

Thermoseal® Breather™ Class 4

Refer to product table below for applicable product codes covered by this document

Issue **C**

Product Type & Application

Thermoseal® Breather™ Class 4 is a Light Duty, perforated, single-sided reflective aluminium foil and polyweave laminate; bonded using a fire-retardant adhesive. This product is a Class 4 Vapour Permeable. This product is not a water barrier, and is suitable for use in masonry walls with a drained cavity.

Compliance with the NCC

For use in Australia, when correctly specified and installed, this product:

NCC 2022

- **Condensation Control** - Meets the requirements of NCC 2022 Volume 1 F8D3, ABCB Housing Provisions Standard 2022 10.8.1 for sarking-type materials through compliance with AS 4200.1.
- **Non- Combustible Sarking-Type Material Exemption** - This product may be used in accordance with the non-combustible sarking-type material exemption stated in NCC 2022 Volume 1 C2D10(6)(f) and NCC 2022 Volume 2 H3D2(1)(f) – it does not exceed 1mm in thickness and has a Flammability Index ≤5.
- **BAL and Fire Hazard Properties** - Where sarking is required by AS 3959 for construction of buildings in bushfire-prone regions BAL 12.5-FZ, this product meets the requirements of section 3.10. It also meets the fire hazard property requirements for sarking-type materials in all locations except exposed installations in fire control rooms or fire-isolated exits, in NCC 2022 Volume 1 S7C7. The product meets these requirements by having a flammability index ≤5.

NCC 2019

- **Condensation Control** - Meets the requirements of the NCC 2019 Volume 1 Amend. 1 F6.2(a), NCC 2019 Volume 2 Amend. 1 3.8.7.2(a) for sarking-type materials membranes through compliance with AS 4200.1.
- **Non- Combustible Sarking-Type Material Exemption** - This product may be used in accordance with the non-combustible sarking-type material exemption stated in NCC 2019 Volume 1 Amend. 1 C1.9(e)(vi) and Volume 2 Amend. 1 3.7.1.1(f) – it does not exceed 1mm in thickness and has a Flammability Index ≤5.
- **BAL and Fire Hazard Properties** - Where sarking is required by AS 3959 for construction of buildings in bushfire-prone regions BAL 12.5-FZ, this product meets the requirements of section 3.10. It also meets the fire hazard property requirements for sarking-type materials in all locations except exposed installations in fire control rooms or fire-isolated exits, in NCC 2019 Volume 1 Amend. 1 Specification C1.10. The product meets these requirements by having a flammability index ≤5.

Limitations of Use

- **IMPORTANT:** Do Not Modify This Product: Compliance with the evidence of suitability data referenced in this document is only achieved by the product or configuration listed in this PTS.
- This product is perforated and is not suitable for applications that require the control of air or water.
- Not recommended for use in tropical NCC Climate Zone 1.
- This product does not have a Group Number in accordance with AS ISO 9705 and AS 5637.1 (NCC 2019 Volume 1 Amend. 1 Specification C1.10 Clause 4, NCC 2022 Volume 1 S7C4) and is not suitable as an exposed internal wall and ceiling lining.
- This product is not designed to withstand prolonged exposure to the elements - accordingly, the exterior cladding should be installed within 6 weeks. Products exposed during this period should be inspected for damage and repaired or replaced prior to installation of the exterior cladding to comply with the Product Warranty. Products exposed for longer than the recommended periods will not be covered by the Product Warranty.
- Additional mechanical fasteners should be considered for products exposed to harsh weather conditions prior to cladding.
- Products exposed to harsh weather conditions prior to cladding should be inspected for damage and replaced or repaired to ensure compliance with the Product Warranty.
- Prior to cladding, it is good practice to protect this product from UV exposure and harsh weather conditions which may cause damage.
- This product is not suitable for submersion in water or continuous contact with soil.
- This foil facing product should not come into contact with wet concrete, or alkaline materials.

