Certificate of Conformity

Certification Body:

SAI Global Certification Services Pty Limited

(ACN 108 716 669) Operating as "Intertek & Intertek SAI Global"

JAS-ANZ Accreditation No. Z1440295AS

Address: 650 Lorimer Street Port, Melbourne, VIC, 3207 Australia

Website: www.saiglobal.com

Certificate Holder:

Kingspan Insulation Pty Ltd

25 O'herns Road, Somerton VIC 3062

Tel: 1300 247 235 Fax: 1300 247 329

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Certificate number: CM20029/1

THIS TO CERTIFY THAT

AIR-CELL Insulbreak®55, Insulbreak®55 Wide, Insulbreak®70, Insulbreak®90 & Insulwhite®

Type and/or use of product:

Reflective pliable building membranes for the provision of thermal insulation in roofs & walls.

For detailed list of Products Use & Description refer to A1 in Appendix A below

Description of product:

Insulbreak®55, Insulbreak®55 Wide, Insulbreak®70, Insulbreak®90 are fibre-free, thermo reflective insulations comprising a cross-linked, closed-cell core sandwiched with an anti-glare foil facing on one side and a plain foil facing on the other side

Insulwhite® is a fibre-free thermo reflective insulation, sandwiched by a highly reflective facing on the upper side and a white facing on the other side.

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

BCA 2022

	Volume One		Volume Two & Housing Provisions	
Performance Requirement(s)	**F3P1**	**Roof and Wall Cladding -** Weatherproofing	**H2P2**	**Damp and weatherproofing –** Weatherproofing
Deemed-to-Satisfy Provision(s):	**C2D11** including S7C7	**Fire resistance and Stability –** Fire hazard properties Other materials	**H3D2**	**Fire properties for materials and construction -** Fire hazard properties
	F8D3	**Condensation Management –** External wall construction	**10.8.1**	**Condensation Management –** Pliable Building Membrane
	J3D3(1)(b)*	**Energy Efficiency –** Thermal Breaks *Only Applicable for **Insulbreak®70 & Insulbreak®90**	**13.2.2**	**Building fabric -** Building fabric thermal insulation. (must be used in conjunction with other building elements to achieve a total R value outlined in clause 13.2.3 'Roofs and ceilings' and 13.2.5 'External walls') subject to state and territory variations.
	J4D3	**Building fabric -** Thermal construction — general (must be used in conjunction with other building elements to achieve a total R value outlined in clause J4D4 'Roof and		

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President, Business Assurance
SAI Global Assurance

Harley Parkes – Unrestricted Building Certifier

Date of issue: 28/09/2023

Date of expiry: 27/09/2026

		Ceiling Construction' and J4D6 'Walls and Glazing') subject to state and territory variations.		*Only **Insulbreak®70 & Insulbreak®90** are suitable for use as a 'Thermal Break'
State or territory variation(s):	**NSW C2D11** including NSW S7C7	**Fire resistance and Stability –** Fire hazard properties Other materials	**NT Part 13.2**	**Building fabric –** In the Northern Territory, Part 13.2 is replaced with NT Part 13.2.
	VIC C2D11 (3)	**Fire resistance and Stability –** Fire hazard properties	**TAS Part 13.2**	**Building fabric –** In the Tasmania, Section 13 is replaced with BCA 2019 Part 3.12.
	NSW J3D3	**Energy Efficiency –** J3D3 does not apply in NSW.	**NSW Part 13.2.3**	**Building fabric –** In NSW delete 13.2.3 and insert NSW Part 13.2.3 'Roofs and ceilings'.
	NT Part J3	**Energy Efficiency –** For a Class 2 building and Class 4 part of a building, Section J is replaced with Section J of BCA 2009. For Class 3 and Class 5-9 buildings, Section J of NCC 2022 does not apply and from 1 October 2023 Section J of NCC 2019 applies.	**NSW Part 13.2.5**	**Building fabric –** In NSW delete 13.2.5 and insert NSW Part 13.2.5 'External walls'.
	TAS Part J3	**Energy Efficiency -** This Part is deleted from the BCA in Tasmania. In Tasmania, for a Class 2 building and Class 4 part of a building, Section J is replaced with Section J of BCA 2019 Amendment 1.		

