

AIR-CELL Retrosshield®

Product Description

Kingspan AIR-CELL Retrosshield® (IP Australia Patent No. 784982 & Pending Australian Patent Application No. 2010201133) has been developed with a unique reflective anti-tear surface, as both a vapour barrier and a high performance insulation. **Kingspan AIR-CELL®** products are designed to combat heat gain and heat loss in all three forms (radiation, convection and conduction), resulting in thermal performance superior to many conventional insulations. Most importantly, **Kingspan AIR-CELL Retrosshield®** is non-allergenic, non-irritant and has none of the health and safety warnings associated with using many conventional bulk insulations.

Product Data	
Reflectance	97%
Emittance	E0.03
Roll Size	1350 mm x 22.25 m (30 m ²)
Roll Diameter	440 mm
Product Thickness	7 mm
Roll Weight	11 kg
Duty	Extra Heavy
Max span	2.4 m without support mesh
Material R-value	R0.14

Thermal Performance

Application	Heat Flow In	Heat Flow Out
Residential Ceiling	R _T 3.2	R _T 1.5
Concrete Panel Wall	R _T 1.8	R _T 2.0
Commercial Warehouse Roof	R _T 2.1	R _T 0.9

The R-values shown are Total R-values for the building element as required by the Energy Provisions of the Building Code of Australia. Kingspan AIR-CELL® products are manufactured, tested and packaged in conformance with AS/NZS 4859.1:2002 - Amdt 1. The contribution of the product Total R-values depends on installation and environmental conditions. The R-value will be reduced in the event of the accumulation of dust on the upward facing surfaces and in those cavities that are ventilated.

Product Testing

Test	Test Method	Result
Corrosion Resistance	AS/NZS 4859.1 Appendix 1	Pass
Flammability	AS 1530.2	Low (Index ≤ 5)
Ignitability		
Flame Spread	AS 1530.3	0/0/0/0-1
Heat Release		
Smoke Release		
Cone Calorimeter	AS/NZS 3837	Group 1
Thermal Resistance	ASTMC518	R0.14
Emittance	ASTM-E408	E0.03
Vapour Transmission	ASTM-E96	Medium
Dry Delamination	AS/NZS 4201.1	Pass
Wet Delamination	AS/NZS 4201.2	Pass
Shrinkage	AS/NZS 4201.3	≤ 0.5%
Water Penetration	AS/NZS 4201.4	High Resistance
Water Absorbency	AS/NZS 4201.6	Unclassified
Edge Tear	AS 4200.1 6.1.3	Lateral 551N Machine 514N
Duty	AS 4200.1 6.1.4	Extra Heavy
Burst Force	AS 3706.4	1400N
Impact Resistance	AS/NZS 4040.4 (Modified)	Pass
Acoustics	Bassett Acoustics Report MA0221j02	6db (A) noise reduction

