

GG167-14
408.3.1, Table 408.3.1

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Revise as follows:

408.3.1 Roof coverings—solar reflectance and thermal emittance. Where roof coverings are used for compliance with Section 408.3, roof coverings shall comply with Section 408.3.1.1 or 408.3.1.2. The values for solar reflectance and thermal emittance shall be determined by an independent laboratory accredited by a nationally recognized accreditation program. Roof products shall be listed and labeled and certified by the manufacturer demonstrating compliance.

TABLE 408.3.1
REFLECTANCE AND EMITTANCE^a

ROOF SLOPE	MINIMUM AGED SOLAR REFLECTANCE	MINIMUM AGED THERMAL EMITTANCE	MINIMUM AGED SRI
2:12 1:12 or less	0.55	0.75	60
Greater than 2:12	0.30	0.75	25

a. Linear interpolation shall be allowed between 1:12 and 2:12.

Reason: The roof slope of 2:12 or less, as provided in Table 408.3.1, has been modified to 1:12 or less. A new footnote has been proposed as follows: a. Linear interpolation shall be allowed between 1:12 and 2:12.

The 2:12 breakpoint between low- and steep slope roofs at 2:12 is an arbitrary limit based on visibility of the roof from ground level. An instantaneous break point such as this allows for a 2.01:12 roof slope to be quite different in terms of performance of an exactly 2:12 roof, when in fact there is no difference in their impact as a cool roof. It also opens the code requirements to gamesmanship. This proposal allows linear interpolation to be applied between two limits: 1:12 and 2:12 to eliminate the instantaneous break. Doing this also allows colors and finishes that are good performers but don't necessarily meet the low slope requirements, to be used at lower roof slopes. This latter point is significant because whether a roof is visible from a certain vantage point varies widely by siting and could be far less or more than 2:12. By introducing a region in which the requirements transition smoothly, colors and finishes that are fair but not bright white can be utilized when a roof flatter than 2:12 is visible and a bright white roof is not visually acceptable or would cause issues with glare.

Cost Impact: Will not increase the cost of construction.

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