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 relevant Kingspan Insulated Panels Installation Instruction Documents listed in section A5 of this certificate.
2. * Only **Insulbreak®70 & Insulbreak®90** are suitable for use as a 'Thermal Break'
3. These products are classified as 'Class 2 Vapour barrier' and are not suitable for use as a 'Vapour Permeable Membrane' for climate zone 4, 5, 6, 7 & 8 as per NCC 2022 Part F8D3(2).
4. Air-cell Insulbreak® and Air-cell Insulwhite® have not been tested to the full scope of AS4200.1 due to material composition of the product, however passed all tests under the standard suitable for the product and has been deemed suitable for use as a pliable building membrane for condensation management in conjunction with expert judgment as outlined in evaluation methods and reports listed within this report.

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. 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

Product	Type & Intended use of product
Insulwhite®	White faced pliable thermo reflective cellular insulation. Roof insulation fixed to the underside of the rafters, acting as an Insulation layer, Vapour barrier & Reflective barrier.
Insulbreak®55 **Insulbreak®55 Wide**	Pliable thermo reflective cellular insulation. The roof insulation fixed either under or over roof battens, acting as an Insulation layer, Vapour barrier, Water barrier & Reflective barrier.
Insulbreak®70 **Insulbreak®90**	Pliable thermal reflective cellular insulation. For use in pitch roofs, walls with steel or timber framing, providing a thermal break in steel framed construction. Only **Insulbreak®70 & Insulbreak®90** are suitable for use as a 'Thermal Break'

A2 Description of product

Product	Description of product
Insulwhite®	Comprises a cross-linked, closed cell insulation core sandwiched by a highly reflective foil facing on the upper side and a white facing on the other side. Insulwhite® provides a protective, corrosive resistant thermal insulation for use where a white ceiling-like appearance is desired.
Insulbreak®55 **Insulbreak®55 Wide**	A fibre-free, thermo reflective insulations comprising a cross-linked, closed-cell core sandwiched with an anti-glare foil facing on one side and a plain foil facing on the other side.
Insulbreak®70 **Insulbreak®90**	A fibre-free, thermo reflective insulations comprising a cross-linked, closed-cell core sandwiched with an anti-glare foil facing on one side and a plain foil facing on the other side.

A3 Product specification

The products are collectively described as: "Thermo-reflective insulation blanket comprised of an encapsulated air cell structure between a layer of reflective aluminium foil and an anti-glare foil."

The Kingspan products consist of the following compositions.

Product Name	**Insulwhite®**	**Insulbreak®55**	**Insulbreak®55 Wide**	**Insulbreak®70**	**Insulbreak®90**
Nominal Product Thickness	5.5mm	5.5mm	5.5mm	7.2mm	9.0mm
Product Dimensions (Roll Size)	1350 mm x 22.25 m (30 m_2)	1350 mm x 22.25 m (30 m_2)	1350 mm x 22.25 m (30 m_2)	1350 mm x 22.25 m (30 m_2)	1350 mm x 22.25 m (30 m_2)
Declared Material R-value	R0.15m^2.K/W at 23°C	R0.15m^2.k/W at 23°C	R0.15m^2.k/W at 23°C	R0.20m^2.k/W at 23°C	R0.25m^2.k/W at 23°C
Emittance	≤ E0.03 – IR Reflective (Reflective face) N/A – IR Non-Reflective (White face)	≤ E0.05 – IR Reflective (Anti-Glare Face) ≤ E0.03 – IR Reflective (Reflective Face)	≤ E0.05 – IR Reflective (Anti-Glare Face) ≤ E0.03 – IR Reflective (Reflective Face)	≤ E0.05 – IR Reflective (Anti-Glare Face) ≤ E0.03 – IR Reflective (Reflective Face)	≤ E0.05 – IR Reflective (Anti-Glare Face) ≤ E0.03 – IR Reflective (Reflective Face)
Flammability Index (AS 1530.2)	≤ 5 - Low	≤ 5 - Low	≤ 5 - Low	≤ 5 - Low	≤ 5 - Low
Vapour Control (ASTM E96)	Vapour Barrier – Class 2	Vapour Barrier – Class 2	Vapour Barrier – Class 2	Vapour Barrier – Class 2	Vapour Barrier – Class 2
Electrical Conductivity (AS/NZS 200.1:2017)	Resistance ≤ 10MΩ – Electrically Conductive	Resistance ≤ 10MΩ – Electrically Conductive	Resistance ≤ 10MΩ – Electrically Conductive	Resistance ≤ 10MΩ – Electrically Conductive	Resistance ≤ 10MΩ – Electrically Conductive

