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Re-Roofing and the 2008 California Residential Energy Compliance Requirements for Cool Roofs

Important information you need to know *BEFORE* obtaining a re-roof permit!

The California Energy Commission (CEC) has adopted new requirements for re-roofing projects.

Beginning January 1, 2010 when more than 50% of the exterior surface of the roof or more than 1,000-sq. ft. of roof is replaced, whichever is less, the roofing product must meet the following prescriptive requirements for Cool Roofs.

For roof slopes of greater than 2:12:

- 1. Roofing products with a density of less than 5lbs/sq.ft. (i.e. Asphalt shingles) shall have a minimum 3-year aged solar reflectance of 0.20 and a minimum thermal emittance of 0.75, or a Solar Reflectance Index (SRI) of 16.**
- 2. Roofing products with a density of 5lbs/sq.ft. or more (i.e. Concrete, clay tiles or slate) shall have a minimum 3-year aged solar reflectance of 0.15 and a minimum thermal emittance of 0.75, or a SRI of 10.**

Or,

Alternatives to the Cool Roof requirement may be one of the following:

- 1. Buildings with no ducts in the attic; or**
- 2. If the building with a radiant barrier in the attic meeting the requirements of §151(f)2; or**
- 3. Buildings with at least R-30 ceiling insulation; or**
- 4. If in climate Zones 10, 11, 13 and 14, R-3 or greater roof deck insulation above vented attic; or**
- 5. If existing ducts in the attic are insulated and sealed according to §151(f)10; or**
- 6. Insulation with a thermal resistance of at least $0.85\text{hr}\cdot\text{ft}^2\cdot^{\circ}\text{F}/\text{Btu}$ or at least $3/4$ inch air-space is added to the rook deck over an attic; or**
- 7. In climate zones, 10, 12, and 13, with 1ft^2 of free ventilation area of attic ventilation for every 150ft^2 of attic floor area, and where at least 30 percent of the free ventilation area is within 2 feet vertical distance of the roof ridge; or**

8. If the building can show compliance using performance approach.

A Certificate of Compliance Energy Form “CF-1R-ALT” must be completed and submitted with the permit application. The “CF-1R-ALT” form must be signed by the documentation Author and the Building Designer (i.e. Contractor or Home Owner).

At Final Inspection an Installation Certificate Form “CF-6R-ENV-01” must be completed by the installing contractor and submitted to the owner and the building department.

Roofing products that are used for compliance with the energy standards are required to be tested and labeled by the Cool Roof Rating Council (CRRC). The roofing products manufacturer must have its roofing product tested for solar reflectance and thermal emittance, and be listed in the CRRC’s Rated Product Directory (see <http://www.coolroofs.org>) and be labeled according to CRRC procedures. Below is an example of an approved CRRC product label.

		<u>Initial</u>	<u>Weathered</u>
	Solar Reflectance	0.00	Pending
	Thermal Emittance	0.00	Pending
	Rated Product ID Number	-----	
	Licensed Seller ID Number	-----	
	Classification	Production Line	
<p>Cool Roof Rating Council ratings are determined for a fixed set of conditions, and may not be appropriate for determining seasonal energy performance. The actual effect of solar reflectance and thermal emittance on building performance may vary.</p> <p>Manufacturer of product stipulates that these ratings were determined in accordance with the applicable Cool Roof Rating Council procedures.</p>			

Visit the California Energy Commissions webpage at: www.energy.ca.gov for more information.