



# Certificate of Conformity

## Certification Body:



SAI Global Certification Services Pty Limited  
 (ACN 108 716 669)  
 Trading as "SAI Global"  
 JAS-ANZ Accreditation No. Z1440295AS  
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## Certificate Holder:



Kingspan Insulation Pty Ltd  
 25 Oherns Road, Somerton VIC 3062  
 Tel: 1300 247 235 Fax: 1300 247 329  
[info@kingspaninsulation.com.au](mailto:info@kingspaninsulation.com.au)

Certificate number: CM20001

### THIS TO CERTIFY THAT

## AIR-CELL Glareshield® & AIR-CELL Retroshield®

### Type and/or use of product:

*Kingspan AIR-CELL Glareshield® & Kingspan AIR-CELL Retroshield®* are pliable building membrane for the provision of thermal insulation in walls, floors and roofs

### Description of product:

*Kingspan AIR-CELL Glareshield®* is a Thermo-reflective insulation blanket comprised of an encapsulated air cell structure between a layer of reflective aluminium foil and an anti-glare foil.  
*Kingspan AIR-CELL Retroshield®* is a thermo-reflective insulation blanket comprised of an encapsulated air cell structure between two layers of reflective aluminium foil.

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

## BCA 2019

	Volume One	Volume Two
<b>Performance Requirement(s)</b>	<b>FP1.4</b>	<b>P2.2.2</b>
	<b>Damp &amp; Weatherproofing</b> – Weatherproofing (must be used in conjunction with other building elements)	<b>Damp &amp; Weatherproofing</b> – Weatherproofing (must be used in conjunction with other building elements)
<b>Deemed-to-Satisfy Provision(s):</b>	<b>Spec. C1.10 Clause 7</b>	<b>3.7.1.2</b>
	<b>Fire Hazard Properties</b> Other Materials	<b>Fire Properties for Materials and Construction - Fire Hazard Properties</b>
	<b>J1.2(a)(b)</b>	<b>3.12.1.1(a)(b)</b>
	<b>Building Fabric</b> – Thermal construction — general (must be used in conjunction with other building elements to achieve a total R value outlined in clause J1.3 'Roof and Ceiling Construction' and J1.5 'Walls and Glazing') subject to state and territory variations	<b>Building Fabric</b> – Building Fabric Thermal Insulation (must be used in conjunction with other building elements to achieve a total R value outlined in clause 3.12.1.2 'Roofs' and 3.12.1.4 'External Walls') subject to state and territory variations
<b>State or territory variation(s):</b>	<b>NSW Spec. C1.10 NSW 7</b>	<b>NSW-3.12</b>
	<b>Fire hazard properties</b> Other materials	<b>ENERGY EFFICIENCY</b> 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.

SAI Global Certification Services



Heather Mahon  
 Global Head of Technical Services  
 SAI Global Assurance



Quintin Kleyn – Unrestricted Building Certifier

Date of issue: 05/08/2020

Date of expiry: 05/08/2023



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<b>NSW Section J</b>	Section J is replaced with NSW Section J which consists of two (2) subsections: <ul style="list-style-type: none"> <li>• J(A) Energy Efficiency – Class 2 buildings &amp; Class 4 part (BASIX)</li> <li>• J(B) Energy Efficiency – Class 3 &amp; Class 5 to 9 buildings</li> </ul>	<b>NT-3.12</b>	In the Northern Territory, Part 3.12 is replaced with BCA 2009 Part 3.12.
<b>NT Section J</b>	For a Class2 building and a Class4 part of a building, Section J is replaced with Section J of BCA 2009. Section J does not apply to Class 3 and 5-9 buildings.	<b>SA-3.12</b>	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.
<b>QLD Section J</b>	In Queensland, for a Class 2 building, Section J is replaced with Section J of BCA 2009	<b>QLD-3.12</b>	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.
		<b>ACT-3.12</b>	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 Product must be installed in accordance with the following:
  - a. 'AIR-CELL Glareshield® *Thermo Reflective Anti-Glare Insulation*' manual (KIAU0043, Issue 9, April 2020)
  - b. 'AIR-CELL Retrosshield® *Thermo Reflective Insulation*' manual (KIAU0045, Issue 7, April 2020)
2. Each product must be used for its intended purpose

**Building classification/s:**

- Volume 1 – Class 2 to Class 9 buildings  
Volume 2 – Class 1 and Class 10a 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](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

Refer to Page 1 of this certificate.

### A2 Description of product

Refer to Page 1 of this certificate.

