



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

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Certificate Holder:

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SAI Global Certification Services

Calin Moldovean
President, Business Assurance
SAI Global Assurance

Harley Parkes – Unrestricted Building Certifier

Certificate number: CM20029/2

THIS TO CERTIFY THAT

AIR-CELL Permivav XV™ & AIR-CELL Permishield® XV 70

Type and/or use of product:

Permivav XV™ is a reflective pliable building membrane acting as an Insulation layer, Vapour-permeable membrane & a Reflective barrier. Suitable for use in double brick cavity walls or brick veneer walls.

Permishield® XV 70 is a reflective pliable building membrane acting as an Insulation layer, Thermal Break & a Vapour-permeable sarking. Suitable for use in Framed & Reverse Brick Veneer walls behind lightweight cladding.

Description of product:

Permivav XV™ is a fibre-free, thermo reflective insulation 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.

Permishield® XV 70 is a fibre-free, thermo reflective insulation 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.

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

BCA 2022

	Volume One		Volume Two	
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 – Wall Thermal Breaks *Only applicable for Permishield® XV 70	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 13.2.5 '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 J4D6 'Walls and Glazing') subject to state and territory variations.		

Date of issue: 21/09/2023

Date of expiry: 20/09/2026



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State or territory variation(s):

NSW C2D11
including NSW
S7C7

Fire resistance and Stability – Fire hazard properties
Other materials

VIC C2D11 (3)

Fire resistance and Stability – Fire hazard properties

NSW J3D3

Energy Efficiency – J3D3 does not apply in NSW.

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.

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.

NSW J4D3

Building fabric – Thermal Construction – general

NT Part J4

Building fabric - 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.

*Only **Permishield® XV 70** is suitable for use as a Thermal Break

NT Part 13.2

Building fabric – In the Northern Territory, Part 13.2 is replaced with NT Part 13.2.

TAS Part 13.2

Building fabric – In the Tasmania, Section 13 is replaced with BCA 2019 Part 3.12.

NSW Part 13.2.5

Building fabric – In NSW delete 13.2.5 and insert NSW Part 13.2.5 ‘External walls’.

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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 products must be installed in accordance with the relevant Kingspan Insulation Pty Ltd brochure:
 - a. **AIR-CELL Permivav XV™** - Vapour Permeable Insulation for Walls with Cavities (KIAU0041, Issue 10, Sept. 2023)
 - b. **AIR-CELL Permishield® XV 70** – Vapour Permeable Reflective Insulation Membrane (KIAU0047, Issue 14, Sept 2023)
2. Each product must be used for its intended purpose.
3. Only Permishield® XV 70 is suitable for use as a thermal break.
4. Permivav XV™ has been classified as a 'Class 3 Vapour permeable' vapour control membrane (VCM). Suitability for use in specific climate zones should be verified by an appropriately qualified person.
5. Permishield® XV 70 has been classified as a 'Class 3 Vapour permeable' vapour control membrane (VCM). Suitability for use in specific climate zones should be verified by an appropriately qualified person.

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.

Refer to Page 1 of this certificate.

A2 Description of product.

Refer to Page 1 of this certificate.

A3 Product specification

Product Name	Permicav XV™	Permishield® XV 70
Nominal Product Thickness	5.5mm	7.2mm
Product Dimensions (Roll Size)	1350 mm x 22.25 m (30 m ²)	1350 mm x 22.25 m (30 m ²)
Declared Material R-value	0.15m ² .K/W at 23°C	0.20m ² .K/W at 23°C
Emittance	E0.03 – Reflective Face E0.12 – Anti Glare Face	E0.03 – Reflective Face E0.12 – Anti Glare Face
Flammability Index (AS 1530.2)	≤ 5 - Low	≤ 5 - Low
Vapour Control (ASTM E96)	Vapour Permeable - Class 3	Vapour Permeable - Class 3
Electrical Conductivity (AS/NZS 200.1:2017)	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.

