind Load Tests to AS 4040.3 and BCA 2010; Dated 30/06/2011.
3. Ian Bennie and Associates; NATA Accreditation No. 2371; Test Report No. 2010-120-S10; MasterWall - 75mm Cladding, with 300mm Fixing Centres on a Steel Frame. Cyclonic Wind Load Tests to AS 4040.3 and NCC 2012; Dated 27/11/2012.
4. AWTA Product Testing; NATA Accreditation No. 1356; Test Report No. 7-583692-CV; "King Pearl F-SBM", AS/NZS 1530.3-1999 Simultaneous Determination of Ignitability, Flame Propagation, Heat Release and Smoke Release; Dated 24/02/2012.
5. Ian Bennie and Associates; NATA Accreditation No. 2371; Test Report No. 2018-051-S1; MasterWall Cladding System - Direct Fixed, Specimen Tests to Verification Methods NCC-2016 FV1 and V2.2.1 for MasterWall Australia Pty Ltd; Dated 26/07/2018.
6. Exova Warringtonfire; NATA Accreditation No. 3277; Report No: EWFA 52433000.1; Bushfire resistance test of an external wall system accordance with AS 1530.8.1-2007 (Direct-Fixed) (referenced by FAS180357.3); Dated 27/06/2018.

Certificate of Conformity

7. Exova Warringtonfire; NATA Accreditation No. 3277; Report No: EWFA 55172600.1; Assessment Test not in strict accordance with AS 1530.8.1-2007. (½ MasterWall pre-rendered and ½ X-Series panels, Direct-Fixed, referenced by FAS180357.3); Dated 27/06/2018.
8. Exova Warringtonfire; NATA Accreditation No. 3277; Test Report No: EWFA 2755500.1; Bushfire resistance test of an external wall system in accordance with AS 1530.8.1-2007 (Direct-Fixed); Dated 20/12/2012.
9. Exova Warringtonfire; NATA Accreditation No. 3277; Report No: FAS 180357.3; An assessment of the bushfire resistance of a MasterWall X-Series direct fixed rendered panel wall system when tested in accordance with AS 1530.8.1-2007; Dated 02/10/2018.
10. Acronem Consulting Australia; Report No. W180727dS; Calculation of Thermal Performance - Masterwall X-Series Direct Fixed System - 125mm; Dated 27/07/2018.
11. Acronem Consulting Australia; Report No. W180727cS; Calculation of Thermal Performance - Masterwall X-Series Direct Fixed System - 100mm; Dated 27/07/2018.
12. Acronem Consulting Australia; Report No. W180727bS; Calculation of Thermal Performance - Masterwall X-Series Direct Fixed System - 75mm; Dated 27/07/2018.
13. Acronem Consulting Australia; Report No. W180727aS; Calculation of Thermal Performance - Masterwall X-Series Direct Fixed System - 50mm; Dated 27/07/2018.

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