Bradford™

Product Technical Statement

Thermoseal® Wall Breather™

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

Product Type & Application

Thermoseal® Wall Breather™ is a Light Duty, perforated, single-sided reflective aluminium foil and polyweave laminate; bonded using a fire-retardant adhesive. This product is a Class 2 Vapour Barrier. This product is not a water barrier.

Compliance with the NCC

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

NCC 2022

- **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

- **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.

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 SUIS/MSDS at Bradfordinsulation.com.au for more information.

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, vapour or water.
- This product is not intended for use as a roof sarking.
- 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 suitable where a vapour permeable, pliable building membrane is specified for use in climate zones 6 to 8 in NCC 2019 Volume 1 Amend. 1 F6.2(a), and NCC 2019 Volume 2 Amend. 1 3.8.7.2(a), in climate zones 4-8 in NCC 2022 F8D3, ABCB Housing Provisions Standard 2022 10.8.1; or where the cladding manufacturer specifies a vapour permeable membrane.
- This 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.

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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.
- When installed for vapour control, this product should be sealed at overlaps (minimum 50mm), end laps, discontinuities and penetrations by suitable means such as heat and moisture resistant adhesive tape.
- **Application Suitability** - Suitable for installation on the exterior side of the building frame in NCC 2019 Climate Zones 2 to 6, and NCC 2022 Climate Zones 1-3 in applications 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 – 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.
- This product should be installed with the semi-reflective or antiglare 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:** This product is classified as a vapour barrier and is recommended to be positioned on the warm side of the construction to reduce the risk of condensation entrapment within the structure. As there are many factors which can influence condensation risk it is highly recommended that designers undertake a hygrothermal analysis to further reduce condensation risk. If in doubt consider using a Class 4 Bradford Enviroseal vapour permeable product on the cold side of the construction.

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

Evidence of Suitability

- Testing to AS 4200.1 across the following reports-
  - AWTA Report 18-000276 – *Resistance to Dry Delamination.*
  - AWTA Report 18-000275 – *Resistance to Wet Delamination.*
  - AWTA Report 18-000274 – *Moisture Shrinkage.*
  - Orora Report 24133 – *Folding Endurance.*
  - AWTA NATA Report 16-005484 – *Tensile Strength.*
  - AWTA NATA Report 18-000277 – *Edge Tearing.*
  - R&D Services Report RD16659 – *Emittance Classification.*
  - R&D Services Report RD18258-R2 – *Vapour Control Classification.*
  - CSR Lab NATA Report NR-16210 – *Flammability Classification.*
  - CSR Lab Report R-20078 – *Thickness.*

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Applicable Product Codes

WIDTH (mm)	LENGTH (m)	m^2 PER ROLL	WEIGHT (kg)	PRODUCT CODE
1350	30	40.5	6.64	101254
1350	60	81	13.02	15123
1500	30	45	7.35	154446

Additional Product Data - AS 4200.1

Duty Classification (AS/NZS 4200.1)	Light Duty	
Tensile Strength (AS/NZS 4200.1 and AS 1301.448s)	≥ 7.5 kN/m	Machine Direction
	≥ 4.5 kN/m	Lateral Direction
Edge Tear Resistance (AS/NZS 4200.1 and TAPPI T470)	≥ 45 N	Machine Direction
	≥ 45 N	Lateral Direction
Water Control Classification (AS/NZS 4201.4)	Non-Water Barrier	
Vapour Control Classification (ASTM E96)	Class 2 Vapour Barrier	
Emittance Classification (AS/NZS 4200.1 and AS/NZS 4201.5)	Reflective, ≤ 0.05	Inward Facing
	Non-Reflective, > 0.15	Outward Facing
Flammability Index (AS 1530.2)	≤ 5 (Low)	
Electrical Conductivity	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)	≤ 0.5 %	
Thickness	< 1.0 mm	

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For further technical advice
call **1300 850 305** or visit **csrbradford.com.au**