



R-Values: Applications & Air Space Requirements



3. Metal Building Applications

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 outline 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,

Post-Frame Applications (White-Faced Reflective Insulation)

Application	R-Value / Benefit	rFOIL™ Products	Required Air Space(s)	Installation Specifics
Roof-New (Bottom of Purlin)	R-6.4 Down R-4.3 Up	2500 or 2600 Series (White-Faced Reflective Insulation)	1.5" Above / Open Below	Installed Above Truss / Below Purlin
Roof-New (Above Purlin)	R-3.8 Down R-3.5 Up	2500 or 2600 Series (White-Faced Reflective Insulation)	0.75" (Nominal) Above / Open Below	Installed Between Roof and Purlin
Roof-Retrofit (Bottom of Truss)	R-6.6 Down R-3.0 Up	2500 or 2600 Series (White-Faced Reflective Insulation)	10" or More Above / Open Below	Attached to Bottom of Truss
Roof-Retrofit (Bottom of Purlin)	R-6.4 Down R-4.3 Up	2500 or 2600 Series (White-Faced Reflective Insulation)	1.5" Above / Open Below	Attached to Bottom of Purlin
Wall-New (Inside of Girt)	R-4.3	2500 or 2600 Series (White-Faced Reflective Insulation)	1.5" Outside / Open Inside	Attached to Inside of Girt
Wall-New (Outside of Girt)	R-3.7	2500 or 2600 Series (White-Faced Reflective Insulation)	0.75" (Nominal) Outside / Open Inside	Installed Between Exterior Wall and Girt
Wall-Retrofit (Inside of Girt)	R-4.2	2500 or 2600 Series (White-Faced Reflective Insulation)	1.5" Outside / Open Inside	Attached to Inside of Girt

Metal Building Applications (White-Faced Reflective Insulation)

Application	R-Value / Benefit	rFOIL™ Products	Required Air Space(s)	Installation Specifics
Roof-New (with Furring)	R-6.6 Down R-3.4 Up	2500 or 2600 Series (White-Faced Reflective Insulation)	0.75" Above / Open Below	0.75" Thermal Break Between Roof and Purlin
Roof-New (without Furring)	R-4.0 Down R-3.2 Up	2500 or 2600 Series (White-Faced Reflective Insulation)	0.75" (Nominal) Above / Open Below	Installed Between Roof and Purlin
Roof-Retrofit (Under Purlin)	R-7.5 Down R-3.6 Up	2500 or 2600 Series (White-Faced Reflective Insulation)	8.75" Above / Open Below	Attached Below Purlin and 8.75" Below Roof
Wall-New (with Furring)	R-4.6	2500 or 2600 Series (White-Faced Reflective Insulation)	0.75" Outside / Open Inside	0.75" Thermal Break Between Exterior Wall and Purlin
Wall-New (without Furring)	R-3.7	2500 or 2600 Series (White-Faced Reflective Insulation)	0.75" (Nominal) Outside / Open Inside	Installed Between Exterior Wall and Girt
Wall-Retrofit (Inside of Girt)	R-3.5	2500 or 2600 Series (White-Faced Reflective Insulation)	8.75" Outside / Open Inside	Attached to 1"x 2" (nominal) Furring Inside Girt