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 JAS-ANZ Accreditation
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Certificate Holder:

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THIS IS TO CERTIFY THAT

EconoClad®

Description of product:

EconoClad® is an insulated roof or wall panel that features an outer steel face with a high-rib trapezoidal cladding profile and an inner face of lightweight thermal foil that encases a core of PIR (Polyisocyanurate). Refer A2 for details.

Type and/or use of product:

Insulated roof or wall panel.

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

BCA 2019

| | Volume One | Volume Two |
|---|--|---|
| Performance Requirement(s): | BP1.1(a)&(b)(i), (ii) &(iii) Structural reliability | P2.1.1(a)&(b)(i), (ii)&(iii) Structural stability and resistance to actions |
| Deemed-to-Satisfy Provision(s): | C1.10(a)(ii)&(ix) Fire Hazard Properties—Refer A3 | P2.2.2 Weatherproofing - Roof applications |
| | F1.5 Weatherproofing - Roof coverings. | 3.12.1.2 Energy Efficiency – Roofs. Can be used in conjunction with other building elements to achieve a Total R Value. Refer to A3. |
| | J1.3 Energy Efficiency – Roof and ceiling construction. Can be used in conjunction with other building elements to achieve a Total R Value. Refer to A3. | 3.12.1.4 Energy Efficiency – External Walls. Can be used in conjunction with other building elements to achieve a Total R Value. Refer to A3. |
| | J1.5 Energy Efficiency – Wall construction. Can be used in conjunction with other building elements to achieve a Total R Value. Refer to A3. | 3.12.1.6 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): | Not Applicable | 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: 10/06/2020

Date of expiry: 12/09/2021



Certificate of Conformity

Limitations and conditions:

1. For installations involving Class 2 to 9 Buildings, the internal lightweight thermal foil face of the EconoClad[®] Wall or Roof Panels must, to the satisfaction of the appropriate authority, be completely shielded from the effects of flame or heat from the internal of the building by a secondary internal lining product that has a smoke growth rate index not more than 100 or the building must be fitted with a sprinkler system complying with Part E1.5 of the Vol 1 of the NCC.
2. The EconoClad[®] panels are not considered to be non-combustible and are limited to the use in Type C Construction in Class 2 to 9 buildings when being used as external walls.
3. The structural support members are designed and engineered separately as per project requirements by building designers and engineers.
4. In the absence of a site-specific performance solution, this product or system must not be used to facilitate the exemptions for a carport specified in Part 3.7.2.6 of Volume 2 of the BCA.
5. Any penetrations made into the certified products will void all nominated structural performance. The adequacy of the size, location and spacing of any penetrations through the roof panel must be confirmed by a structural engineer.
6. The roof 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.
7. It is the responsibility of the building designer to ensure fitness for purpose including, but not limited to, consideration for the corrosion resistance level of the product and the proximity to breaking surf.
8. 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

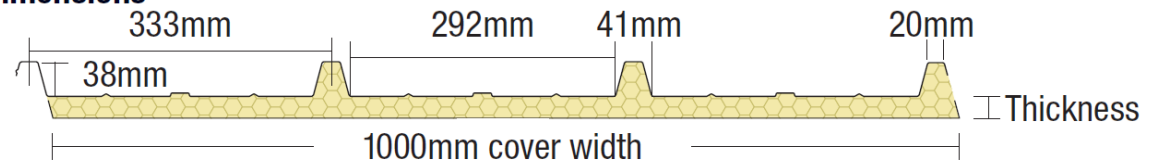
A1 Type and intended use of product

As per page 1.

A2 Description of product

| | |
|-------------------|------------------------------------|
| Core | PIR (Polyisocyanurate) |
| Width (cover mm) | 1000 |
| Thickness (mm) | 25, 40, 60, 80 & 100 |
| Length | Up to 16m (check for availability) |
| External Material | 0.42mm Colorbond® steel |
| Internal Material | Lightweight Thermal Foil |
| Pitch | 2° Minimum Pitch |

Dimensions



Source: Certificate Holder

A3 Product specification

Structure

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

| Document Name | Version |
|---|---------|
| ECONOCLAD® SPAN TABLES FOR WIND REGION A NON-CYCLONIC (EXTERNAL ROOF APPLICATIONS ONLY) | 3 |
| ECONOCLAD® SPAN TABLES FOR WIND REGION B NON-CYCLONIC (EXTERNAL ROOF APPLICATIONS ONLY) | 3 |
| ECONOCLAD® SPAN TABLES FOR WIND REGION C CYCLONIC (EXTERNAL ROOF APPLICATIONS ONLY) | 3 |
| ECONOCLAD® SPAN TABLES FOR WIND REGION D CYCLONIC (EXTERNAL ROOF APPLICATIONS ONLY) | 3 |

Penetrations

Any penetrations made into the certified products will void all nominated structural performance. The adequacy of the size, location and spacing of any penetrations through the roof panel must be confirmed by a structural engineer.

