



R-Values: Applications & Air Space Requirements



1. Do-it-Yourself & Residential Applications (HVAC)

For any applications claiming R-Values, reflective insulations **MUST** face at least one open airspace cavity, or be installed within an enclosed air space (without free air flow).
The charts below outlines various Air Space Requirements by application, the location of the airspace(s) needed to achieve the R-Values shown. and specific rFOIL™ products recommended for each application,

Application	R-Value / Benefit	rFOIL™ Products	Required Air Space(s)	Installation Specifics
Attic	Radiant Barrier	NT Radiant Barrier® (4800 Series)	Attic Air Space	Installed on Bottom of Rafters, or Directly to Inside of Roof Deck
Cathedral Ceiling (Above Mass Insulation)	R-6 (Summer) R-2 (Winter)	2200 Series (Double-Sided Reflective Insulation)	0.75"	Underside of Decking
Cathedral Ceiling (Above Mass Insulation)	Radiant Barrier	NT Radiant Barrier® (4800 Series)	0.75"	Underside of Decking
Cathedral Ceiling (Below Mass Insulation)	R-7 (Summer) R-1 (Winter)	2200 Series (Double-Sided Reflective Insulation)	0.75"	Underside/Base of Rafter
Concrete Slab	R-1.1	Concrete UnderPad® (4320/4620 Series) (Double-Sided Reflective Insulation)	Airspace Within Product (Bubble Structure)	Directly Beneath Concrete Slab
Concrete Slab	R-3.8	Ultra CBF® - Concrete Barrier Foil (Double-Sided Reflective Insulation)	Airspace Within Product (Bubble Structure)	Directly Beneath Concrete Slab
Crawl Space (R-17)	R-17	2220 or 2290 Series (Double-Sided Reflective Insulation)	9.5" Floor (Min.) Joist Cavity	Installed to Underside of Joist
Crawl Space (R-21)	R-21	2220 or 2290 Series (Double-Sided Reflective Insulation)	Two Air Spaces at 4.75" each - Split within 9.5" (Min.) Joist Cavity	Insulation Centered Within 9.5" Cavity (Splitting Airspace)
Garage Door	R-3	2200 Series (Double-Sided Reflective Insulation)	Attach to Interior Side of Door	3/8" Spacer Between Garage Door and Insulation
House Wrap (Behind Brick)	R-3.4	Reflective House Wrap (4800 Series)	0.5" Behind Brick	Attach on Inside of Exterior Panel
House Wrap (Behind Siding)	R-2.5	Reflective House Wrap (4800 Series)	0.25" Behind Siding	Attach on Inside of Exterior Panel
Knee Wall (R-16)	R-16 (w / R-13 Batt)	2200 Series (Double-Sided Reflective Insulation)	Back of Knee Wall	Attach to Back (Attic Side) of Knee Wall Studs
Knee Wall (R-19)	R-19 (w / R-13 Batt)	2200 Series (Double-Sided Reflective Insulation)	Back of Knee Wall and 0.75" Air Space from Furring	Attach to 1" x 2" Furring (Added to Attic Side of Knee Wall Studs)
Wall - Exterior 2"x 4" Framing	R-14.4 (w / R-13 Batt)	2200 Series (Double-Sided Reflective Insulation)	0.75" - Within Wall Cavity (Offset from Interior Wall)	Installed Between Studs and Offset 0.75" Behind Interior Wall
Wall - Exterior 2"x 6" Framing	R-21 (w / R-19 Batt)	2200 Series (Double-Sided Reflective Insulation)	0.75" - Within Wall Cavity (Offset from Interior Wall)	Installed Between Studs and Offset 0.75" Behind Interior Wall
Wall - Masonry	R-3.7	2200 Series (Double-Sided Reflective Insulation)	0.75" - 1"x 2" nominal Furring	Attach to Masonry Wall, Behind 1" x 2" furring strips
Wall - Masonry	R-4.2	2200 Series (Double-Sided Reflective Insulation)	0.75" - 1"x 2" nominal Furring	Attach to Masonry Wall, Behind 2" x 2" furring strips
Wall - Masonry	R-6.1	2200 Series (Double-Sided Reflective Insulation)	Two Air Spaces at 0.75" each (split within 2" x 2" nominal furring)	Attach to Masonry Wall, Behind 2" x 2" furring strips