



# Retroshield®

clean | safe | fibre-free

## Benefits

- **Advanced thermal performance**  
Helps achieve a 5 star house energy rating.
- **Three products in one**  
AIR-CELL® provides a protective vapour barrier, insulation barrier and radiant barrier all in one.
- **Fibre-free, non-allergenic, and non-irritant**  
Non-asthmatic and poses no health and safety risks.
- **Quick and easy to install**  
Saves time and helps reduce labour costs compared to conventional bulk insulation.
- **Tough, strong, durable**  
Hail resistant, unique anti-tear surface material.
- **Waterproof and unaffected by moisture**  
Ideal in humid climates and protects against water damage.
- **Anti-bacterial and anti-fungal**  
As a clean, sterile surface, Retroshield® will not promote the growth of fungi and bacteria.
- **Rodent and insect resistant**  
Does not provide a nesting medium for rodents and insects.
- **Australian Standard Compliant**  
CodeMark certified to comply with the BCA and Australian Standard AS/NZS 4859.1:2002.

AIR-CELL Retroshield® (IP Australia Patent Pending No. 38983/01) has been developed with a unique reflective anti-tear surface, as both a vapour barrier and a high performance insulation. 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, AIR-CELL Retroshield® is non-allergenic, non-irritant and has none of the health and safety warnings associated with using many conventional bulk insulations.

### Product Specifications

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

### Product Testing

Thermal Performance	AS/NZS 4859.1
Surface Corrosion Resistance	AS/NZS 4859.1 Appendix I
Thermal Resistance	ASTMC518
Emittance	ASTM-E408
Flammability	AS 1530.2 (Index ≤ 5)
Ignitability	AS 1530.3
Flame Spread	AS 1530.3
Heat Evolved	AS 1530.3
Smoke Developed	AS 1530.3
Cone Calorimeter	AS/NZS 3837:1998
Vapour Transmission	ASTM-E96-1995
Edge Tear	AS/NZS 4200.1:1994 6.1.3
Duty	AS/NZS 4200.1:1994 6.1.4
Dry Delamination	AS/NZS 4201.1 Method 1
Wet Delamination	AS/NZS 4201.1 Method 2
Shrinkage	AS/NZS 4201.3 Method 3
Water Barrier	AS/NZS 4201.4:1994
Burst Force	AS 3706.4:1990
Impact Resistance	AS/NZS 4040.4:1996 (Modified)
Acoustics	6db (A) as tested for roof applications

### Thermal Performance

Application	Heat flow: In	Out
Residential Ceiling	R <sub>T</sub> 3.2	R <sub>T</sub> 1.5
Concrete Panel Wall	R <sub>T</sub> 1.8	R <sub>T</sub> 2.0
Commercial Warehouse Roof	R <sub>T</sub> 2.1	R <sub>T</sub> 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. 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.

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