### A3 Product specification

- 'AIR-CELL Glareshield® Thermo Reflective Anti-Glare Insulation' manual (KIAU0043, Issue 9, April 2020)
- 'AIR-CELL Retroshield® Thermo Reflective Insulation' manual (KIAU0045, Issue 7, April 2020)

Product Name & Code	AIR-CELL Glareshield®	AIR-CELL Retroshield®
Nominal Product Thickness	7.0mm	7.0mm
Product Dimensions (Roll Size)	1350.0 mm x 22.25 m (30 m <sup>2</sup> )	1350.0 mm x 22.25 m (30 m <sup>2</sup> )
Declared Material R-value	R0.14 m <sup>2</sup> .K/W at 23°C	R0.14 m <sup>2</sup> .K/W at 23°C
Emittance	E0.03 – Reflective Face E0.05 – Anti Glare Face	E0.03 – Reflective Face
Vapour Control (ASTM E96)	Vapour Barrier – Class 2	Vapour Barrier – Class 2
Electrical Conductivity (AS/NZS 200.1:2017)	Resistance $\leq$ 10M $\Omega$ – Electrically Conductive	Resistance $\leq$ 10M $\Omega$ – Electrically Conductive

For the purposes of the NCC 2019 Building Code of Australia Volume One, Specification C1.10 clause 7, the AIR-CELL Glareshield® has been tested to AS 1530.2 and achieved a *Flammability Index of 4* & the AIR-CELL Retroshield® has been tested to AS 1530.2 and achieved a *Flammability Index of 3*.

### A4 Manufacturer and manufacturing plant(s)

Manufacturer - Kingspan Insulation Pty Ltd, 25 Oherns Road, Somerton VIC 3062

Manufactured in Carrum Downs , VIC, Australia

### A5 Installation requirements

Refer to Page 2 of this certificate and the following;

- 'AIR-CELL Glareshield® Thermo Reflective Anti-Glare Insulation' manual (KIAU0043, Issue 9, April 2020)
- 'AIR-CELL Retroshield® Thermo Reflective Insulation' manual (KIAU0045, Issue 7, April 2020)

### 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. This involved a review of product specifications, test reports, installation manuals, and associated documentation.

1. Damp and Weatherproofing Assessment:
  - a) A2.3(2)(a) / A5.2(1)(d) - A report issued by an Accredited Testing Laboratory – ‘AWTA’ Australian Wool Testing Authority (NATA accreditation No. 983)
  - b) A2.2(2)(a) / A5.2(1)(e) – A report from an appropriately qualified person/s – ‘AWTA’ Australian Wool Testing Authority
2. Fire Hazard Properties assessment:
  - a) A2.3(2)(a) / A5.2(1)(d) - A report issued by an Accredited Testing Laboratory - ‘AWTA’ Australian Wool Testing Authority (NATA accreditation No. 1356)
3. Energy Efficiency Assessment:
  - a) A2.3(2)(a) / A5.2(1)(d) - A report issued by an Accredited Testing Laboratory – ‘AWTA’ Australian Wool Testing Authority (NATA accreditation No. 1356) and ‘R&D Services’ (IAS accreditation No. TL-566)
  - b) A2.3(2)(a) / A5.2(1)(e) – A report from an appropriately qualified person - ‘Surface Optics Corporation’
  - c) A2.3(2)(a) / A5.2(1)(f) - Another form of documentary evidence, such as but not limited to a Product Technical Statement - Kingspan Insulation Pty Ltd

### B2 Reports

Evaluation methods	Related Reports - Glareshield
Damp and Weatherproofing Assessment	3, 4, 5, 6, 7
Fire Hazard Properties assessment	2
Energy Efficiency Assessment	15, 16, 17

Evaluation methods	Related Reports - Retrosshield
Damp and Weatherproofing Assessment	8, 9, 10, 11, 12, 13, 14
Fire Hazard Properties assessment	1
Energy Efficiency Assessment	15, 18, 19

1. **AWTA Product Testing, Methods for Fire Tests on Building Materials, Components and Structures, Test No. 18-006635 (dated 16 November 2018)** (NATA accreditation No. 1356).  
*This report provides the results of testing of Glareshield to AS 1530.2-1993 and specifies the product obtained a Flammability Index of 4.*
2. **AWTA Product Testing, Methods for Fire Tests on Building Materials, Components and Structures, Test No. 18-006634 (dated 16 November 2018)** (NATA accreditation No. 1356).  
*This report provides the results of testing of Retrosshield to AS 1530.2-1993 and specifies the product obtained a Flammability Index of 3.*

