

CHAPTER 11 ENERGY EFFICIENCY

SECTION N1101 GENERAL

N1101.8 Certificate. A permanent certificate shall be posted on or in the electrical distribution panel. The certificate shall be completed by the builder, registered design professional or entity as designated by the builder or registered design professional. The certificate shall list the predominant R-values of

insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor) and ducts outside conditioned spaces; U-factors for fenestration; and the solar heat gain coefficient (SHGC) of fenestration. Where there is more than one value for each component, the certificate shall list the value covering the covering the largest area. The certificate shall list the type and efficiency of heating, cooling and service water heating equipment.

Modify Table N1102.1 to read as follows.

**TABLE N1102.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT ^a**

| CLIMATE ZONE | FENESTRATION U-FACTOR | SKYLIGHT ^b U-FACTOR | GLAZED FENESTRATION SHGC | CEILING R-FACTOR | WOOD FRAME WALL R-VALUE | MASS WALL R-VALUE | FLOOR R-VALUE | BASEMENT ^c WALL R-VALUE | SLAB ^d R-VALUE AND DEPTH | CRAWL SPACE WALL R-VALUE |
|-----------------|-----------------------|--------------------------------|--------------------------|------------------|-------------------------|-------------------|-----------------|------------------------------------|-------------------------------------|--------------------------|
| 1 | 1.2 | 0.75 | 0.40 | 30 | 13 | 3 | 13 | 0 | 0 | 0 |
| 2 | 0.75 | 0.75 | 0.40 | 30 | 13 | 4 | 13 | 0 | 0 | 0 |
| 3 | .065 | 0.65 | 0.40 ^e | 30 | 13 | 5 | 19 | 0 | 0 | 5/13 |
| 4 except Marine | 0.40 | 0.60 | NR | 38 | 13 | 5 | 19 | 4/13 | 4, 2 ft | 10/13 |
| 5 and Marine 4 | 0.35 | 0.60 | NR | 38 | 19 or 13+5 ^g | 13 | 30 ^f | 10/13 | 10, 2 ft | 10/13 |
| 6 | 0.35 | 0.60 | NR | 49 | 19 or 13+5 ^g | 15 | 30 ^f | 10/13 | 10, 4 ft | 10/13 |
| 7 and 8 | 0.35 | 0.60 | NR | 49 | 21 | 19 | 30 ^f | 10/13 | 10, 4 ft | 10/13 |

- a. R-values are minimums. U-factors and SHGC are maximums. R-19 insulation shall be permitted to be compressed into a 2 x 6 cavity.
- b. The fenestration U-factor column excludes skylights. The solar heat gain coefficient (SHGC) column applies to all glazed fenestration.
- c. The first R-value applies to continuous insulation, the second to framing cavity insulation; either insulation meets the requirement.
- d. R-5 shall be added to the required slab edge R-values for heated slabs.
- e. There are no solar heat gain coefficient (SHGC) requirements in the Marine Zone.
- f. Or insulation sufficient to fill the framing cavity, R-19 minimum.
- g. "13+5" means R-13 cavity insulation plus R-5 insulated sheathing. If structural sheathing covers 25% or less of the exterior, R-5 sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25% of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.