

## THERMO REFLECTIVE PRODUCTS

### PRODUCT DESCRIPTION

Polyair Unicell is classified under AS/NZS 4859.1:2002/Amdt.1 as a reflective insulation material (and sarking AS/NZS 4200.1/.2) and falls into the Group 1 category of section 9.2 of the standard. Polyair Unicell is manufactured with two external layers of extra strong reflective aluminium foils with the external layer coated in a special antiglare that can reflect up to 95% of the sun's radiant heat. Polyair Unicell incorporates a 4mm thick internal cell structure that provides an engineered air cavity within the product. This cell structure reduces heat transfer from the antiglare outer foil surface to the inner silver foil surface.

### SPECIFICATION TABLE


	THICKNESS (mm)	ROLL SIZE (m x mm)	m <sup>2</sup> PER ROLL (m <sup>2</sup> )	ROLL DIAMETER (mm)	ROLL WEIGHT (kg)	PRODUCT CODE
Unicell	4 (+/- 0.5)	40 x 1350	54	430	21	127418
Unicell - 1.5m wide	4 (+/- 0.5)	25 x 1500	37.5	370	15	130301
Unicell - Self Adhesive	4 (+/- 0.5)	40 x 1350	54	430	21	130304

### APPLICATIONS

Polyair Unicell can be used in a range of BCA classified buildings and in BAL effected regions. Ideal applications include steel roofing and steel wall cladding in class 7b warehouses, class 7b industrial sheds and class 8 work sheds. It can also be used in residential tiled roofs and within attic storage areas. For advice on the suitability of these products for your project contact the Bradford technical services team on 1300 850 305.

### INSTALLATION GUIDANCE

- Install with antiglare surface facing outwards.
- Sealing overlaps, penetrations and damaged areas with a reinforced aluminium foil tape (or approved self-adhesive strip) is recommended especially when aiming to achieve a consistent: stated thermal performance, seal against draughts, seal against vapour infiltration, seal against water entry into the building.
- Overlaps should be a minimum 50mm when a reinforced aluminium foil tape (or approved self-adhesive strip) is used.
- Overlaps should be a minimum of 150mm if no tape is used.
- Follow all relevant OHS and statutory regulations – eye protection from sun glare is recommended.



High grade  
radiant heat  
barriers

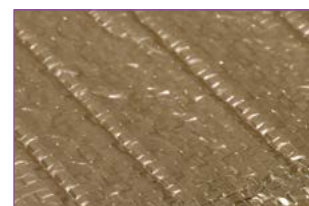
# Polyair Unicell – Thermo Reflective Products

## CLASSIFICATIONS

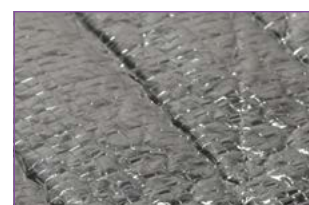
PROPERTY	REFERENCE	RESULT
Duty	Table 1 – AS/NZS 4200.1:1994	Extra heavy duty
Vapour Barrier	ASTM E96	Medium
Emittance	AS/NZS 4201.5:1994/ASTM E408	Double-sided reflective Antiglare Face E0.05 Silver Face E0.03
Material thermal resistance	ASTM C518	R <sub>m</sub> 0.1
Water Barrier	AS/NZS 4201.4:1994	High
Absorbency	AS/NZS 4201.6:1994	Unclassified
Shrinkage	AS/NZS 4201.3:1994	<0.5%
Resistance to dry delamination	AS/NZS 4201.1:1994	Pass
Resistance to wet delamination	AS/NZS 4201.2:1994	Pass
Surface corrosion	AS/NZS 4859.1:2002	Pass
Flammability index	AS 1530.2	Low (≤5)
Early fire hazard Indices	AS/NZS 1530.3	
Ignitability	AS/NZS 1530.3	0
Spread of flame	AS/NZS 1530.3	0
Heat evolved	AS/NZS 1530.3	0
Smoke developed	AS/NZS 1530.3	2



Unicell 54m<sup>2</sup> roll



Unicell exterior face



Unicell interior face

## TOTAL R-VALUE PERFORMANCE

Pitched Tiled Roof - attic cavity non-ventilated	Pitched Tiled Roof - attic cavity ventilated*
Heat flow in (summer) = R <sub>T</sub> 1.9	Heat flow in (summer) = R <sub>T</sub> 2.1
Heat flow out (winter) = R <sub>T</sub> 1.2	Heat flow out (winter) = R <sub>T</sub> 1.0

\*Ventilated attic space based on incorporating minimum 2x wind driven ventilators such as Edmonds WindMaster 300mm throat ventilator (total aggregate area 0.14m<sup>2</sup>) in conjunction with eave vents of not less than 0.2% of the plan ceiling area. Refer to explanation in the BCA 3.12.1.2(b)(ii). Pitched tiled roof system comprises of: tiled pitched roof 22.5°, 40mm airspace, Polyair Unicell (with moderate dust cover), attic cavity, 10mm plasterboard ceiling.

## TOTAL R-VALUE ASSUMPTIONS

The contribution of this product to a Total R-Value depends on the installation and environmental conditions. The Total R-Value will be reduced in the event of the accumulation of dust on upward facing surfaces and in those cavities that are ventilated.

Thermal calculations are based on Australian parameters and in accordance with AS/NZS 4859.1:2002/Amdt.1. The contribution of this product towards the Total R-Value depends on installation and environmental conditions. For upward facing surfaces of horizontal or sloping reflective insulation in non-vented cavities where no special precautions for prevention of dust ingress have been included, the Total R-Value is calculated based on an emittance for the case of slight dust cover in accordance with AS/NZS4859.1 Paragraph K3.2(a)(ii), unless otherwise stated. For calculation purposes, the air gaps are assumed as still parallel air gaps unless otherwise stated and the membrane continuous.

## SAFETY INSTRUCTIONS

Polyair is safe to handle, no protective clothing, gloves or mask is required. It is the responsibility of the installer to observe and comply with all relevant OHS and statutory regulations. Read electrical safety warning (below).

## ELECTRICAL SAFETY 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. This product should not be installed in an existing structure in a horizontal orientation such as a ceiling or sub-floor application due to the presence of electrical wiring in the framing.