3. **AWTA Product Testing, Resistance to Dry Delamination, Test No. 15-006183 (dated 15 December 2015).** *This report provides the results to testing of Glareshield to AS/NZS 4201.1-1994 and returns a PASS result.*
4. **AWTA Product Testing, Resistance to Wet Delamination, Test No. 15-006186 (dated 15 December 2015).** *This report provides the results to testing of Glareshield to AS/NZS 4201.2-1994 and returns a PASS result.*
5. **AWTA Product Testing, Edge tearing resistance of Building Membranes and Underlays, Test No. 15-006182 (dated 21 Dec 2015) .** *This report provides the results to testing of Glareshield to AS/NZS 4200.1-1994 Clause 6.1.3 and returns the mean result of 1050N in the machine direction and 1060N in the lateral direction, with a classification of Extra Heavy.*
6. **AWTA Product Testing, Determination of California Bearing Ratio (CBR) Plunger Method, Test No. 15-006184 (dated 11 January 2016).** *This report provides the results to testing of Glareshield to AS3706.4-2012 and returns a result for a mean burst strength of 2.9kN.*
7. **AWTA Product Testing, Water Vapour Transmission – Water Method, Test No. 15-006180 (dated 18 February 2016).** *This report provides the results to testing of Glareshield to ASTM E96-2012 and returns a result for mean permeance of 0.1819e-7 µg/N.s*
8. **AWTA Product Testing, Pliable Building Membranes and Underlays - Shrinkage, Test No. 16-003461 (dated 26 July 2016).** *This report provides the results to testing of Retrosshield to AS/NZS 4201.3-1994 and returns the result that the product is compliant with AS/NZS 4200.1-1994 Clause 5(c).*
9. **AWTA Product Testing, Resistance to Dry Delamination, Test No. 17-003898 (dated 21 July 2017).** *This report provides the results to testing of Retrosshield to AS/NZS 4201.1-1994 and returns a PASS result.*
10. **AWTA Product Testing, Edge tearing resistance of Building Membranes and Underlays, Test No. 17-003901 (dated 25 July 2017).** *This report provides the results to testing of Retrosshield to AS/NZS 4200.1-1994 Clause 6.1.3 and returns the mean result of 925N in the machine direction and 887N in the lateral direction, with a classification of Extra Heavy.*
11. **AWTA Product Testing, Pliable Building Membranes and Underlays – Resistance to Water Penetration, Test No. 17-003896 (dated 26 July 2017).** *This report provides the results to testing of Retrosshield to AS/NZS 4201.4-1994 and returns a PASS result.*
12. **AWTA Product Testing, Determination of California Bearing Ratio (CBR) Plunger Method, Test No. 17-003897 (dated 27 July 2017).** *This report provides the results to testing of Retrosshield to AS3706.4-2012 and returns a result for a mean burst strength of 2.6kN.*
13. **AWTA Product Testing, Resistance to Surface Corrosion and Wet Delamination at Elevated Ambient Temperatures (Reflective Insulations), Test No. 17-003902 (dated 17 August 2017).** *This report provides the results to testing of Retrosshield to AS/NZS 4859.1-2002 Appendix I and returns a PASS result.*
14. **AWTA Product Testing, Water Vapour Transmission – Water Method, Test No. 17-003900 (dated 23 August 2017)** (NATA accreditation No. 983). *This report provides the results to testing of Glareshield to ASTM E96-2012 and returns a result for mean permeance of 0.0105 µg/N.s*
15. **Kingspan Thermal Value Summary Report – Kingspan Kooltherm Range (Dated 31 July 2020)** *This report provides a Thermal value summary Report in conformance with AS/NZS 4859.1:2018 clause 2.3.3.9, based on test reports provided by AWTA Product Testing for Glareshield & Retrosshield (NATA accreditation No. 1356) – (Test Numbers 7-560924-NW, 7-566216-NW, 7-566242-NW, 7-571735-NW, 20-002410, 20-002411) & test reports provided by R&D Services for Glareshield & Retrosshield (IAS Accreditation No. TL-566) - (Test Numbers RD182696TR, RD152248TR, RD151960TR, RD122660TD, RD20630).*
16. **Surface Optics Corporation, Certificate of Analysis, Job No. 5734MP (dated 02 June 2018).** *This certificate determines that Glareshield (orange) was tested for Infrared emissivity in accordance with ASTM E-408 and returned a result of 0.02*



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17. **Surface Optics Corporation, Certificate of Analysis, Job No. 5734MP (dated 02 June 2018).** *This certificate determines that Glareshield (silver) was tested for Infrared emissivity in accordance with ASTM E-408 and returned a result of 0.02*
18. **Surface Optics Corporation, Certificate of Analysis, Job No. 5734MP (dated 02 June 2018).** *This certificate determines that Retrosshield (GT1468 side 1) was tested for Infrared emissivity in accordance with ASTM E-408 and returned a result of 0.01*
19. **Surface Optics Corporation, Certificate of Analysis, Job No. 5734MP (dated 02 June 2018).** *This certificate determines that Retrosshield (GT1469 side 2) was tested for Infrared emissivity in accordance with ASTM E-408 and returned a result of 0.01*