



Certificate of Conformity

Certification Body:



SAI Global Certification Services Pty Limited

(ACN 108 716 669) Trading as "SAI Global"

JAS-ANZ Accreditation No. Z1440295AS

Address: 680 George St, Sydney, NSW 2000

Website: www.saiglobal.com

Certificate Holder:



Insulcon Pty Ltd

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Certificate number: CM20171

THIS TO CERTIFY THAT

Insulcon Panel System™

Type and/or use of product:

Insulcon Panel System™ is for use as an exterior wall cladding direct fixed to a timber or steel stud framing.

Description of product:

The Insulcon Panel System™ is a composite cladding system consisting of an expanded M Grade polystyrene panel and comes in two forms:

1. Insulcon Pre-rendered Panels which are pre-coated with alkaline resistant fibre mesh and then a high polymer render base coat (primary coat) with a secondary standard acrylic render coat.
2. Insulcon Raw Panels which are plain polystyrene panels (the alkaline resistant fibre mesh together with the primary and acrylic render coats are applied at the job site).

The Insulcon panels are available in 75mm and 100mm thickness.

For detailed product description, refer to section A3 below.

COMPLIES WITH THE FOLLOWING BCA PROVISIONS AND STATE OR TERRITORY VARIATION(S) BCA 2019 Amdt 1

	Volume One	Volume Two
Performance Requirement(s)	N/A	P2.1.1(a) – limited to (b)(i)(iii) P2.2.2
	N/A	Structural stability and resistance Weatherproofing
Deemed-to-Satisfy Provision(s):	N/A	3.10.5.0
	N/A	Construction in bushfire prone areas (Up to and including BAL 29)

SAI Global Certification Services

Frank Camasta
Global Head of Technical Services
SAI Global Assurance

Quintin Kleyn – Unrestricted Building Certifier

Date of issue: 3 December 2021

Date of expiry: 2 December 2024



State or territory variation(s): N/A N/A

- 3.12.1.1(a) Building fabric thermal Insulation**
(must be used in conjunction with other building elements to achieve a Total R-Value as outlined in clause 3.12.1.4 External Walls) subject to state and territory variations

- NSW 3.10.5.0 Construction in bushfire prone areas**
- QLD 3.10.5.0 Construction in bushfire prone areas**

- NSW Part 3.12 Energy efficiency**
In New South Wales, Part 3.12 does not apply.
Note: The New South Wales Additions contain energy efficiency measures that apply in New South Wales to support and complement BASIX.

- NT Part 3.12 Energy efficiency**
In the Northern Territory, Part 3.12 is replaced with BCA 2009 Part 3.12.

- SA 3.12 Energy efficiency**
In South Australia, for the purposes of this Part, a sunroom or the like is deemed to be a Class 10a building and must comply with 3.12.1.6.

- QLD 3.12 Energy efficiency**
In Queensland, building work for the energy efficiency of Class 1 buildings is also regulated by the Building Act 1975 and the Queensland Development Code MP 4.1—Sustainable buildings.

- ACT 3.12 Energy efficiency**
In the Australian Capital Territory, see the ACT Appendix for further information on application to building work on new buildings and additions to existing buildings in the 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:

