

**TABLE N1102.1.2 (R402.1.2) INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT<sup>a</sup>**

| CLIMATE ZONE    | FENESTRATION U-FACTOR <sup>b</sup> | SKYLIGHT <sup>b</sup> U-FACTOR | GLAZED FENESTRATION SHGC <sup>b,e</sup> | CEILING R-VALUE | WOOD FRAME WALL R-VALUE  | MASS WALL R-VALUE <sup>f</sup> | FLOOR R-VALUE | BASEMENT <sup>g</sup> WALL R-VALUE | SLAB <sup>d</sup> R-VALUE & DEPTH | CRAWL SPACE <sup>h</sup> WALL R-VALUE |
|-----------------|------------------------------------|--------------------------------|---|-----------------|--|--------------------------------|---------------|------------------------------------|-----------------------------------|---------------------------------------|
| 1               | NR                                 | 0.75                           | 0.25                                    | 30              | 13   | 3/4                            | 13            | 0                                  | 0                                 | 0                                     |
| 2               | 0.40                               | 0.65                           | 0.25                                    | 38              | 13   | 4/6                            | 13            | 0                                  | 0                                 | 0                                     |
| 3               | 0.35                               | 0.55                           | 0.25                                    | 38              | 20 or 13 + 5 <sup>h</sup>  | 8/13                           | 19            | 5/13 <sup>f</sup>                  | 0                                 | 5/13                                  |
| 4 except Marine | 0.35                               | 0.55                           | 0.40                                    | 49              | 20 or 13 + 5 <sup>h</sup>  | 8/13                           | 19            | 10/13                              | 10.2 ft                           | 10/13                                 |
| 5 and Marine 4  | 0.32                               | 0.55                           | NR                                      | 49              | 20 or 13 + 5 <sup>h</sup>  | 13/17                          | 309           | 15/19                              | 10.2 ft                           | 15/19                                 |
| 6<br>7 and 8    | 0.32<br>0.32                       | 0.55<br>0.55                   | NR<br>NR                                | 49<br>49        | 20 + 5 or 13 + 10 <sup>h</sup><br>20 + 5 or 13 + 10 <sup>h</sup> | 15/20<br>19/21                 | 309<br>389    | 15/19<br>15/19                     | 10.4 ft<br>10.4 ft                | 15/19<br>15/19                        |

For Slab 1 foot = 304.8 mm.

- a. R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.
- b. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
- c. **Exception:** Skylights may be excluded from glazed fenestration SHGC requirements in Climate Zones 1 through 3 where the SHGC for such skylights does not exceed 0.30.
- d. "15/19" means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. "15/19" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.
- e. R-5 shall be added to the required slab edge R-values for heated slabs. Insulation depth shall be the depth of the footing or 2 feet, whichever is less in Zones 1 through 3 for heated slabs.
- f. There are no SHGC requirements in the Marine Zone.
- g. Basement wall insulation is not required in warm-humid locations as defined by Figure N1101.10 and Table N1101.10.
- h. Or insulation sufficient to fill the framing cavity, R-19 minimum.
- i. The first value is cavity insulation, the second value is continuous insulation, so "13+5" means R-13 cavity insulation plus R-5 continuous insulation.
- j. The second R-value applies when more than half the insulation is on the interior of the mass wall.