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2022 CALIFORNIA ENERGY CODE COOL ROOFS REQUIREMENTS FOR MULTI-FAMILY BUILDINGS

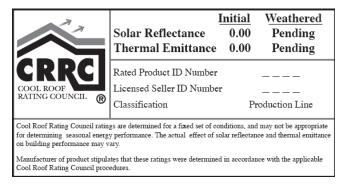
COOL ROOF requirements were adopted by the California Energy Commission – (CEC) for newly constructed buildings, additions, and the re-roofing of existing buildings for which permit applications were filed on or after January 1, 2023 and that use the prescriptive compliance method.

1. COOL ROOFS

To qualify as a COOL ROOF under the 2022 California Energy Code, the roofing material must:

- Have a Cool Roof Rating Council (CRRC) rating for Solar Reflectance and Thermal Emittance
- Meet the Aged Solar Reflectance and Thermal Emittance or SRI

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 as in the following example:



The labeled product material shall be available for the jurisdiction's permit inspector at the time of inspection.

2. <u>MULTIFAMILY BUIDLING COOL ROOF REQUIREMENTS (Cal Energy Code. Section 170.2 and 180.2)</u>

Construction Type	Slope	Min. 3-year Aged Solar Reflectance	Min. Thermal Emittance	Min. Solar Reflectance Index (SRI)
Re-Roofing	2:12 or less ¹	0.63	0.75	75
Re-Roofing	Greater than 2:12	0.20	0.75	16
New Construction, Additions for	Greater than 2:12	0.20	0.75	16
Roof without Attic ²				

¹ Additional requirements for insulation at re-roofing area apply, see 180.2(b)1Aiii.

 2 Cool roof is not required for roof with attic, but additional requirements for insulation apply, see 170.2(a)1B.

COOL ROOF EQUIVALENT ALTERNATIVES:

The following alternatives for re-roofing cool roof requirement are considered as equivalent.

- a. For low-sloped roof (2:12 or less) re-roofing, the aged solar reflectance requirement can be met by using insulation at the roof deck specified in Table 180.2-A below.
- b. For steep-sloped roof (greater than 2:12) re-roofing, the following are equivalent alternatives.
 - Buildings with ceiling assemblies with a U-factor lower than or equal to 0.025 or that are insulated with at least R-38 ceiling insulation in an attic
 - Buildings that have no ducts in the attic.
 - Buildings with R-2 or greater continuous insulation above or below the roof deck.
 - Building follows 180.2(b)1Aii requirement b for radiant barrier.

	Minimum Aged Solar	Roof Deck Continuous Insulation		
	Reflectance	R-Value		
		(Climate Zone 4)		
	0.60	16		
	0.55	18		
	0.50	20		
	0.45	22		
	No requirement	24		

Table 180.2-A - Roof/Ceiling Insulation Tradeoff for Low-Sloped Aged Solar Reflectance

COOL ROOF EXEMPTIONS:

The following buildings and re-roofing of existing buildings are exempt from COOL ROOF requirements:

- a. Multifamily building additions of 300 square feet or less are exempt from the roofing product requirements of Section 170.2(a)1A.
- b. Buildings where the performance energy analysis approach justifies other roofing types.
- c. Qualified historical buildings.
- d. Re-roofing where the re-roofed area is less than 2,000 square feet or 50 percent of the roof, whichever is less.
- e. Roofing area covered by building integrated photovoltaic panels and solar thermal panels.
- f. Roof construction that has thermal mass over the roof membrane with at least 25 lb/ft².