A4 Manufacturer and manufacturing plant(s)

Manufacturer - Kingspan Insulation Pty Ltd, 25 O'herns Road, Somerton VIC 3062
Manufactured in Taren Point, NSW, Australia

A5 Installation requirements

1. Air-cell Insulwhite® White-Faced Thermo Reflective Insulation – KIAU0048, Issue 9, September 2023.
2. Air-cell Insulbreak® Thermal Break Solution (Insulbreak®55, Insulbreak®55 Wide, Insulbreak®70 & Insulbreak®90) – KIAU0040, Issue 18, September 2023.

A6 Other relevant technical data

- Nil

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

The system has been assessed as complying with the identified Performance Requirements of the BCA 2022. This involved a review of product specifications, test reports, installation manuals, and associated documentation.

1. Damp and Weatherproofing Assessment:
   a) A2G2(2)(a) / A5G3(1)(d) - A report issued by an Accredited Testing Laboratory – *'AWTA' Australian Wool Testing Authority (NATA accreditation No. 985) & R & D Services (IAS accreditation No. TL-566)*
   b) A2G2(2)(a) / A5G3(1)(e) – A report from an appropriately qualified person – *'AWTA' Australian Wool Testing Authority & 'Acronem Consulting Australia Pty Ltd'*
2. Condensation Management assessment:
   a) A2G3(2)(a) / A5G3(1)(d) - A report issued by an Accredited Testing Laboratory – *'AWTA' Australian Wool Testing Authority (NATA accreditation No. 985) & R & D Services (IAS accreditation No. TL-566)*
   b) A2G3(2)(a) / A5G3(1)(e) – A report from an appropriately qualified person – *Acronem Consulting Australia Pty Ltd*
3. Fire Hazard Properties assessment:
   a) A2G3(2)(a) / A5G3(1)(d) - A report issued by an Accredited Testing Laboratory - *'AWTA' Australian Wool Testing Authority (NATA accreditation No. 1356)*
4. Energy Efficiency Assessment:
   a) A2G3(2)(a) / A5G3(1)(d) - A report issued by an Accredited Testing Laboratory – *'AWTA' Australian Wool Testing Authority (NATA accreditation No. 1356) & R&D Services, Inc. (IAS accreditation No. TL-566) & OTM Solutions Pte. Ltd. (SAC accreditation no. LA-2016-0610-G)*
   b) A2G3(2)(a) / A5G3(1)(e) – A report from an appropriately qualified person - *Acronem Consulting Australia Pty Ltd & Surface Optics Corporation.*
   c) A2G3(2)(a) / A5G3(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
Damp and Weatherproofing Assessment	1, 2, 3 ,4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 33, 36, 37
Condensation Management assessment	7, 14, 17, 23, 33
Fire Hazard Properties assessment	24, 25, 26, 27, 28
Energy Efficiency Assessment	29, 30, 31, 32, 34, 35, 38, 39, 40, 41

1. **Australian Wool Testing Authority Ltd – Determination of California Bearing Ratio (CBR) Plunger Method. Test No. 16-000627 (dated 23/02/2016).** *This report provides the results of testing to AS3706.4-2012 (Insulwhite®).*