Fire Hazard Properties

AS/NZS 1530.3-1999 Indices

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

Source: AWTA Product Testing Report No. 18-000627 dated 15/02/2018.

Material Group Numbers

Group 2 and Smoke Growth Rate Index (SMOGR_{RC}) of 188.6 m²s⁻² x 1000.

Source: Exova Warringtonfire Report No; 46469800.1z1 dated 29/11/2016

Thermal & Energy Efficiency **Core: PIR, k=0.020355 W/m·K @ 23°C**

| Calculated Panel Thermal Resistance | | | | | |
|---|-----|-----|-----|-----|-----|
| Nominal (minimum) thickness, mm | 25 | 40 | 60 | 80 | 100 |
| Panel Insulation R (m².K/W) | | | | | |
| Insulation R @ 6°C | 1.4 | 2.3 | 3.4 | 4.4 | 5.5 |
| Insulation R @ 15°C | 1.4 | 2.1 | 3.2 | 4.2 | 5.3 |
| Insulation R @ 23°C | 1.3 | 2.1 | 3.1 | 4.0 | 5.0 |
| Insulation R @ 30°C | 1.3 | 2.0 | 2.9 | 3.9 | 4.8 |
| Total R for Application as Roof Panels (m².K/W) | | | | | |
| Total R @ 6°C (heat flow out) | 1.7 | 2.5 | 3.6 | 4.7 | 5.8 |
| Total R @ 15°C (heat flow out) | 1.6 | 2.4 | 3.5 | 4.5 | 5.5 |
| Total R @ 23°C (heat flow out) | 1.6 | 2.3 | 3.3 | 4.3 | 5.3 |
| Total R @ 30°C (heat flow in) | 2.1 | 2.8 | 3.8 | 4.7 | 5.7 |
| Total R for Application as Wall Panels (m².K/W) | | | | | |
| Total R @ 6°C (heat flow out) | 1.8 | 2.6 | 3.7 | 4.8 | 5.9 |
| Total R @ 15°C (heat flow out) | 1.7 | 2.5 | 3.5 | 4.6 | 5.6 |
| Total R @ 23°C (heat flow out) | 1.6 | 2.4 | 3.4 | 4.4 | 5.4 |
| Total R @ 30°C (heat flow in) | 1.6 | 2.3 | 3.3 | 4.2 | 5.2 |

The temperatures are the average for the insulation material

Notes:

- Determinations based upon AS/NZS 4859.1:2018, 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:

- 0.43mm steel outdoor skin, k=45 W/m·K
- Bright foil indoor skin (infrared emittance =0.05)
- Indoor surface is bright foil, with no dust as facing down or horizontally.

The Total R assumes still air within the room and the following air film resistances:

Roofs:

- Outdoor air film, R=0.04 m².K/W.
- Winter indoor air film, R=0.23 m².K/W.
- Summer indoor air film, R=0.80 m².K/W



Certificate of Conformity

A4 Manufacturer and manufacturing plant(s)

Metecno Pty Ltd.
111 Ingram Road,
Acacia Ridge QLD 4110.

A5 Installation requirements

Installation requirements are outside the scope of this certificate and subject to project specific engineering advice. The minimum fixing requirements are outlined in the Span Tables referenced in A3 of this Certificate of Conformity.

A6 Other relevant technical data

No other relevant technical data.

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

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

B2 Reports

1. AWTA Product Testing; NATA Accreditation No. 1356; Report No. 18-000627; Testing in accordance with AS/NZS 1530.3-1999; Dated 15/02/2018.
2. Bligh Tanner; Reference No. 2017.0493; Certification of EconoClad Span Tables; Dated 27/05/2020.
3. Exova Warringtonfire; NATA Accreditation No. 3277; Fire Test in accordance with AS ISO 9708-2003 and AS 5637.1:2015 to determine group number; Dated 24/01/2017.
4. Ignis Solutions; Evaluation No. IGNS-6180 I01 R00; Product Evaluation – EconoClad Group Number evaluation; Dated 24/05/2018.
5. James M Fricker; Report No. i265c; Thermal Performance Calculations; Dated 23/04/2020, updated 14/05/2020.

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