

## THERMO REFLECTIVE PRODUCTS

### PRODUCT DESCRIPTION

Polyair Performa XHD 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 Performa XHD 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 Performa XHD incorporates a foam structure that reduces heat transfer from the antiglare outer foil surface to the inner silver foil surface. Polyair Performa XHD is available in 4mm and 8mm thicknesses.

### 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
Performa 4.0 XHD	4 (+/- 0.5)	22.25 x 1350	30	410	13	152161
Performa 4.0 XHD	4 (+/- 0.5)	40 x 1350	54	560	19	152429
Performa 8.0 XHD	8 (+/- 0.5)	22.25 x 1350	30	520	16	152472

### APPLICATIONS

Polyair Performa XHD can be used in a range of BCA classified buildings and in BAL effected regions. It can be used in a range of residential applications including tiled roofs, steel roofs, brick veneer walls and some light weight clad walls. 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.

### THERMAL BREAK

The BCA Volumes 1 and 2 outline the requirement to reduce thermal bridging of direct-fix claddings\* onto metal frames by installing a thermal break with an R-Value of not less than R<sub>m</sub> 0.2, positioned between the lightweight external cladding\* and the primary metal framing. Polyair Performa 8.0 XHD is a continuous reflective insulation material and achieves an uncompressed R-Value of R<sub>m</sub> 0.2 in accordance with AS/NZS4859.1, which is also a requirement of the BCA.

\*Cladding includes: metal sheeting, weatherboards, fibre-cement or similar

RADIANT  
HEAT BARRIER  
AND EXTRA  
HEAVY DUTY  
SARKING  
IN ONE

# Polyair Performa XHD – Thermo Reflective Products

## CLASSIFICATIONS

PROPERTY	REFERENCE	RESULT
Emittance	AS/NZS 4201.5:1994/ASTM E408	Double-sided reflective Antiglare (outer face) E0.05 Silver (inner face) E0.03
Material thermal resistance	ASTM C518 as part of AS/NZS 4859.1:2002/Amdt.1	R <sub>m</sub> 0.10 Performa 4.0 XHD R <sub>m</sub> 0.20 Performa 8.0 XHD
Duty	Table 1 – AS/NZS 4200.1:1994	Extra heavy duty
Vapour barrier	ASTM E96	Medium
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



## TOTAL R-VALUE PERFORMANCE WITH POLYAIR PERFORMA 4.0 XHD

PITCHED METAL ROOF (Attic cavity ventilated*)	PITCHED TILED ROOF (Attic cavity ventilated*)	BRICK VENEER WALL	LIGHTWEIGHT CLAD WALL	SHED ROOF
Heat flow in (summer) = R <sub>T</sub> 2.4	Heat flow in (summer) = R <sub>T</sub> 2.1	Heat flow in (summer) = R <sub>T</sub> 1.9	Heat flow in (summer) = R <sub>T</sub> 1.7	Heat flow in (summer) = R <sub>T</sub> 1.6
Heat flow out (winter) = R <sub>T</sub> 1.1	Heat flow out (winter) = R <sub>T</sub> 1.0	Heat flow out (winter) = R <sub>T</sub> 2.0	Heat flow out (winter) = R <sub>T</sub> 1.8	Heat flow out (winter) = R <sub>T</sub> 0.8

Total R-Value results are based on Polyair Performa 4.0 XHD. Add R0.1 to each result if using Polyair Performa 8.0 XHD.

Pitched metal roof system comprises of: metal roof 22.5°, 40mm airspace, Polyair Performa 4.0 XHD (with slight dust cover), ventilated airspace, 10mm plasterboard ceiling. Pitched tiled roof system comprises of: pitched roof 22.5°, 40mm airspace, Polyair Performa 4.0 XHD (with moderate dust cover), ventilated airspace, 10mm plasterboard ceiling. Brick veneer wall system comprises of: 110mm brick, 35mm airspace, Polyair Performa 4.0 XHD, 90mm airspace, 10mm plasterboard. Lightweight clad wall system comprises of: lightweight cladding, 35mm airspace, Polyair Performa 4.0 XHD, 90mm airspace, 10mm plasterboard. Shed metal roof comprises of: metal roof 11°, 40mm airspace, Polyair Performa 4.0 XHD (with slight dust cover).

\*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).

## 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.



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