

R-Value Table
Common Building Materials

| | resistivity (r) (per inch thickness) | Resistance(R) (for given matl.) |
|---|---|------------------------------------|
| | °F ft ² h/BTU-in | °F ft ² h/BTU |
| Insulation Materials | | |
| Fiberglass Batt | 3.14-4.30 | |
| Fiberglass Blown (attic) | 2.20-4.30 | |
| Fiberglass Blown (wall) | 3.70-4.30 | |
| Rock Wool Batt | 3.14-4.00 | |
| Rock Wool Blown (attic) | 3.10-4.00 | |
| Rock Wool Blown (wall) | 3.10-4.00 | |
| Cellulose Blown (attic) | 3.13 | |
| Cellulose Blown (wall) | 3.70 | |
| Vermiculite | 2.13 | |
| Autoclaved Aerated Concrete | 1.05 | |
| Urea Terpolymer Foam | 4.48 | |
| Rigid Fiberglass (> 4lb/ft ³) | 4.00 | |
| Expanded Polystyrene (beadboard) | 4.00 | |
| Extruded Polystyrene | 5.00 | |
| Polyurethane (foamed-in-place) | 6.25 | |
| Polyisocyanurate (foil-faced) | 7.20 | |
| Construction Materials | | |
| Concrete Block 4" | | 0.80 |
| Concrete Block 8" | | 1.11 |
| Concrete Block 12" | | 1.28 |
| Brick 4" common | | 0.80 |
| Brick 4" face | | 0.44 |
| Poured Concrete | 0.08 | |
| Soft Wood Lumber | 1.25 | |
| 2" nominal (1 1/2") | | 1.88 |
| 2x4 (3 1/2") | | 4.38 |
| 2x6 (5 1/2") | | 6.88 |
| Cedar Logs and Lumber | 1.33 | |
| Sheathing Materials | | |
| Plywood | 1.25 | |
| 1/4" | | 0.31 |
| 3/8" | | 0.47 |
| 1/2" | | 0.63 |
| 5/8" | | 0.77 |
| 3/4" | | 0.94 |
| Fiberboard | 2.64 | |
| 1/2" | | 1.32 |
| 25/32" | | 2.06 |
| Fiberglass (3/4") | | 3.00 |
| (1") | | 4.00 |
| (1 1/2") | | 6.00 |
| Extruded Polystyrene (3/4") | | 3.75 |
| (1") | | 5.00 |
| (1 1/2") | | 7.50 |
| Foil-faced Polyisocyanurate | | |
| (3/4") | | 5.40 |
| (1") | | 7.20 |
| (1 1/2") | | 10.80 |

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| Siding Materials | |
|---|-------|
| Hardboard (1/2") | 0.34 |
| Plywood (5/8") | 0.77 |
| (3/4") | 0.93 |
| Wood Bevel Lapped | 0.80 |
| Aluminum, Steel, Vinyl (hollow backed) | 0.61 |
| (w/ 1/2" Insulating board) | 1.80 |
| Brick 4" | 0.44 |
| Interior Finish Materials | |
| Gypsum Board (drywall 1/2") | 0.45 |
| (5/8") | 0.56 |
| Paneling (3/8") | 0.47 |
| Flooring Materials | |
| Plywood | 1.25 |
| (3/4") | 0.93 |
| Particle Board (underlayment) | 1.31 |
| (5/8") | 0.82 |
| Hardwood Flooring | 0.91 |
| (3/4") | 0.68 |
| Tile, Linoleum | 0.05 |
| Carpet (fibrous pad) | 2.08 |
| (rubber pad) | 1.23 |
| Roofing Materials | |
| Asphalt Shingles | 0.44 |
| Wood Shingles | 0.97 |
| Windows | |
| Single Glass | 0.91 |
| w/storm | 2.00 |
| Double insulating glass | |
| (3/16") air space | 1.61 |
| (1/4" air space) | 1.69 |
| (1/2" air space) | 2.04 |
| (3/4" air space) | 2.38 |
| (1/2" w/ Low-E 0.20) | 3.13 |
| (w/ suspended film) | 2.77 |
| (w/ 2 suspended films) | 3.85 |
| (w/ suspended film and low-E) | 4.05 |
| Triple insulating glass | |
| (1/4" air spaces) | 2.56 |
| (1/2" air spaces) | 3.23 |
| Addition for tight fitting drapes or shades, or closed blinds | 0.29 |
| Doors | |
| Wood Hollow Core Flush | |
| (1 3/4") | 2.17 |
| Solid Core Flush (1 3/4") | 3.03 |
| Solid Core Flush (2 1/4") | 3.70 |
| Panel Door w/ 7/16" Panels | |
| (1 3/4") | 1.85 |
| Storm Door (wood 50% glass) | 1.25 |
| (metal) | 1.00 |
| Metal Insulating | |
| (2" w/ urethane) | 15.00 |

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| Air Films | |
|--------------------------|------|
| Interior Ceiling | 0.61 |
| Interior Wall | 0.68 |
| Exterior | 0.17 |
| Air Spaces | |
| 1/2" to 4" approximately | 1.00 |