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Certificate number: CM40108 Rev2

## THIS TO CERTIFY THAT

### Vitradual Cladding System

#### Type and/or use of product:

Internal and External decorative panel or attachment.

#### Description of product:

PVDF-Kynar 500 Roller coated aluminium panel.

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

**BCA 2016**

	Volume One (Amdt. 1)	Volume Two
<b>Performance Requirement(s)</b>	FP1.4 Weatherproofing	Not Applicable
	GP5.1 Construction in Bushfire Zones	
<b>Deemed-to-Satisfy Provision(s):</b>	C1.9(e)(v) Pre-finished metal sheeting deemed non-combustible.	Not Applicable
	C1.10(c)(xv) Material that does not significantly increase the hazard of fire	
	G5.2 Construction in Bushfire Zones	
<b>State or territory variation(s):</b>	GP5.1 (NSW, QLD & TAS), G5.2 (NSW & SA), G5.3 (SA & TAS), G5.4 (TAS), C1.10(c)(xv) (VIC).	Not Applicable

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

#### Limitations and conditions:

- The Vitradual Cladding System should meet a positive serviceable static wind pressure of up to 600pa for weather resistance. The system must be designed and constructed by a suitably qualified person(s) to ensure building specifications are met.

#### Building classification/s:

2,3,4,5,6,7,8 & 9

  
 John Thorpe - CMI

  
 Don Grehan – Unrestricted Building Certifier

Date of issue: 29/08/2018

Date of expiry: 29/03/2021



# Certificate of Conformity

2. The Vitradual Cladding System must only be mechanically fixed to the wall system in accordance with the [Vitradual Installation Manual Version 3](#).
3. Information contained herein or related hereto is intended only for evaluation by technically skilled persons, with any use thereof to be at their independent discretion and risk. Such information is believed to be reliable, but CertMark International (CMI) shall have no responsibility or liability for results obtained or damages resulting from such use. CMI grants no license under and shall have no responsibility or liability for infringement of, any patent or other proprietary right. 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.
4. This Certificate is issued based on the evidence of compliance as detailed herein. Any deviation from the specifications contained in this Certificate is outside of this document's scope and the installation of the certified product/system will not be covered by this CodeMark certification. This may result in the product being classified as a non-conforming building product/system.

**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](http://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.

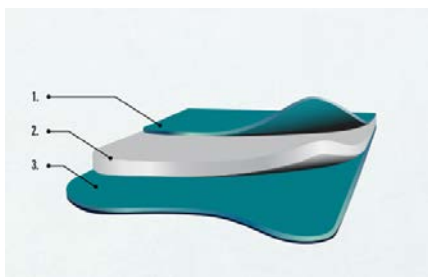
## APPENDIX A – PRODUCT TECHNICAL DATA

### A1 Type and intended use of product

As per page one.

### A2 Description of product

Vitrual Cladding System is a PVDF coated, Aluminium Panel manufactured from Marine Grade 5052 series aluminium for use as a decorative attachment or as part of an external wall system.



1. PVDF-Kynar 500 coating system
2. 3mm Aluminium
3. Polyester Anti-Corrosion coating

Physical Property	Value
Panel Weight	7.9kg/m <sup>2</sup>
Thickness	3mm
Width	1250mm/1500mm
Lengths	2500mm/3200mm/4000mm
Alloy/Temper of Aluminium Layers	Minimum 3000 series
Density	2.68g/cm <sup>3</sup>
Melting Point	605°C
Thermal Expansion	23.7 x10 <sup>-6</sup> /K
Modulus of Elasticity	70GPa
Thermal Conductivity	138W/m.K
Electrical Resistivity	0.0495 x10 <sup>-6</sup> Ω.m
Tensile Strength	210 - 260MPa

Proof Stress	130 (Min) MPa
Hardness Brinell	61HB
Acoustic insulation	R <sub>w</sub> 27

## A3 Product specification

### Non-Combustibility

The material is NOT deemed COMBUSTIBLE according to the test criteria specified in Clause 3.4 of AS 1530.1-1994.

