



**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:

		Initial	Weathered
	Solar Reflectance	0.00	Pending
	Thermal Emittance	0.00	Pending
	Rated Product ID Number	-----	
	Licensed Seller ID Number	-----	
	Classification	-----	Production Line
<small>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. Manufacturer of product stipulates that these ratings were determined in accordance with the applicable Cool Roof Rating Council procedures.</small>			

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

2. MULTIFAMILY BUILDING COOL ROOF REQUIREMENTS (Cal Energy Code, Section 170.2 and 180.2)

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 Roof without Attic ²	Greater than 2:12	0.20	0.75	16

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.

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

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

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.