

Enviroseal® Tuff™

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

Issue **B**

Product Type & Application

Enviroseal® Tuff™ is an Enviroseal Class 4 vapour permeable weather resistive barrier (WRB). It is an air and water barrier pliable building membrane designed for use in roof & wall applications. It is rated as Medium Duty and is constructed from a non-reflective, electrically non-conductive spun bond material with reinforcement scrim.

Compliance with the NCC

For use in Australia, when correctly specified and installed, this pliable building membrane:

NCC 2022

- **Material Performance Properties** - Meets the requirements of the NCC 2022 Volume 1 Amend. 2 F3D3 for sarking-type material through compliance with AS 4200.1.
- **Condensation Control** - Meets the requirements of NCC 2022 Volume 1 Amend. 2 F8D3, ABCB Housing Provisions Standard 2022 Amend. 2 10.8.1 for pliable building 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 2022 Volume 1 Amend. 2 C2D10(6)(f) and NCC 2022 Volume 2 Amend. 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 Amend. 2 S7C7. The product meets these requirements by having a flammability index ≤5.

NCC 2019

- **Material Performance Properties** - Meets the requirements of the NCC 2019 Volume 1 Amend. 1 F1.6 for sarking-type material through compliance with AS 4200.1.
- **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 pliable building 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.

Compliance with the NCC cont.

NCC 2019 cont.

- **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.

Evidence of Suitability

- Testing to AS/NZS 4200.1 across the following reports-
 - AWT Report 24-002243 – Resistance to Dry Delamination.
 - AWT Report 24-002243 – Resistance to Wet Delamination.
 - AWT Report 24-002243 – Moisture Shrinkage.
 - Opal Report 29236 – Folding Endurance.
 - AWT NATA Report 24-002100 – Tensile Strength.
 - AWT NATA Report 24-002243 – Edge Tearing.
 - AWT Report 24-002243 – Electrical Conductivity.
 - AWT NATA Report 24-002243 – Vapour Control Classification.
 - AWT Report 24-002243 – Water Control Classification.
 - AWT NATA Report 24-002242 – Flammability Classification.
 - Opal Report 29236 – Air Control Classification.
 - AWT NATA Report 24-002243 – Thickness.

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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Specific Design or Installation Instructions

- Isolate power before installation.
- **Application Suitability:** Suitable for installation on the exterior side of the building frame of all construction types in NCC Climate Zones 2 to 8. Always check cladding manufacturer's guidance to confirm compatibility and refer to the Condensation Risk Consideration section on this document for further guidance.
- Where direct fix cladding and/or the profile of the cladding reduces drainage and drying, the incorporation of a cavity for drainage and drying is recommended.
- This product is suitable for brick veneer and lightweight cladding construction where the permeability Class is compatible with the wall cladding manufacturer's recommendation.
- Compatible for use with metal cladding, masonry, timber, slate, concrete and terracotta tiles.
- Recommended for use on framed walls, or roofs that are supported by safety mesh or rigid sheeting, unsupported tile roofs at ≤900mm spans, or unsupported metal roofs at ≤1200mm spans.
- Where this product is used with OSB, plywood or other supporting materials it is recommended that suitable ventilation is provided above or below the assembly to manage condensation risk.
- When installed from ridge to gutter, improved water control can be achieved by sealing overlaps between adjacent layers with suitable means such as heat and moisture resistant adhesive tape, with a minimum 50mm overlap.
- This product should be installed with up to 40mm sag between battens/rafters to reduce the risk of shrinkage.
- When installed for vapour and/or air 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.
- When installed for water control, this product must have overlaps of minimum 150mm, or 50mm and be taped on the exterior face.
- Improved water control at vertical joints can be achieved by sealing overlaps, end laps, discontinuities and penetrations by suitable means such as heat and moisture resistant adhesive tape with a minimum 50mm overlap.
- 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.
- To maintain the water barrier properties of the material it should not be punctured, creased, crushed, sharply folded or 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

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.
- **WARNING:** This product is not structural - Do not walk on this product or place/store building materials or equipment on this product.
- This product is not designed to withstand prolonged exposure to the elements - accordingly, the exterior cladding should be installed within 12 weeks in a wall application, or 2 weeks in a roof application. 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 does not provide a reflective R-value.
- This product has not been tested for pressure equalised façade applications.
- Not suitable for applications in Class 2-9 buildings with pressure equalised façades.
- Not suitable as a replacement for safety mesh or as a fall arrest system.
- This product should not come into contact with wet concrete, or alkaline materials.
- This product is not suitable for submersion in water or continuous contact with soil.
- 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 Amend. 2 S7C4) and is not suitable as an exposed internal wall and ceiling lining.

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Applicable Product Codes

PRODUCT NAME	WIDTH (mm)	LENGTH (m)	m ² PER ROLL	WEIGHT (kg)	PRODUCT CODE
Enviroseal Tuff	1500	30	45	8.8	487982

Additional Product Data - AS 4200.1

Duty Classification (AS 4200.1)	Medium Duty	
Tensile Strength (AS 1301.448s and AS 4200.1)	≥ 9.5 kN/m	Machine Direction
	≥ 6.0 kN/m	Lateral Direction
Edge Tear Resistance (TAPPI T470 and AS 4200.1)	≥ 65 N	Machine Direction
	≥ 65 N	Lateral Direction
Folding Endurance (AS 1301.423 and AS 4200.1)	Pass	
Water Control Classification (AS/NZS 4201.4 and AS 4200.1)	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)	Air Barrier	
Emittance Classification (AS/NZS 4201.5 and AS 4200.1)	Non-Reflective, 0.9	Inward Facing
	Non-Reflective, 0.9	Outward Facing
Flammability Index (AS 1530.2 and AS 4200.1)	≤ 5 (Low)	
Electrical Conductivity (AS/NZS 3100 Mod. and AS 4200.1)	Non-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	
Taping / Sealing	Bradford ULTRAtape is recommended for taping overlaps and joints.	