Mean furnace thermocouple temperature rise	9.6°C
Mean specimen centre thermocouple temperature rise	5.8°C
Mean Specimen surface thermocouple temperature rise	6.4°C
Mean Duration of sustained flaming	0 Seconds
Mean Mass loss	0.3%

**Source:** CSIRO; Report No FNC11690.

### Ignitability, Flame Propagation, Heat Release and Smoke Release

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

**Source:** AWTA Product Testing; Test Number 16-002875.

### Bushfire

The Vitradual product can be used as part of the external wall of a building located in a designated bushfire prone area depending on the BAL value requirements. The panels are to be mechanically fixed, either direct screw or cassette in accordance with Fairview installation instructions.

AS 3959-2009 Clause 5.4, 6.4, 7.4, 8.4 and 9.4 for BAL 12.5, BAL 19, BAL 29, BAL 40 and BAL FZ respectively details the requirements for external walls. The exposed components of an external wall that are less than 400mm from the ground or less than 400mm above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110mm in width from the wall requires specific requirements for compliance in accordance with AS 3959-2009 for BAL 12.5 to BAL 19. This requirement is that the material must be tested in accordance with AS 1530.8.1-2007 or be non-combustible. Within this location, Vitradual panel can be used.

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Exposed parts of an external walls of BAL 29 or 40 under Clause 8.4 of AS 3959-2009 requires that material must be tested in accordance with AS 1530.8.1-2007, be non-combustible or a combination of the requirements. This must apply to the entire wall.

Exposed parts of an external walls of BAL FZ under Clause 9.4 of AS 3959-2009 requires that materials must be tested in accordance with AS 1530.8.2-2007 from the outside, be non-combustible, a system with a Fire Resistance Level (FRL) of 30/30/30 or a combination of the requirements. It is recommended that within a BAL FZ location that the external wall incorporate an FRL of at least 30/30/30 between the building frame and external Vitradual panel.

The Vitradual Panel is permitted to be used in the areas detailed above in accordance with AS 3959-2009.

**Source:** Ignis Solutions Pty Ltd; Report IGNS-5289 Issue 01 Revision 00[2017].

## Weatherproofing

The cladding system is a faced sealed system which primarily dependent on the sealant quality and site workmanship.

The system has not been tested to either AS 2047-2014 nor AS 4284-2008, however, it is noted that by adopting the performance based verification in the National Construction Code (NCC) and referring to NCTL test report, the system should meet the weatherproofing clause FP1.4 of the NCC for a positive serviceable static wind pressure of up to 600pa for weather resistance.

- The Façade Contractor shall design, engineer, fabricate, supply and install the complete façade work strictly in accordance with the installation manual, the Principal's project's requirements and the project's specifications.
- The structural capacity of the cladding system and stiffeners must be designed for each specific project requirements.
- Designers are required to design the cladding system to accommodate deflection movements due to all design loads and changes in temperature without any reduction in the project's specified performance and the relevant Australian standards.
- The façade contractor shall comply with manufacturer's instructions for all sealant materials, joint preparation, curing, joint dimensions and backer rods. Façade contractor to seal all joints in accordance with these drawings, approved shop drawings and project's specifications.
- The façade contractor shall install fixings in accordance with their manufacturer's instructions and procedures. Fixings shall be made weathertight in a manner not restricting thermal or wind movements of the façade.

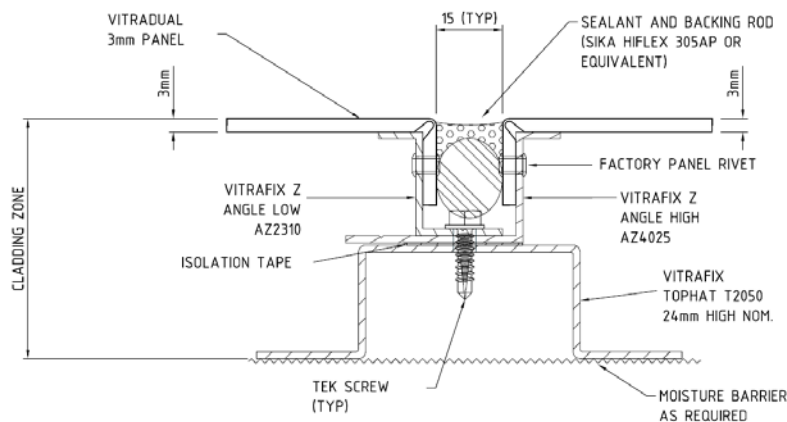
Report concludes: Based on adhering to the above, the cladding system provides a primary seal for weatherproofing purposes.

