

RESNET Proposed Amendment

Proponent: Cool Metal Roofing Coalition, and RESNET Technical Committee

Proposed Changes:

2006 Mortgage Industry Home Energy Rating Systems Standards

Table 3.2(1) Specifications for the Reference and Qualifying Homes, and Table 3.3 Default Solar Absorptance for Various Roofing Surfaces – Amend as follows:

Table 3.2(1) Specifications for the Reference and Qualifying Homes

Building Component	Reference Home	Rated Home
Roofs:	Type: composition shingle on wood sheathing Gross area: same as Rated Home Solar absorptance = 0.75 Emittance = 0.90	Same as Rated Home Same as Rated Home <u>Same as Rated Home. Values from Table 303.4.1(4) shall be used to determine solar absorptance except where test data are provided for roof surface in accordance with ASTM methods E-903, C-1549, E-1918 or CRRC Method #1.</u> Same as Rated Home <u>Emittance values provided by the roofing manufacturer in accordance with ASTM C-1371 shall be used when available. In cases where the appropriate data are not known, same as the Reference Home.</u>

Table 303.4.1(4)

Default Solar Absorptance for Various Roofing Surfaces

<u>Roof Materials</u>	<u>Absorptance</u>
<u>White Composition Shingles</u>	<u>0.80</u>
<u>White Tile (including concrete)</u>	<u>0.60</u>
<u>White Metal</u>	<u>0.50</u>
<u>All others</u>	<u>0.92</u>

Justification:

10/31/07 Note: this proposal has been modified from the original such that the default Solar absorptance remains at 0.75, rather than the initial proposed change to 0.92. All other changes in this proposed amendment are as previously posted.

In Table 3.2(1) Specifications for the Reference and Qualifying Homes, the solar absorptance of the roof on the qualifying home comes from Table 3.3 except where test data is provided for roof surface in accordance with ASTM E-903. Although the ASTM standard E-903 is a legitimate test method for measuring solar reflectance and absorptance, it is only one of several industry recognized standard test methods used for measuring radiative properties of roofing products. For example, the Cool Roof Rating Council, and the Energy Star program accept ASTM C-1549 for low and steep slope roofing, and ASTM E-1918 for low slope roofing. In addition to these ASTM test methods, both CRRC and Energy Star also accept a method referred to as the CRRC Test Method #1 for measuring solar reflectance/absorptance of variegated roof products. Emittance is commonly tested using ASTM C-1371. Therefore, we would petition RESNET to accept these other recognized test methods for measuring solar reflectance/absorptance and emittance of roof products used on the qualifying home.

[edited for length and to reflect subsequent changes. Note that the reference to Table 3.3 applies to the tax credit document (Publication 05-001), which contained this table; the 2006 Mortgage Industry Home Energy Rating Systems Standards has no such table.]

We should be encouraging the roofing industry to use actual certified solar reflectance/absorptance data rather than using default values. An Energy Star labeled product or CRRC-listed product would already have these data available from the roofing manufacturer.

The revised table provides conservative (high) default values for three common, white roofing materials, allowing some default (un-tested) credit relative to the reference home, for clearly identifiable roofing materials.