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Certificate Holder:

Metecno Pty Ltd
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THIS IS TO CERTIFY THAT

FlameGuard® and FlameGuard® Plus

Type and/or use of product:

FlameGuard® and FlameGuard® Plus are intended for use as an external wall, internal wall or ceiling panel system.

Description of product:

FlameGuard® and FlameGuard® Plus are panel systems manufactured using 0.6mm Colorbond® G300 steel faces with a mineral wool fibre core material and available in the following sizes:

- **FlameGuard®** – 50mm and 75mm thick panel; and
- **FlameGuard® Plus** – 100mm and 150mm thick panel.

Refer A2 below for further detail.

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) (i),(ii)&(iii)	P2.1.1(a),(b) (i),(ii)&(iii)
	Structural reliability	Structural stability and resistance to actions
	FP1.4	P2.2.2
	Weatherproofing	Weatherproofing
Deemed-to-Satisfy Provision(s):	C1.1(b)	3.7.1.1(g)(i)
	Fire-resistance of building elements – FRLs are Limited to FlameGuard® Plus panel systems	Non-combustible materials
	C1.9(e)(vii)	3.7.2.4(b)(i)
	Non-combustible building materials	Fire-resistance of building elements – FRLs are Limited to FlameGuard® Plus panel systems
	C1.10(a)(ii)&(ix)	3.10.5.0
	Fire hazard properties. Walls, Ceiling & Other Insulative Material other than sarking - Refer A3	Bushfire- Refer A3
	G5.2	3.12.1.4
	Bushfire - Refer A3	Energy Efficiency – External Walls. Can be used in conjunction with other building elements to achieve a Total R Value. Refer to A3.
	J1.5	3.12.1.6
	Energy Efficiency – Wall construction. Can be used in conjunction with other building elements to achieve a Total R Value. Refer to A3.	Energy Efficiency – Attached Class 10a buildings. Can be used in conjunction with other building elements to achieve a Total R Value. Refer to A3.
State or territory variation(s):	G5.2 NSW	3.10.5.0 NSW, 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


 Richard Donarski - CMI


 Don Grehan – Unrestricted Building Certifier

Date of issue: 28/08/2020

Date of expiry: 13/12/2021



Certificate of Conformity

Limitations and conditions:

1. The wall panels will be limited by wind load shown in the manufacturer's specifications on the span certified for the product type, thickness, core density and fixing configuration as per the product's certified span tables. Refer A3 below.
2. It is the responsibility of the building designer to ensure fitness for purpose.
3. Installation and configuration of FRL Systems referenced in the FRL tables in A3 of the Certificate of Conformity must in accordance with the requirements outlined in [Warringtonfire - Fire Assessment Report 24897 Revision 22 dated 04/11/2019](#). Any deviation to this report is outside the Scope of this Certificate of Conformity
4. The structural support members are designed and engineered separately as per project requirements by building designers and engineers. The minimum fixing requirements are outlined in the Span Tables referenced in A3 of this Certificate of Conformity.
5. 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.

Building classification/s:

Class 1,2,3,4,5,6,7,8,9 & 10

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. 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

Core	Mineral Wool	
Width (cover mm)	900, 1140 & 1200	
Thickness	FlameGuard®:	50mm or 75mm
	FlameGuard® Plus:	100mm or 150mm
Length	Up to 11m (check for availability)	
External Material	0.6mm G300 Colorbond® steel	
Internal Material	0.6mm G300 Colorbond® steel	
Paint System	AS/NZS 2728:2013 & AS 1397-2011	

Dimensions



Source: Certificate Holder

A3 Product specification

Structure In order to maintain compliance with structure, the following Span Tables must be referred to for which have been certified by a licensed Professional Engineer.