**Source:** BG&E Façade Consultants Dated: 30 June 2016.

## A4 Manufacturer and manufacturing plant(s)

This field is voluntary. For more information, please contact Certificate Holder.

## A5 Installation requirements



(Typical Panel Joint Detail).

Only to be installed in accordance with the [Vitradual Installation Manual Version 3](#).

The Vitradual Cladding System is certified to be fixed through any insulation, weatherproofing sarking-type fire resistance or acoustic material directly to the primary building element or wall frame.

Source: [Vitradual Installation Manual V3](#).

## Penetrations through Vitradual

- Service penetrations through Vitradual will not expose combustible materials, as the composite panel consists of a solid aluminium sheet.
- If the penetration is through a wall in a location that requires protection under clause C3.4 of the BCA (NCC 2016 Amdt. 1, Vol 1) then the penetration must be appropriately fire stopped in accordance with specification C3.15 of the BCA (NCC 2016 Amdt. 1, Vol 1).

## A6 Other relevant technical data

The fixing system associated with the external elements and components of buildings framing, being the top hats, 'Z' angle, screws and rivets, are non-combustible. The use of caulking and sealants are considered exempt from requirements for non-combustibility and fire hazard properties.

May be used on a wall and ceiling lining anywhere a Group 1 material is allowed according to specification C1.10 of the BCA (NCC 2016 Amdt. 1, Vol 1).

The Vitradual Cladding System with a nominal thickness of 3mm meets all the requirements of a non-combustible material in the NCC 2016 Amdt. 1, Vol 1, hence can be used where non-combustible material is required.

The Vitradual Cladding System is certified be used where non-combustible materials are required, it can be used either as part of an external wall or as an attachment to an external wall.

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## Attachment to walls requiring an FRL

- Vitradual does not have an FRL and it will not affect the FRL of a wall. When a wall requires a specific FRL, Vitradual can be used as part of that wall or as an attachment to that wall providing the wall with the Vitradual removed, has the required FRL.
- Vitradual will not impair the FRL of concrete/masonry systems designed in accordance with Australian Standards.

*Source: Red Fire Engineering Ref: 170404\_JV15-00082\_Vitradual\_PA.docx Dated: 4 April 2017 non-combustible materials.*

## APPENDIX B – EVALUATION STATEMENTS

### B1 Evaluation methods

1. Fire assessment - A2.2 (a)(iv) & (v) Reports from NATA accredited test laboratories and registered Engineers.
2. Weatherproofing assessment - A2.2 (a)(v) Reports from registered Engineers.

### B2 Reports

1. Red Fire Engineering; Report Ref: 170404\_JV15-00082\_Vitradual\_PA.docx; Façade Suitability Report; Dated: 04/04/2017.
2. CSIRO; NATA Accreditation No. 165; Report No. FNC11690; Testing to AS1530.1-1994 - non-combustible; Dated 21/06/2016.
3. AWTA; NATA Accreditation No. 2859; Product Testing Test Number: 16-002875; Testing to AS1530.3-1999; Dated 07/06/2016.
4. Ignis Solutions; Evaluation No. IGNS-5289 Issue 01 Revision 00 [2017]; BAL rating of the system; Dated 01/09/2017.
5. Ignis Solutions; Evaluation No. IGNS-6081-01 I01-R01[2018]; Fixing Assessment; Dated 13/03/2018.
6. BG&E Façade Consultants; Weatherproofing system should meet the weatherproofing clause FP1.4; Dated 30/06/2016.