Refer to Page 2 of this certificate and the following;

1. AIR-CELL Permicav XV™ Vapour-Permeable Insulation for Walls with Cavities – KIAU0041, Issue 10, September 2023
2. AIR-CELL Permishield® XV 70 – Vapour Permeable Reflective Insulation Membrane - KIAU0047, Issue 14, September 2023

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 2022. This involved a review of product specifications, test reports, installation manuals, and associated documentation.

1. Damp and Weatherproofing Assessment:
 - A2G2(2)(a) / A5G3(1)(d) - A report issued by an Accredited Testing Laboratory – ‘AWTA’ Australian Wool Testing Authority (NATA accreditation No. 985)
 - 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:
 - A2G3(2)(a) / A5G3(1)(d) - A report issued by an Accredited Testing Laboratory – ‘AWTA’ Australian Wool Testing Authority (NATA accreditation No. 985)
 - A2G3(2)(a) / A5G3(1)(e) – A report from an appropriately qualified person – Acronem Consulting Australia Pty Ltd
3. Fire Hazard Properties assessment:
 - 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:
 - A2G3(2)(a) / A5G3(1)(d) - A report issued by an Accredited Testing Laboratory – ‘AWTA’ Australian Wool Testing Authority (NATA accreditation No. 1356) & OTM Solutions Pte. Ltd. (SAC accreditation no. LA-2016-0610-G) & R&D Services (IAS accreditation No. TL-566)
 - A2G3(2)(a) / A5G3(1)(e) – A report from an appropriately qualified person - Acronem Consulting Australia Pty Ltd
 - 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, 11, 14, 15, 16, 17, 18, 19, 20
Condensation Management assessment	7, 11, 20
Fire Hazard Properties assessment	8, 21
Energy Efficiency Assessment	9, 10, 12, 13, 22, 23, 24

1. **Australian Wool Testing Authority Ltd – Determination of California Bearing Ratio (CBR) Plunger Method. Test No. 16-006541 (dated 21/12/2016).** This report provides the results of testing to AS3706.4-2012 (Permicav XV™).
2. **Australian Wool Testing Authority Ltd – Test for Edge Tearing Resistance of Building Membranes and Underlays. Test No. 16-006543 (dated 23/02/2016).** This report provides the results of testing to AS/NZS 4200.1-1994 (Permicav XV™).

3. **Australian Wool Testing Authority Ltd – Test for Resistance to Dry Delamination. Test No. 16-006542 (dated 20/12/2016).** This report provides the results of testing to AS/NZS 4201.1-1994 and states the product obtained a “PASS” (Permicav XV™).
4. **Australian Wool Testing Authority Ltd – Test for Resistance to Shrinkage of Building Membranes and Underlays. Test No. 16-006546 (dated 12/01/2017).** This report provides the results of testing to AS/NZS 4201.3-1994 (Permicav XV™).
5. **Australian Wool Testing Authority Ltd – Test for Resistance to Water Penetration of Building Membranes and Underlays. Test No. 16-006539 (dated 21/12/2016).** This report provides the results of testing to AS/NZS 4201.4-1994 (Permicav XV™).
6. **Australian Wool Testing Authority Ltd – Pliable Building Membranes and underlays – Surface Water Absorbency. Test No. 16-006544 (dated 20/12/2016).** This report provides the results of testing to AS/NZS 4201.6-1994 (Permicav XV™).
7. **Australian Wool Testing Authority Ltd – Test for Water Vapour Transmission. Test No. 21-002020 (dated 05/05/2021).** This report provides the results of testing to ASTM E96-2016 (Permicav XV™).
8. **Australian Wool Testing Authority Ltd – Test for Flammability of Materials. Test No. 17-007342 (dated 08/01/2018).** This report provides the results of testing to AS 1530.2-1993 Part 2, and specifies the product obtained a Flammability Index of 1. (Permicav XV™).
9. **Kingspan Thermal Value Summary Report (Thermal Value Summary Report - 5.5mm – dated 02/08/2023) – (Permicav XV)** 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.
10. **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 (Permishield XV & Permicav XV™).
11. **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 on initial report ACA 160218 & ACA 160517.**
12. **OTM Solutions – Material Surface Emittance Test. Report No. OTM2203043 ‘Silver Foil’ - dated 16/03/2022** (SAC accreditation No. LA-2016-0610-G). This report provides the results to testing ASTM C1371-15 (Standard test method for determination of emittance of materials near room temperature using portable emissometers) as identified in AS/NZS 4859.1:2018, for Kingspan Air-Cell Insulbreak 55 (Silver Foil).
13. **OTM Solutions – Material Surface Emittance Test. Report No. OTM2303025 ‘Anti-Glare Foil’ - dated 29/03/2023** (SAC accreditation No. LA-2016-0610-G). This report provides the results to testing ASTM C1371-15 (Standard test method for determination of emittance of materials near room temperature using portable emissometers) as identified in AS/NZS 4859.1:2018, for Kingspan Air-Cell Insulbreak 55 (Anti-Glare Foil).
14. **Australian Wool Testing Authority Ltd – Determination of California Bearing Ratio (CBR) Plunger Method. Test No. 19-006039 (dated 22/10/2019).** This report provides the results of testing to AS3706.4-2012 (Permishield® XV 70).

