CERTIFICATE OF CONFORMITY

This is to certify that

Innowood Australia
InnoClad and InnoScreen

Complies with the New Zealand Building Code:

a. B1.3.1, B1.3.2, B1.3.3(a),(f),(h),(j) & (q) and B1.3.4(a),(b),(c),(d) & (e) - Structure
b. B2.3.1(b)(i) & (ii) - Durability
c. E2.3.2, E2.3.7(a), (b) & (c) - External Moisture
d. F2.3.1 - Hazardous Building Materials

Product Purpose or Use

External cladding and privacy screening for wall and ceilings.

Subject to the following Conditions & Limitations:

a. This Certificate of Conformity does not address any claims of compliance against clauses of the NZBC relating to fire.
b. Ultimate limit state pressure of 2.8kPa.
c. Nail guns must not be used for fixing of any Innowood product.
d. Boards subject to reflective heat must be installed at max centres of 225mm until 1200mm from the reflective source.
e. Secret Fix Shiplap Profiles may only be installed vertically. Other shiplap profiles may be installed horizontally and vertically.
f. All InnoClad & InnoScreen profiles must have minimum 3 fixing points and InnoScreen profiles must not overhang more than 200mm. Inserts must be cut off 50mm from the edge of the profile end.
g. Must be installed in accordance with the manuals detailed in A2 below, by a suitably licenced tradesperson.
h. 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.
i. The certificate holder must maintain compliance with the conditions set out in Section 15 of the Building (Product Certification) Regulations 2008.

Product Description

Innowood is a Composite Wood material, extruded into various profiles including those for cladding, screens and louvres. Innowood profiles are pre-finished and suitable for external use in either Innovative or Premium colouring systems.

Trade Names:

- InnoClad
- InnoScreen

Certificate Holder

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Certification Body

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John Thorpe
CertMark International Pty Ltd

21/12/2018
Date of Issue

CM40236-I01-R00
Certificate Number

- This certificate is issued by an independent certification body accredited by the product certification accreditation body appointed by the Chief Executive of the Ministry of Business, Innovation & Employment (MBIE) under the Building Act 2004. MBIE does not in any way warrant, guarantee, or represent that the building method or product the subject of this certificate conforms to the New Zealand Building Code, nor accept any liability arising out of the use of the building method or product. MBIE disclaims, 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 building method(s) or product(s) referred to in this certificate
- It is advised to check that this Certificate of Conformity is currently valid and not withdrawn, suspended or superseded by a later issue by referring to the MBIE website, www.mbie.govt.nz
- This certificate may only be reproduced in its entirety.

A1 Product or system specification

Physical Property	Attribute	Standard	Comment
Modulus of Rupture (MoR)	30.78 - 32.2 MPa	AS/NZS 4266.5:2004	Ultimate strength at failure
Modulus of Elasticity (MoE)	1.527 - 2.102 GPa	AS/NZS 4266.5:2004	Proof elastic limit
Internal Bond Strength	1.36 MPa	AS/NZS 4266.6:2004	Internal bond strength normal to the face of the sample
Specific Density	825 – 830 kg/m^3	AS/NZS 4266.4:2004	At equilibrium moisture content (EMC) - 23°C & 50% RH
Moisture Content	1.31%	AS/NZS 4266.3:2004	At equilibrium moisture content (EMC) - 23°C & 50% RH
Moisture Absorption	0.54 % Mass Change	AS/NZS 4266.14:2004	Moisture absorption mass change is reversible Mass change of material at 25°C & 85% RH / ~216 hrs
Moisture Movement	δ=4.4 x 10-6mm/mm/% R.H. Extrapolated Average	AS/NZS 4266.14:2004	Moisture movement is reversible - Final length calculated as follows: Lf = Li (1 + ∆δ R.H.)
Surface Water Absorption	1.0435 g/m^2/hr Extrapolated Average	AS/NZS 4266.12:2003	Observed capillary moisture absorption similar
	1.0435 g/m^2/hr Extrapolated Average	AS/NZS 4266.12:2003	Observed capillary moisture absorption similar
Thermal Coefficient of Linear Expansion (α).	A = ~6.0 x 10-5mm/mm/0C Estimated Average	REF AS 4459.8-1997	Thermal linear movement is reversible
Impact Resistance	Mean failure height: 1330mm Mean failure energy: 59J	ASTM D4495-12	Specimen thickness: 28.0mm Mass of the falling weight: 5kg Diameter of the falling weight: 63.5mm
Abrasion Resistance	Weight loss: 108mg	ASTM D4060-10	Wheel: CS-10 Load: 1000g/wheel (total 2000g) Cycles: 1000
Fastener Pull Out	91.85 N	AS 1649-2001	Ring-shank nails and screws have an enhanced pull out force