Document Name	Version
FLAMEGUARD® SPAN TABLES FOR WIND REGION A & B – NON-CYCLONIC (EXTERNAL WALL APPLICATIONS WITH SINGLE MUSHROOM FIXING) Mineral Wool Core 0.6mm Steel Skins	4
FLAMEGUARD® SPAN TABLES FOR WIND REGION C & D – CYCLONIC (EXTERNAL WALL APPLICATIONS ONLY) Mineral Wool Core 0.6mm Steel Skins	1
FLAMEGUARD® SPAN TABLES (INTERNAL WALL AND CEILING APPLICATIONS ONLY) Mineral Wool Core 0.6mm Steel Skins	4
FLAMEGUARD® 0.6mm Steel Skins Wall Span Table for Housing Application	1

Non-Combustibility Each lamina of the **FlameGuard®** and **FlameGuard® Plus** panels have been tested in accordance with AS 1530.1-1994 and is **NOT** deemed combustible.

Fire Properties AS/NZS 1530.3-1999 Indices for **FlameGuard®** and **FlameGuard® Plus** panels.

Ignitability Index	0	Range 0-20
Spread of Flame Index	0	Range 0-10
Heat Evolved Index	0	Range 0-10
Smoke Index	3	Range 0-10

Source: AWTA Product Testing, Testing in accordance with AS/NZS 1530.3-1999, dated 13/03/2009

Material Group Numbers **FlameGuard®** and **FlameGuard® Plus** panels achieve a Material Group Number 1 and have a Smoke Growth Rate Index (SMOGR_{RC}) of <100.

Bushfire Attack Level (BAL)	Product	Bushfire Attack Level
	FlameGuard®	BAL—12.5 to BAL—40.
	FlameGuard® Plus	BAL—FZ.

Source: Ignis Solutions Evaluation No. IGNS-7258 Issue 01 Revision 04 dated 30/07/2019.

Fire Resistance Levels (FRLs)

The [Warringtonfire - Fire Assessment Report 24897 Revision 22 dated 04/11/2019](#) outlines the various Fire Resistance Levels of the various systems and configurations that only apply to the 100mm and 150mm FlameGuard® Plus panels. Tables 5.1 to 5.10 outline the various FRL systems from -/60/60 up to 180/180/180 as follows:

FRL Table References:

Table 5.1 - FRL Performance for Vertical FlameGuard® Plus Panel system – Fire from Either Side
Table 5.2 - FRL Performance for Vertical FlameGuard® Plus – External Fire only
Table 5.3 - FRL Performance for Vertical FlameGuard® Plus Panel system – Fire from Either Side
Table 5.4 - FRL Performance for Horizontal FlameGuard® Plus – Fire from Either Side
Table 5.5 - FRL Performance for Horizontal FlameGuard® Plus – External Fire only
Table 5.6 - FRL Performance for Horizontal FlameGuard® Plus – Fire from Either Side
Table 5.7 - FRL Performance of FlameGuard® Plus Incorporating Doorsets
Table 5.8 – FRL Performance of FlameGuard® Plus Incorporating Penetration Seals
Table 5.9 - FRL Performance of 150mm uPVC Pipe Penetrating Promaseal® Bulkhead Batt
Table 5.10 - FRL Service Penetrations allowed through PROMASEAL Bulkhead batts

Source: Exova Warringtonfire Assessment Report No. 24897-22; dated 04/11/2019.

Thermal & Energy Efficiency

Core: Mineral wool, k=0.0367 W/m·K @ 23°C

Calculated Panel Thermal Resistance	FlameGuard®		FlameGuard® Plus	
	50	75	100	150
Nominal (minimum) thickness, mm				
Panel Insulation R (m².K/W)				
Insulation R @ 6°C	1.5	2.2	3.0	4.4
Insulation R @ 15°C	1.4	2.1	2.8	4.3
Insulation R @ 23°C	1.4	2.0	2.7	4.1
Insulation R @ 30°C	1.3	2.0	2.6	3.9
Total R for Application as Wall Panels (m².K/W)				
Total R @ 6°C (heat flow out)	1.6	2.4	3.1	4.6
Total R @ 15°C (heat flow out)	1.6	2.3	3.0	4.4
Total R @ 23°C (heat flow out)	1.5	2.2	2.9	4.2
Total R @ 30°C (heat flow in)	1.5	2.1	2.8	4.1