1. The Insulcon Panel System™ must be installed in accordance with the Insulcon Installation Manual (Rev 5 dated 25 September 2021) and by an appropriately qualified person.
2. The polystyrene panel must be of Class 'M' and marked with Black stripe applied at the edge of the panel across the full thickness in accordance with AS 1366.3-1992 (R2018).
3. The Insulcon™ Panel System™ is suitable for use in wind classifications N1, N2, N3, and N4 as specified in AS 4055-2012 (+A1) and the maximum fixing spacings must be in accordance with the Insulcon Installation Manual (Rev 5 dated 25 September 2021).
4. The product is not suitable for construction within 900mm from an allotment boundary or within 1800mm from another building on the same allotment as specified in NCC 2019 BCA Volume 2 Clause 3.7.2.2 subject to State and Territory variations.
5. To comply with P2.2.2, the product is suitable for use on an external wall (direct fixed) that is not subjected to an ultimate limit state wind pressure of more than 2.5 kPa and in applications where the building design achieves a risk score of not more than 20 when calculated in accordance with the BCA Table V2.2.1(a), and the product is installed in accordance with Insulcon Installation Manual (Rev 5 dated 25 September 2021).
6. The product contributes to the Total R-Value and must be used in conjunction with other building elements to achieve a Total R-Value as outlined in clause 3.12.1.4 External Walls subject to state and territory variations.
7. The 100mm thick product has not been assessed for thermal insulation properties.
8. The product is suitable for use in bushfire prone areas up to and including BAL29 when installed with a minimum 10.0mm thick render (9mm BAL Base Render™ and 1mm Insulcon Texture) and constructed in accordance with the requirements of AS3959-2018.
9. Wall framing is to be in accordance with the AS 1684.2-2010, AS 1684.4-2010, or AS 1720.1-2010 for timber framing; or AS 4100-1998, AS/NZS 4600-2018, or the NASH Standard-2014 for steel framing, as applicable.
10. Footings and slabs are to be constructed in accordance with AS 2870-2011 or AS 2159-2009, as applicable.

Building classification/s:

Volume 2 – Class 1 and Class 10(a) buildings

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.

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

Refer to Page 1 of this certificate.

A2 Description of product

Refer to Page 1 of this certificate and the below basic components of the system.

- Building wrap.
- Expanded polystyrene panels.
- Fixings and washers.
- Alkali-resistant fibreglass reinforcing mesh.
- External Angle/bead trims used around external edges.
- Base coat of Insulcon high polymer modified render.
- Second coat of Insulcon Acrylic Render.
- Insulcon Texture finish and/or Insulcon membrane.

A3 Product specification

Product specifications as provided by the manufacturer.

- Approximate weights of Insulcon pre-rendered panels.

Size	Weight
2400 x 1200 x 75mm	9.90kg
2400 x 1200 x 100mm	10.80kg
2700 x 1200 x 75mm	11.15kg
2700 x 1200 x 100mm	12.15kg

- Weights of raw styrene panels (Class M).

Size	Weight
2400 x 1200 x 75mm	4.40kg
2400 x 1200 x 100mm	5.30kg
2700 x 1200 x 75mm	4.95kg
2700 x 1200 x 100mm	5.95kg

Additional information provided by the manufacturer can be found in the following documents:

- Insul-Con Pty Ltd, Specification: Alkali resistant Fiberglass mesh, Doc #042, issued 15th October 2018.
- Insul-Con Pty Ltd, Specification: Panel Retaining Screws, Doc #043, issued 15th October 2018.
- Insul-Con Pty Ltd, Specification: Polystyrene Retaining Washers, Doc #044, issued 15th October 2018.
- Insul-Con Pty Ltd, Specification: Insulcon Pre Rendered Panel, Doc #054, issued January 2017.
- Starter Channel – LU-X 115, issued 11 July 2018.
- Starter Channel – LU-X 90, issued 11 July 2018.

A4 Manufacturer and manufacturing plant(s)

Insulcon Pty Ltd, 34 Swift Way, Dandenong South, VIC 3175, Australia.

A5 Installation requirements

Refer to Page 3 of this certificate and the following:

As well as compliance with all the installation methods in the Insulcon Installation Manual (Rev 5 dated 25 September 2021) specific attention is drawn to the requirement for the full thickness of render and texture coatings to be achieved:

- 1st coat – Nominal 5mm of BAL Base Render
- 2nd coat – Nominal 4mm of BAL Base Render
- 3rd coat – Nominal 1mm of Insulcon Texture

Failure to achieve these thicknesses will invalidate the test results showing compliance with BAL 29.

A6 Other relevant technical data

- None.

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

The system has been assessed as complying with the identified Performance Requirements of the BCA 2019.1. This involved a review of product specifications, test reports, installation manuals, and associated documentation.