2. **Australian Wool Testing Authority Ltd – Test for Edge Tearing Resistance of Building Membranes and Underlays. Test No. 16-000625 (dated 23/02/2016).** *This report provides the results of testing to AS/NZS 4200.1-1994 (AS/NZS 4200.1-2017) (Insulwhite®).*
3. **Australian Wool Testing Authority Ltd – Test for Resistance to Dry Delamination. Test No. 16-000626 (dated 18/02/2016)**. *This report provides the results of testing to AS/NZS 4201.1-1994 and states the product obtained a "PASS" (Insulwhite®).*
4. **Australian Wool Testing Authority Ltd – Test for Resistance to Shrinkage of Building Membranes and Underlays. Test No. 16-000623 (dated 10/03/2016)**. *This report provides the results of testing to AS/NZS 4201.3-1994 (Insulwhite®).*
5. **Australian Wool Testing Authority Ltd – Test for Resistance to Water Penetration of Building Membranes and Underlays. Test No. 16-000620 (dated 19/02/2016)**. *This report provides the results of testing to AS/NZS 4201.4-1994 (Insulwhite®).*
6. **Australian Wool Testing Authority Ltd – Pliable Building Membranes and underlays – Surface Water Absorbency. Test No. 16-000621 (dated 18/02/2016).** *This report provides the results of testing to AS/NZS 4201.6-1994 (Insulwhite®).*
7. **Australian Wool Testing Authority Ltd – Test for Water Vapour Transmission Water Method. Test No. 19-006028 (dated 22/11/2019).** *This report provides the results of testing to ASTM E96-2016 (Insulwhite®).*
8. **Australian Wool Testing Authority Ltd – Determination of California Bearing Ratio (CBR) Plunger Method. Test No. 16-005596 (dated 20/10/2016).** *This report provides the results of testing to AS3706.4-2012 (Glareshield XL – renamed Insulbreak®55 & Glareshield XL Wide – renamed Insulbreak®55 Wide).*
9. **Australian Wool Testing Authority Ltd – Test for Edge Tearing Resistance of Building Membranes and Underlays. Test No. 16-005508 (dated 26/10/2016).** *This report provides the results of testing to AS/NZS 4200.1-1994 (AS/NZS 4200.1-2017) (Glareshield XL – renamed Insulbreak®55 & Glareshield XL Wide – renamed Insulbreak®55 Wide).*
10. **Australian Wool Testing Authority Ltd – Test for Resistance to Dry Delamination. Test No. 19-006024 (dated 22/10/2019).** *This report provides the results of testing to AS/NZS 4201.1-1994 and states the product obtained a "PASS" (Insulbreak®55).*
11. **Australian Wool Testing Authority Ltd – Test for Resistance to Shrinkage of Building Membranes and Underlays. Test No. 16-005509 (dated 17/11/2016)**. *This report provides the results of testing to AS/NZS 4201.3-1994 (Glareshield XL – renamed Insulbreak®55 & Glareshield XL Wide – renamed Insulbreak®55 Wide).*
12. **Australian Wool Testing Authority Ltd – Test for Resistance to Water Penetration of Building Membranes and Underlays. Test No. 16-005511 (dated 27/10/2016)**. *This report provides the results of testing to AS/NZS 4201.4-1994 (Glareshield XL – renamed Insulbreak®55 & Glareshield XL Wide – renamed Insulbreak®55 Wide).*
13. **Australian Wool Testing Authority Ltd – Pliable Building Membranes and underlays – Surface Water Absorbency. Test No. 16-005510 (dated 21/10/2016).** *This report provides the results of testing to AS/NZS 4201.6-1994 (Glareshield XL – renamed Insulbreak®55 & Glareshield XL Wide – renamed Insulbreak®55 Wide).*
14. **Australian Wool Testing Authority Ltd – Test for Water Vapour Transmission Water Method. Test No. 19-006020 (dated 15/11/2019).** *This report provides the results of testing to ASTM E96-2016 (Insulbreak®55).*
15. **Australian Wool Testing Authority Ltd – Test for Resistance to Shrinkage of Building Membranes and Underlays. Test No. 18-002073 (dated 11/05/2018)**. *This report provides the results of testing to AS/NZS 4201.3-1994 (Permishield 65 – Properties comparable to Insulbreak 65 – Renamed Insulbreak®70).*
16. **Australian Wool Testing Authority Ltd – Tests for Resistance to Water Penetration of Building Membranes and Underlays, Determination of California Bearing Ratio (CBR) Plunger Method, Resistance to Dry Delamination, Pliable Building Membranes and underlays – Surface Water Absorbency, Edge Tearing Resistance of Building Membranes and**