Durability

Physical Property	Attribute	Standard and Report No.	Comments
UV Resistant Coating	UV Stable	ISO 105-A02:1993 AWTA Report 7-5600004-NV	Continuous cyclic QUV test – 1000 hrs UV stable under normal environmental conditions Gloss loss nil - Colour change 4
Salt Water Emersion	No adverse effects	CSIRO-CMMT Report No. 2880/R2	Suitable for marine intertidal zones and salt spray environments
High Humidity Environment	No adverse effects	CSIRO-CMMT Report No. 2880/R2	Suitable for high humidity environments
Borer Resistance	Deemed resistant	CSIRO-FFP Report No. 996	Suitable for outside above-ground applications

Environmental

Physical Property	Attribute	Standard and Report No.	Comments
Volatile Compound Emissions	Deemed very low	CETEC Report No. CV090305	Suitable for use in indoor environments

A2 Installation requirements

InnoClad and InnoScreen products are to be installed in accordance with the INNOWOOD Care & Maintenance Guide Version November 2017 and the following applicable manuals:

- InnoClad Secret Fixed Shiplap Cladding – 2018 Nov V30; or
- InnoClad V Joint Shiplap Cladding – 2018 Nov V3; or
- InnoScreen Concealed Lock In Fixing Installation Manual – August 2017 – V2; or
- InnoScreen Face & Rear Installation Manual – August 2017 – V2.

A3 Other relevant technical data

Clause	Reference
B1 Structure	The products referenced in this Certificate of Conformity have assessed by Lautrec Façade Design Engineers, which confirms that, when installed in accordance with the manuals referenced in A2, the products will meet the structural requirements of the NZBC clauses B1.3.1, B1.3.2, B1.3.3(a),(f),(h),(j) & (q) and B1.3.4(a),(b),(c),(d) & (e).
B2 Durability	The products referenced in this Certificate of Conformity have been evaluated by Timbaigl Optics Pty Ltd, which confirms that, when installed in accordance with the manuals referenced in A2, the products will meet the durability requirements of the NZBC clauses B2.3.1(b)(i) & (ii).
E2 External Moisture	The products referenced in this Certificate of Conformity have been tested in accordance with AS/NZS 4284:2008 and with E2/VM1 and will meet the external moisture requirements of the following provisions of the New Zealand Building Code (NZBC): Clause E2.3.2, E2.3.7(a), (b) & (c).
F2 Hazardous Building Materials	The products referenced in this Certificate of Conformity have been evaluated based on the material safety data sheets as well as its history in service and VOC emission testing. If designed, used, installed and maintained in accordance with the statements and conditions of the Manufacturer, will meet F2.3.1.

B1 Basis of CodeMark Certification

The Innowood products has been evaluated in accordance with the requirements of the Building (Product Certification) Regulations 2008 Clause 8.
CMI has followed procedures for certifying the Innowood products that are based on evidence established by –

- Testing of the Innowood products at accredited testing facilities.
- Assessing a quality plan for the Innowood products that conforms to ISO 10005:2018 and the CodeMark Scheme Rules, Version 2009.1.
- By reviewing testing of, samples supplied to ascertain whether or not the product meets the performance requirements specified on this certificate.
- Conducting site audits of the factory to verify compliance of the Innowood products.

B2 Sources of Information

- CSIRO; NATA Accreditation No. 165; Report No. 2880/R1; Evaluation of Innowood Composite Timber, dated 23 October 2007.
- Lautrec Façade Design Engineers; PS1 Report; Innowood Span/Fixing; dated 29/11/2018.
- AWTA; NATA Accreditation No. 978; Test Report 7-5600004-NV; Testing in accordance with ISO 105-A02:1993; dated 10/06/2008.
- CSIRO; NATA Accreditation No. 165; CMMT Report 2880/R2; Evaluation of Innowood composite timber; dated 23/10/2007.
- CSIRO; NATA Accreditation No. 165; FFP Report 996; Evaluation of Innowood composite timber; dated 02/08/2001.
- Timbaigl Optics Pty Ltd; Durability Assessment; dated 05/04/2018.
- Facadelab; Report No. 17-11; Testing in accordance with AS/NZS 4284:2008 and E2/VM1; dated 22-24/5/17.
- CETEC; Emission Test Certificate; Project CV090305; Testing of VOC Testing for Asbestos; dated 19/03/2009.
- Innowood Australia Pty Ltd; Material Safety Data Sheet – V3.
- Product specification testing as listed in A1.