

2013 California Title 24, Part 6 Requirements

The most recent Title 24 Roofing Code that takes effect on July 1, 2014 establishes new requirements to promote the installation of “Cool Roofs” in Low Rise Residential Steep Slope Construction. The goal of the California Energy Commission is to reduce energy consumption. The determining factors used to define “Cool Roofs” are Solar Reflectance and Thermal Emittance as listed by the CRRC (Cool Roof Rating Council) and the Solar Reflectance Index.

Important Terms

Solar Reflectance (SR): Measure of a surface’s ability to reflect solar energy. Dark surfaces tend to absorb solar energy, becoming hot and passing heat into the attic below. Lighter surfaces, on the other hand, reflect solar energy and help keep the roof and building cooler. Solar Reflectance is expressed as a percentage (0-100%).

Thermal Emittance (TE): The ability of a roofing material to release absorbed heat energy back into to the atmosphere. Surfaces with low emittance transfer more heat into the roof components and attic space. Thermal Emittance is expressed as a percentage (0-100%)

Solar Reflectance Index (SRI): Index that uses a calculation, incorporating both SR and TE. For the purposes of 2013 Title 24, Part 6, the California Energy Commission is concerned with aged SRI. This means that the calculation is made using a 3 year aged reflectance, as listed with the CRRC.

Cool Roof Requirements for July 1, 2014 (Climate Zones 10-15)

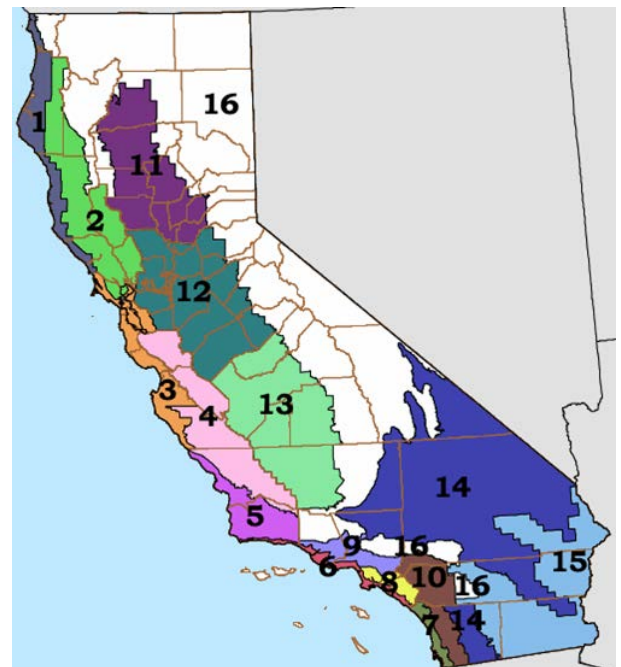
- Solar Reflectance of .20 and Thermal Emittance of .75
- Or Aged Solar Reflectance Index of 16

Re-Roof and Alterations

In Climate Zones 10-15, must use roofing products meeting cool roof requirements (**prescriptive**).

Except when:

- Re-roof alterations are less than 50% of the existing roof
- Home addition has less than 300 square feet of roofing
- Minimum R38 attic insulation is used
- Minimum R4 above deck insulation is used
- There is no duct work in attic or duct insulation meets new requirements
- High profile tile is used (rise to width ratio of 1:5 when installed)
- Elevated battens are used



New Construction

Use California Energy Commission approved software to demonstrate compliance for the entire building (**performance**).

- A total building energy budget is established.
- SR and TE of chosen product are entered into the software.
- Tradeoffs are allowed (i.e. higher efficiency windows, HVAC, etc...).
- Any profile or color can be used as long as the energy budget is met.

To find out which climate zone a project is in, visit the CEC’s link:

http://www.energy.ca.gov/maps/building_climate_zones.html

Searchable lists of climate zones by zip code and city