- **Structural assessment**
 - A2.2(2)(a) / A5.2(1)(d) – A report issued by an Accredited Testing Laboratory (Ian Bennie and Associates – NATA Accreditation No. 2371).
 - A2.2(2)(a) / A5.2(1)(e) – A certificate or report from a professional engineer or other appropriately qualified person (Acronem Consulting).
- **Weatherproofing assessment:**
 - A2.2(2)(a) / A5.2(1)(d) – A report issued by an Accredited Testing Laboratory (Ian Bennie and Associates – NATA Accreditation No. 2371).
- **Bushfire assessment:**
 - A2.3(2)(a) / A5.2(1)(d) – A report issued by an Accredited Testing Laboratory (Exova Warringtonfire – NATA Accreditation No. 3277).
- **Thermal Insulation assessment**
 - A2.3(2)(a) / A5.2(1)(d) – A report issued by an Accredited Testing Laboratory (AWTA – NATA Accreditation No. 1356).
 - A2.3(2)(a) / A5.2(1)(e) – A certificate or report from a professional engineer or other appropriately qualified person (James M Fricker).

B2 Reports

Evaluation methods	Related Supporting Evidence as listed below
Structural Assessment	Numbers 1 – 2
Weatherproofing Assessment	Number 3
Bushfire Assessment	Number 4
Thermal Insulation Assessment	Numbers 5 & 6

Structural

1. Ian Bennie and Associates, Static Ultimate Wind Load Tests to AS4040.2-1992 (R2016), Test Report No. 2020-034-S1 (dated June 2021).

This test report provides the testing of Insulcon 75mm panel to the requirements of AS 4040.2 and determines that when installed with 100mm x 10-gauge SS screw and build smart 48mm diameter retaining washer fixings at 300c/c in panel centre and fixings at 200c/c around perimeter frame, with mesh and render as per Insulcon manual, the product is suitable for use in non-cyclonic wind regions.

2. Acronem Consulting, Insulcon Panel System (Wind and Weatherproofing performance), Report No. ACA-210601 (dated 5 July 2021).

This report provides the opinion of Acronem Consulting on the compliance of Insulcon 75mm panel with BCA 2019.1 Clause P2.1.1(b)(iii) and Clause P2.2.2 and determines that the product complies with the requirements.

Weatherproofing

3. Ian Bennie and Associates, Direct Fixed Insulcon Panel Specimen tests to NCC 2019 Verification Methods FV1 and V2.2.1, Test Report no. 2020-046-S1 (dated August 2020).

This report provides the results to testing of Direct Fixed Insulcon Panel to the requirements of AS/NZS 4284-2008 and determines that the product passed all the compliance requirements of NCC-2019 Weatherproofing Verification method requirement FV1 and V2.2.1.

Bushfire

4. Exova Warringtonfire, Bushfire resistance test of an external wall system in accordance with AS1530.8.1-2007, EWFA Report No. 38326000.1 (dated 25 January 2016).

This report provides the results to testing of Insulcon 75mm to AS1530.8.1 and determines that the system is suitable for use in bushfire prone areas up to and including BAL 29.

Thermal Insulation

5. AWTA Product Testing, Steady-State Thermal Transmission Properties by Means of the Heat Flow Apparatus, Test Number 21-005314, dated 9 November 2021.

This report provides the results of 10 samples of Foamex Styroboard EPS M Grade tested to ASTM C518-2017 and calculated $R_{50/90}$ of 1.85m²K/W.

6. James M Fricker, Overall "Total R" (Thermally Bridged) Thermal Performance calculations to AS/NZS 4859 Parts 1 & 2: 2018, Report i199b, dated 11 November 2021.

This report provides the thermal insulation evaluation by calculation to the requirements of AS/NZS 4859.1-2018 and AS/NZS 4859.2-2018 for the Insulcon 75mm EPS panel when installed with 90x45mm studs at 600mm centres and 10mm plasterboard. The report determines that the Overall Total Thermal Resistance R_T is 2.84 in winter and 2.72 in summer.