Evidence of Suitability

- Testing to AS 4200.1 across the following reports-
 - AWTa Report 24-002188 – *Resistance to Dry Delamination.*
 - AWTa Report 24-002188 – *Resistance to Wet Delamination.*
 - AWTa Report 24-002428 – *Moisture Shrinkage.*
 - Opal Report 29236 – *Folding Endurance.*
 - AWTa NATA Report 24-001631 – *Tensile Strength.*
 - AWTa NATA Report 24-002194 – *Edge Tearing.*
 - AWTa Report 24-004019 – *Emittance Classification.*
 - AWTa NATA Report 24-001631 – *Vapour Control Classification.*
 - AWTa NATA Report 24-002555 – *Flammability Classification.*
 - CSR Lab Report R-20078 – *Thickness.*

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Specific Design or Installation Instructions

- Isolate power before installation.
- **WARNING:** This product contains aluminium foil which conducts electricity. To avoid electrocution, care should be taken to ensure that this product or conductive fasteners used to secure this product, do not come into contact or close proximity with electrical wiring during installation or use.
- **Application Suitability** - Suitable for installation on the exterior side of the building frame in NCC Climate Zones 2 to 7, where the primary water control layer is provided by the cladding system, and is separated from the building's water sensitive materials by a drained cavity in accordance with AS 3700, AS 4773.1 and AS 4773.2 or NCC requirements – this product is not a water or air barrier. Always check cladding manufacturer's guidance to confirm compatibility and refer to the Condensation Risk Consideration section on this document for further guidance.
- Recommended for use on framed walls that provide membrane support at no greater than 600mm centres. Please refer to Enviroseal HTS or HTS-IT Product Technical Statement for applications having support exceeding 600mm centres.
- This product should be installed with the non-reflective side facing outward.
- Always follow the installation instructions in AS 4200.2, and those available on the Bradford website. For inclusion in BAL (Bushfire Attack Level) classified buildings, additionally adhere to the installation requirements of AS 3959.
- Reflective R-values achieved by the product rely upon adjacent air spaces and will vary depending upon the design and installation. Refer to AS/NZS 4859.2.
- The product should not be dragged over the building structure during installation.
- **Condensation Risk Consideration:** As there are many factors which can influence condensation risk it is highly recommended that designers undertake a hygrothermal analysis of the building design to further reduce condensation risk.

For general installation guidance refer to the product installation guide at Bradfordinsulation.com.au

Conditions of Storage & Maintenance

- Store in the original packaging in a cool, dry area, away from UV light (direct sunlight).
- Do not pressure clean or use mineral based cleaners on this product.

Refer to the product SDS at Bradfordinsulation.com.au for more information.

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Applicable Product Codes

WIDTH (mm)	LENGTH (m)	m ² PER ROLL	WEIGHT (kg)	PRODUCT CODE
1350	30	40.5	4.05	486520
1350	60	81	8.08	486521
1500	30	45	4.50	488931

Additional Product Data - AS 4200.1

Duty Classification (AS 4200.1)	Light Duty	
Tensile Strength (AS 1301.448s and AS 4200.1)	≥ 7.5 kN/m	Machine Direction
	≥ 4.5 kN/m	Lateral Direction
Edge Tear Resistance (TAPPI T470 and AS 4200.1)	≥ 45 N	Machine Direction
	≥ 45 N	Lateral Direction
Folding Endurance (AS 1301.423 and AS 4200.1)	Pass	
Water Control Classification (AS/NZS 4201.4 and AS 4200.1)	Non-Water Barrier	
Vapour Control Classification (ASTM E96 and AS 4200.1)	Class 4 Vapour Permeable	
Air Control Classification (ISO 5636-5 and AS 4200.1)	Non-Air Barrier	
Emittance Classification (AS/NZS 4201.5 and AS 4200.1)	Reflective, ≤ 0.05	Inward Facing
	Non-Reflective, > 0.15	Outward Facing
Flammability Index (AS 1530.2 and AS 4200.1)	≤ 5 (Low)	
Electrical Conductivity (AS/NZS 3100 Mod. and AS 4200.1)	Conductive	
Resistance to Dry Delamination (AS/NZS 4201.1)	Pass	
Resistance to Wet Delamination (AS/NZS 4201.2)	Pass	
Moisture Shrinkage (AS/NZS 4201.3 and AS 4200.1)	≤ 0.5 %	
Thickness	< 1.0 mm	