

Table R402.1.3.1

MD Alternative Insulation Minimum R-Values and Fenestration Requirements by Component^a

Climate Zone	Fenestration U-Factor ^{b,1}	Skylight ^b U-Factor	Glazed Fenestration SHGC ^{b,c}	Ceiling R-Value	Wood Frame Wall R-Value ^e	Mass Wall R-Value ^h	Floor R-Value	Basement ^{f, g} Wall R-Value	Slab ^d R-Value & Depth	Crawl Space ^{2, B} Wall R-Value
4 except Marine	0.30	0.55	0.40	49	20 or 13+5 ^h	8/13	19	10ci or 13	10ci, 4ft	10ci or 13
5	0.30 ¹	0.55	0.40	49	20 or 13+5 ^h	13/17	30	15ci or 19 or 13 + 5ci	10ci, 4ft	15ci or 19 Or 13 + 5ci

For SI: 1 foot = 304.8 mm.

ci = continuous insulation.

^a R-values are minimums, U-factors and SHGC are maximums. Where insulation is installed in a cavity that is less than the label or design thickness of the insulation, the installed R-value of the insulation shall be not less than the R-value specified in the table.

^b The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestrations. Exception: In Climate Zones 0 through 3, skylights shall be permitted to be excluded from glazed fenestration SHGC requirements provided that the SHGC for such skylights does not exceed 0.30.

^c "10ci or 13" means R-10 continuous insulation (ci) on the interior or exterior surface of the wall or R-13 cavity insulation on the interior side of the wall. "15ci or 19 or 13 & 5ci" means R-15 continuous insulation (ci) on the interior or exterior surface of the wall; or R-19 cavity insulation on the interior side of the wall; or R-13 cavity insulation on the interior of the wall in addition to R-5 continuous insulation on the interior or exterior surface of the wall.

^d R-5 insulation shall be provided under the full slab area of a heated slab in addition to the required slab edge insulation R-value for slabs, as indicated in the table.

The slab-edge insulation for heated slabs shall not be required to extend below the slab.

^e There are no SHGC requirements in the Marine Zone.

^f Basement wall insulation is not required in Warm Humid locations as defined by Figure R301.1 and Table R301.1.

^g The first value is cavity insulation; the second value is continuous insulation. Therefore, as an example, "13 & 5" means R-13 cavity insulation plus R-5 continuous insulation.

^h Mass walls shall be in accordance with Section R402.2.5. The second R-value applies where more than half of the insulation is on the interior of the mass wall.

¹ A maximum U-factor of 0.32 shall apply in Climate Zones 3 through 8 to vertical fenestration products installed in buildings located either:

¹ Above 4,000 feet in elevation, or

² In windborne debris regions where protection of openings is required by Section R301.2.1.2 of the International Residential Code.