15. **Australian Wool Testing Authority Ltd – Test for Edge Tearing Resistance of Building Membranes and Underlays. Test No. 19-006043 (dated 22/10/2019).** This report provides the results of testing to AS/NZS 4200.1-2017 (Permishield® XV 70).
16. **Australian Wool Testing Authority Ltd – Test for Resistance to Dry Delamination. Test No. 19-006042 (dated 22/10/2019).** This report provides the results of testing to AS/NZS 4201.1-1994 and states the product obtained a “PASS” (Permishield® XV 70).
17. **Australian Wool Testing Authority Ltd – Test for Resistance to Shrinkage of Building Membranes and Underlays. Test No. 19-006040 (dated 08/11/2019).** This report provides the results of testing to AS/NZS 4201.3-1994 (Permishield® XV 70).
18. **Australian Wool Testing Authority Ltd – Test for Resistance to Water Penetration of Building Membranes and Underlays. Test No. 20-000689 (dated 19/02/2020).** This report provides the results of testing to AS/NZS 4201.4-1994 (Permishield® XV 70).
19. **Australian Wool Testing Authority Ltd – Pliable Building Membranes and underlays – Surface Water Absorbency. Test No. 19-006037 (dated 22/10/2019).** This report provides the results of testing to AS/NZS 4201.6-1994 (Permishield® XV 70).
20. **Australian Wool Testing Authority Ltd – Test for Water Vapour Transmission. Test No. 20-000688 (dated 28/02/2020).** This report provides the results of testing to ASTM E96-2016 (Permishield® XV 70).
21. **Australian Wool Testing Authority Ltd – Test for Flammability of Materials. Test No. 20-004359 (dated 07/09/2020).** This report provides the results of testing to AS 1530.2-1993 Part 2, and specifies the product obtained a Flammability Index of 1. (Permishield® XV 70).
22. **Kingspan Thermal Value Summary Report (Thermal Value Summary Report – 7.2mm (dated 02/08/2023) – (Insulbreak 70 & Permishield® XV 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.*
23. **OTM Solutions – Material Surface Emittance Test. Report No. OTM2203041 ‘Silver Foil’ - dated 16/03/2022** (SAC accreditation No. LA-2016-0610-G). This report provides the results to testing ASTM C1371-15 (Standard test method for determination of emittance of materials near room temperature using portable emissometers) as identified in AS/NZS 4859.1:2018, for Kingspan Air-Cell Insulbreak / Insulshed / Permishield (Silver Foil).
24. **OTM Solutions – Material Surface Emittance Test. Report No. OTM2203035 ‘Anti-Glare Foil’ - dated 16/03/2022** (SAC accreditation No. LA-2016-0610-G). This report provides the results to testing ASTM C1371-15 (Standard test method for determination of emittance of materials near room temperature using portable emissometers) as identified in AS/NZS 4859.1:2018, for Kingspan Air-Cell Insulbreak / Insulshed / Permishield (Anti-Glare Foil).