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Residential Re-Roof Energy Compliance Requirements



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

When more than 50% of the exterior surface of the roof is being replaced and the roof slope is greater than 2:12, the roofing product must meet the following prescriptive requirements for Cool Roofs or comply with the Performance approach per Sec.150.2(b). Roof areas covered by building integrated photovoltaic panels, solar thermal panels and thermal mass roofing materials over the roof membrane with a weight of at least 25lb/ft² are exempt from these requirements.

Roofing products that are used for compliance with the energy standards are required to comply with Section 110.8. Roofing products that are tested and labeled by the Cool Roof Rating Council (CRRC) is a typical compliance approach. The manufacturer of the roofing products has their roofing products tested for solar reflectance and thermal emittance. The listed values are in the CRRC's Rated Product Directory (see www.coolroofs.org) and the roofing material is labeled according to CRRC procedures. Below is an example of an approved CRCC product label.

	Solar Reflectance	Initial 0.00	Weathered 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>			

For roof slopes of greater than 2:12 (steep-sloped roof):

1. Roofing products shall have a minimum aged solar reflectance of 0.20 and a minimum thermal emittance of 0.75, or a minimum Solar Reflectance Index (SRI) of 16.

Alternatives to the Cool Roof requirement

Acceptable alternatives may be one of the followings:

1. 1" air space is provided between top of roof deck and bottom of the roofing material;
2. Existing ducts in the attic are insulated and sealed according to CEC Regulations Section 150.1(c)9;
3. Installed roofing product has a profile ratio of rise to width of 1 to 5 for 50 percent or greater of the width of the roofing product;
4. Buildings with at least R-38 ceiling insulation;
5. Buildings with a radiant barrier in the attic meeting the requirements of Section 150.1(c)2;
6. Buildings that have no ducts in the attic;
7. R-2 or greater insulation above the roof deck.

Application Requirements

For re-roofs subject to these regulations, indicate on the Building Permit Application under the "JOB DESCRIPTION", the compliance approach whether an alternative is proposed, or cool roofing material is to be installed.

If cool roofing material is proposed, the CRRC label specifying the initial and aged (weathered) solar reflectance and thermal emittance is needed for field verification. Product labeling must be available for final inspection by building department.

For more information, consult the California Energy Commission website:

<http://www.energy.ca.gov/title24/>