



**Calculated R-Values for a Reflective Insulation System  
Produced by Prodex Corporation**

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The following calculations are based in part on thermal data for plane reflective air spaces published in 1956 by the U.S. National Bureau of Standards [1]. R-value calculations were performed using a computer program "REFLEC.FOR" [2].

**Conditions**

Heat flow direction is down.

Overall thickness is 88.9 mm divided into two regions by a 5 mm thick reflective insulation.

Temperature difference across the assembly is 30 F ( 16.7 C ).

Average temperature is 75 °F (23.9 °C).

Material thermal resistivity of 3.6 ft<sup>2</sup>•h•°F/Btu. (assumed)

Foil surface emittance is 0.03. (assumed)

**Calculated Results**

R-value for 5-mm-thick reflective insulation 0.71 ft<sup>2</sup>•h•°F/Btu

R-value for two 42-mm- wide reflective air spaces for heat flow down

Total

Rounded value 14.5 ft<sup>2</sup>•h•°F/Btu

Measured R-values should be used when available. These results are for heat-flow down.

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