Underlays, Water Vapour Transmission Water Method, Resistance to Shrinkage of Building Membranes and Underlays, . Test No. 17-003014 (dated 24/08/2017). *This report provides the results of testing to AS/NZS 4201.4-1994, AS 3706.4-2012, AS/NZS 4201.6-1994, AS 4200.1-1994, (Insulbreak 65 – Renamed Insulbreak®70).*

17. **Australian Wool Testing Authority Ltd – Test for Water Vapour Transmission Water Method. Test No. 19-006073 (dated 12/12/2019).** *This report provides the results of testing to ASTM E96-2016 (Insulbreak®70).*
18. **Australian Wool Testing Authority Ltd – Determination of California Bearing Ratio (CBR) Plunger Method. Test No. 17-003728 (dated 20/07/2017).** *This report provides the results of testing to AS3706.4-2012 (Insulbreak 80 – Renamed Insulbreak®90).*
19. **Australian Wool Testing Authority Ltd – Test for Edge Tearing Resistance of Building Membranes and Underlays. Test No. 17-003730 (dated 20//07/2017).** *This report provides the results of testing to AS/NZS 4200.1-1994 (Insulbreak 80 – Renamed Insulbreak®90).*
20. **Australian Wool Testing Authority Ltd – Test for Resistance to Shrinkage of Building Membranes and Underlays. Test No. 17-003733 (dated 01/08/2017)**. *This report provides the results of testing to AS/NZS 4201.3-1994 (Insulbreak 80 – Renamed Insulbreak®90).*
21. **Australian Wool Testing Authority Ltd – Test for Resistance to Water Penetration of Building Membranes and Underlays. Test No. 17-003727 (dated 19/07/2017)**. *This report provides the results of testing to AS/NZS 4201.4-1994 (Insulbreak 80 – Renamed Insulbreak®90).*
22. **Australian Wool Testing Authority Ltd – Pliable Building Membranes and underlays – Surface Water Absorbency. Test No. 17-003731 (dated 19/07/2017).** *This report provides the results of testing to AS/NZS 4201.6-1994 (Insulbreak 80 – Renamed Insulbreak®90).*
23. **Australian Wool Testing Authority Ltd – Test for Water Vapour Transmission. Test No. 19-006053 (dated 18/11/2019).** *This report provides the results of testing to ASTM E96-2016 (Insulbreak®90).*
24. **Australian Wool Testing Authority Ltd – Test for Flammability of Materials. Test No. 18-007585 (dated 11/01/2019)**. *This report provides the results of testing to AS 1530.2-1993 Part 2, and specifies the product obtained a Flammability Index of 1. (Insulwhite®).*
25. **Australian Wool Testing Authority Ltd – Test for Flammability of Materials. Test No. 18-007584 (dated 15/01/2019)**. *This report provides the results of testing to AS 1530.2-1993 Part 2, and specifies the product obtained a Flammability Index of 1. (Glareshield XL – renamed Insulbreak®55).*
26. **Australian Wool Testing Authority Ltd – Test for Flammability of Materials. Test No. 18-007583 (dated 15/01/2019)**. *This report provides the results of testing to AS 1530.2-1993 Part 2, and specifies the product obtained a Flammability Index of 1. (Glareshield XL Wide – renamed Insulbreak®55 Wide).*
27. **Australian Wool Testing Authority Ltd – Test for Flammability of Materials. Test No. 18-007576 (dated 04/01/2019)**. *This report provides the results of testing to AS 1530.2-1993 Part 2, and specifies the product obtained a Flammability Index of 1. (Insulbreak 65 – Renamed Insulbreak®70).*
28. **Australian Wool Testing Authority Ltd – Test for Flammability of Materials. Test No. 18-007575 (dated 04/01/2019)**. *This report provides the results of testing to AS 1530.2-1993 Part 2, and specifies the product obtained a Flammability Index of 1. (Insulbreak 80 – Renamed Insulbreak®90).*
29. **Kingspan Thermal Value Summary Report (Thermal Value Summary Report - 5.5mm – dated 02/08/2023)** – (*Insulwhite®, Insulbreak®55 & Insulbreak®55 Wide*) *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 - Test Report No. 18-007622, 18-007623, 18-007624, 18-007625, for Kingspan Air-Cell (NATA accreditation No. 1356) & R&D Services – Test report No. RD221112 for Kingspan Air-Cell Permicav XV (IAS accreditation No. TL-566) These reports provide results of testing to ASTM C518-2017*