The temperatures are the average for the insulation material

Notes:

- Determinations based upon AS/NZS 4859:2018, Materials for the thermal insulation of buildings.
- Insulation R adjusted for temperature per AS/NZS 4859.2:2018, Clause 5.
- The Total R values for insulation average temperatures of 6°C correspond to surface temperatures of -6° outdoors for 18° indoors.
- The Total R values for insulation average temperatures of 15°C correspond to surface temperatures of 12° outdoors for 18° indoors.
- The Total R values for insulation average temperatures of 30°C correspond to surface temperatures of 36° outdoors for 24° indoors.

The following are assumed:

- 0.6mm steel outdoor and indoor skin, k=45 W/m·K
- Indoor surface is painted

The Total R assumes still air within the room

- Outdoor air film, R=0.04 m².K/W.
- Indoor air film, R=0.12 m².K/W. (still air)



Certificate of Conformity

A4 Manufacturer and manufacturing plant(s)

Metecno Pty Ltd
103 Ingram Road
Acacia Ridge QLD 4110.

A5 Installation requirements

Installation and configuration of FRL Systems referenced in the FRL tables in A3 of the Certificate of Conformity, must in accordance with the requirements outlined in [Warringtonfire - Fire Assessment Report 24897 Revision 22 dated 04/11/2019](#). The minimum fixing requirements are outlined in the Span Tables referenced in A3 of this Certificate of Conformity.

A6 Other relevant technical data

Acoustic Properties 50mm **Flameguard**® achieved R_w 29, C -2 & C_{tr} -4.
100mm **Flameguard**® **Plus** achieved R_w 30, C -2 & C_{tr} -4

Source: CSIRO Report No. TL511/R1 dated July 2010.

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

1. Energy Efficiency 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. Structural Provisions – A5.2(1)(e). Reports from a professional engineer.
4. Weatherproofing Provisions – A5.2(1)(e). Reports from a professional engineer.

B2 Reports

1. AWTA Product Testing; NATA Accreditation No. 1356; Fire Testing of Flameguard – AS/NZS 1530.3-1999 Fire indices; Dated 13/03/2009.
2. Bligh Tanner Pty Ltd; Reference No. 2017.0493; Certification of FlameGuard® Panel Span Tables; Dated 07/08/2020.
3. Bligh Tanner Pty Ltd, Reference Number: 2017.0493; Weatherproof assessment of Equitilt, BondorPanel and Flameguard to BCA; Dated 09/03/2018.
4. CSIRO; NATA Accreditation No. 165; Report No. FCO-2349; Likely combustibility of Bondor Flameguard Panel; Dated 10/06/2014.
5. CSIRO; NATA Accreditation No. 165; Report No. FNC 0339; Combustibility test for materials in accordance with AS 1530.1-1994; Dated 11/06/2004.
6. CSIRO; NATA Accreditation No. 165; Report No. FNC12440; Combustibility Test for Materials in Accordance with AS 1530.1-1994; Dated 09/09/2019.
7. CSIRO; NATA Accreditation No. 165; Report No. FNE11603; Simultaneous determination of ignitability, flame propagation, heat release and smoke release; Dated 21/01/2016.
8. Ignis Solutions; Report No. IGNS-6252 I01R02; Bondor FlameGuard NCC Compliance; Dated 10/10/2018.
9. Ignis Solutions; Report No. IGNS-7258 I01R04; Bondor Bushfire Compliance; 30/07/2019.
10. James M Fricker Pty Ltd; Report No. i265c; Thermal calculations of FlameGuard® wall panel; Dated 23/04/2020.
11. Warringtonfire Australia Pty Ltd; NATA Accreditation No. 3277; Report No. EWFA 24897-22; Fire testing to AS 1530.4:2014 – Determination of FRL; Dated 04/11/2019.
12. Warringtonfire Australia Pty Ltd; NATA Accreditation No. 3277; Job No. RTF190071; The fire resistance performance of Bondor Flameguard panel; Dated 17/06/2019.

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