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 Drg. No. N/A

**Thermal Performance Computation**

This document verifies the Total Thermal Performance R-value ( $R_T$ ) of the building profile detailed below. These R-values have been generated from computations using the internationally industry recognised scientific data of Robinson and Powlitch, appropriate AS/NZS Standards including AS/NZS 4859.1:2002 and to the standard industry assumptions as published by the Aluminium Foil Insulation Association of Australia in October 2004[1].

These performance computation R-values are indicative for idealised construction, ignoring thermal bridging, and assume expected in-service conditions with respect to dust cover on upward facing surfaces.

**Application profile:** Benex Block wall with Air-Cell™ RETROSHIELD® and Plasterboard.

Profile	Orientation	Emittance	R-Value (m <sup>2</sup> .K/W)
Outside Air Film	Any Position	Any	2.5
Benex Block wall			
25mm air space	Vertical	0.03/0.90	
Air-Cell™ RETROSHIELD®			
28mm air space	Vertical	0.03/0.90	
Plasterboard - 13mm			
Air-film still air	Any Position	Any	
Overall Heat Transfer Coefficient (U)			0.40

R-Values are calculated in accordance with AS/NZS 4859.1:2002 and are Total R-values indicative for the conditions specified and expressed in terms of m<sup>2</sup>.K/W.

Notes: Indoor temperature 18.0 °C  
 Outdoor temperature 12.0 °C  
 Temperature difference -6.0 K

This Calculation is valid for Air-Cell™ Products only

[1] De-Rating recommendations for Reflective Aluminium Insulations as a Result of Dust accumulation - Prof R Aynsley 2003

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