

New State of California Requirements for Single Family Residential Reroofs

The 2022 California Energy Code has changed the requirements for reroofs on Single Family Dwellings that will trigger when more than 50% of the roof is being replaced. The roofing products will need to have an energy rating that meets the below requirements. This is commonly referred as a **cool roof**

Cool Roof – is a roof that reflects more sunroof away from the house to help reduce energy costs

(for more information on requirements and possible exceptions please see the fact sheet from Energy Code ACE on 2nd page)

Roof Slope	Aged Solar Reflectance	Thermal Emittance	SRI (Solar Reflective Index)
Steep-Sloped ($\geq$ 2:12 slope)	$\geq$ 0.20	$\geq$ 0.75	$\geq$ 16
Low Slope ($<$ 2:12 slope)	$\geq$ 0.63	$\geq$ 0.75	$\geq$ 75

Additionally Low-sloped roofs will be required to have insulation installed as well to the below value

- Low-Sloped roofs shall be insulated with either R-14 continuous insulation above Deck or Have an overall assembly U-Factor less than or equal to .039 (such as R-11 cavity insulation below the roof deck, and wood framing at 24" o.c.)

Inspection

- Roofing materials need to be on site at the Roof sheathing or pre-roof inspection so that the inspector can verify the energy ratings of the material, please ensure when purchasing that the values on the product material comply with the above requirements
- Low slope roofs will now require 3 inspections
 - Roof sheathing/Pre-Roof (Material verification from above)
 - Insulation
 - Final

Additions and Alterations (*continued*)

Reroofing Products and Insulation

[§150.2\(b\)1](#)



Prescriptive Requirements

Reroofing Products

When more than 50% of a roof is being replaced, products used to reroof the building must meet minimum requirements for aged solar reflection and thermal emittance or meet solar reflectance index (SRI) requirements. In the 2022 Energy Code, the Climate Zone triggers and exceptions have changed for both steep-sloped and low-sloped roofs. See Table 4 for a summary of reroofing product requirements.

Roof Slope	Climate Zone	Aged Solar Reflectance	Thermal Emittance	SRI
Steep-sloped	4, 8-15	≥ 0.20	≥ 0.75	≥ 16
Low-sloped	4, 6-15	≥ 0.63	≥ 0.75	≥ 75

Low-sloped = rise-to-run ratio of $< 2:12$ (lower than 9.5 degrees); **steep-sloped** = rise-to-run ratio $\geq 2:12$ (9.5 degrees or more); **SRI** = solar reflective index.

Table 4. Reroofing Product Requirements

Exceptions for both steep- and low-sloped roofs:

1. Roof area covered by building-integrated photovoltaic panels or solar thermal panels is not required to meet the minimum requirements.
2. Roof constructions with a weight of at least 25 lb/ft² are exempt from these minimum requirements

Exceptions for only steep-sloped roofs:

3. A building is excepted if it has one or more of the following features:
 - ♦ A ceiling assembly with a U-factor lower than or equal to 0.025 or that is insulated with at least R-38 ceiling insulation
 - ♦ A radiant barrier in the attic that is not installed directly above spaced sheathing and meets [§150.1\(c\)2](#)
 - ♦ Location in Climate Zone 2, 4, 9, 10, 12 or 14 and has no ducts in the attic
 - ♦ R-2 or greater continuous insulation above or below the roof deck

Exception for only low-sloped roofs:

4. The aged solar reflectance can be met by using insulation at the roof deck as specified in [Table 150.2-B](#).

Low-sloped Roof Insulation

In addition to reroofing product requirements, low-sloped roofs have insulation requirements.

In Climate Zones 1, 2, 4 and 8-16, one of the following is required:

- ♦ **R-14 continuous insulation above the roof deck**
- ♦ **Overall assembly U-factor ≤ 0.039 (such as R-11 cavity insulation below the roof deck, wood framing at 24" o.c.)**

Exceptions:

1. There is existing R-10 or greater continuous insulation above or below the roof deck
2. The existing roof assembly has a U-factor 0.056 or less and the building is in Climate Zones 1, 2, 4 and 8-12, OR there is at least R-19 insulation between roof rafters and in contact with the roof deck.
3. Required continuous insulation may be reduced to R-4 where (a) mechanical equipment on the roof is not being disconnected or removed as part of the project OR (b) sidewall or parapet walls exist AND the additional insulation would reduce the height of the roof surface to the top of the base flashing to less than allowed by California Residential Code Section R900.
The exception only applies to sidewall and parapet walls if they are finished with an exterior cladding material that must be removed to install the new roof covering membrane to maintain the base flashing height and the ratio of the replaced roof area to the affected sidewall or parapet walls is less than 25 linear feet.
4. Required continuous insulation may be reduced where the flashing around an exterior wall opening would be reduced below manufacturer's installation instructions or design professionals approved flashing design required by California Residential Code R703.4 or R905.2.8.3
5. Tapered insulation may be used at drains and other low points so long as insulation thickness is increased at the high points of the roof and the average thermal resistance meets the required value.