30. **Kingspan Thermal Value Summary Report (Thermal Value Summary Report – 7.2mm – dated 02/08/2023)** – *(Insulbreak®70) 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 OTM Solutions – Test report No. OTM2305023 for Kingspan Air-Cell Insulbreak (SAC accreditation no. LA-2016-0610-G) . These reports provide results of testing to ASTM C518-21.*
31. **Kingspan Thermal Value Summary Report (Thermal Value Summary Report – 9.0mm – dated 02/08/2023)** – *(Insulbreak®90) 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 OTM Solutions – Test report No. OTM2305041 for Kingspan Air-Cell Insulbreak (SAC accreditation no. LA-2016-0610-G) . These reports provide results of testing to ASTM C518-21.*
32. **Australian Wool Testing Authority Ltd – Test for Resistance to Surface Corrosion and Wet Delamination at Elevated Ambient Temperatures (Reflective Insulations). Test No. 20-004345 (dated 05/10/2020).** *This report provides the results of testing to AS/NZS 4859.1-2018 and indicates a "PASS" for Wet Delamination and a "PASS" for Surface Corrosion (Insulwhite®).*
33. **Acronem Consulting Australia Pty Ltd. – Kingspan Insuliner NCC Compliance Appraisal (dated 13/06/2023) -** *This appraisal reconfirms the performance of the noted products to the relevant NCC 2022 clauses in relation to AS/NZS 4859.1:2018, based of initial report ACA 160218 & ACA 160517.*
34. **OTM Solutions Pte. Ltd. – Material Surface Emittance Test Report. OTM2203043 'Silver foil' (dated 16/03/2022)** – *This report provides the results of ASTM C1371-15 for determination of emittance of material (Insulbreak 55).*
35. **OTM Solutions Pte. Ltd. – Material Surface Emittance Test Report. OTM2203025 'Antiglare foil' (dated 29/03/2022)** – *This report provides the results of ASTM C1371-15 for determination of emittance of material (Insulbreak 55).*
36. **Australian Wool Testing Authority Ltd – Test for Resistance to Dry Delamination. Test No. 19-006071 (dated 22/10/2019)**. *This report provides the results of testing to AS/NZS 4201.1-1994 and states the product obtained a "PASS" (Insulbreak 70).*
37. **Australian Wool Testing Authority Ltd – Test for Resistance to Dry Delamination. Test No. 19-006059 (dated 22/10/2019)**. *This report provides the results of testing to AS/NZS 4201.1-1994 and states the product obtained a "PASS" (Insulbreak 90).*
38. **Australian Wool Testing Authority Ltd – Test for Resistance to Surface Corrosion and Wet Delamination at Elevated Ambient Temperatures (Reflective Insulations). Test No. 20-004344 (dated 05/10/2020).** *This report provides the results of testing to AS/NZS 4859.1-2018 and indicates a "PASS" for Wet Delamination and a "PASS" for Surface Corrosion (Insulbreak).*
39. **OTM Solutions Pte. Ltd. – Material Surface Emittance Test Report. OTM2203035 'Antiglare foil' (dated 16/03/2022)** – *This report provides the results of ASTM C1371-15 for determination of emittance of material (Insulbreak 70 & Insulbreak 90).*
40. **OTM Solutions Pte. Ltd. – Material Surface Emittance Test Report. OTM2203041 'Silver foil' (dated 16/03/2022)** – *This report provides the results of ASTM C1371-15 for determination of emittance of material (Insulbreak 70 & Insulbreak 90).*
41. **Surface Optics Corporation – Test for Infra-Red emissivity. Job No. 4419MP 'White Face' (dated 07/10/2014).** This report provides the results of emissivity data measured to ASTM E-408 for Insulwhite® (TB055W).