

Title 24, Part 6, of the California Code of Regulations: California's Energy Efficiency Standards for Residential and Nonresidential Buildings

Summary of the 2019 Cool Roof Requirements

THIS IS NOT AN OFFICIAL CODE DOCUMENT. THE CRRC IS NOT LIABLE FOR ANY MISPRINTS OR OUTDATED INFORMATION. PLEASE REFER TO THE ACTUAL CODE FOR THE FULL REQUIREMENTS: <https://ww2.energy.ca.gov/2018publications/CEC-400-2018-020/CEC-400-2018-020-CMF.pdf>

Section		Topic	Occupancy Type	Slope	Climate Zone	Minimum 3 year Aged Solar Reflectance	Minimum Thermal Emittance	Minimum Solar Reflectance Index (SRI)	Notes	Page
10-113(a)	Mandatory	Product Labeling	All	All	See below	See below	See below	See below	Every roofing product installed in construction to take compliance credit or meet the prescriptive requirements for reflectance and emittance shall have a clearly visible packaging label that lists the emittance and the initial and 3-year aged solar reflectance, or a CRRC Rapid Rating for solar reflectance, tested in accordance with the CRRC-1 Program.	40
110.8(i)1-4	Mandatory	Insulation, Roofing Products & Radiant Barriers	All	All	See below	See below	See below	See below	Exception 1 to Section 110.8(i)1: Roofing products that are not certified according to Section 10-113 shall assume the following default aged solar reflectance/thermal emittance values: A. For asphalt shingles: 0.08/0.75 B. For all other roofing products: 0.10/0.75 See code for additional exceptions	122-123
Section		Construction Type	Occupancy Type	Slope	Climate Zone	Minimum 3 year Aged Solar Reflectance	Minimum Thermal Emittance	Minimum Solar Reflectance Index (SRI)	Notes	Page
140.3(a)1Aia	Prescriptive	New Construction	Nonresidential	Low Slope	Zones ALL	0.63	0.75	75	See code for exceptions	194-195, 200
140.3(a)1Aib	Prescriptive	New Construction	Nonresidential	Steep Slope	Zones ALL	0.20	0.75	16	See code for exceptions	194-195, 200
140.3(a)1Aiaa	Prescriptive	New Construction	High rise residential buildings, hotels, motels	Low Slope	Zones 9,10,11,13,14,15	0.55	0.75	64	See code for exceptions	194-195, 202
140.3(a)1Aiab	Prescriptive	New Construction	High rise residential buildings, hotels, motels	Steep Slope	Zones 2 - 15	0.20	0.75	16		194-195, 202
140.3(a)8	Prescriptive	New Construction	Relocatable Public School Buildings Where Manufacturer certifies use in all climate zones	Low Slope	Zones ALL	0.63	0.75	75		198, 200 & 204
140.3(a)8	Prescriptive	New Construction	Relocatable Public School Buildings Where Manufacturer certifies use in all climate zones	Steep Slope	Zones ALL	0.20	0.75	16		198, 200 & 204
141.0(a)1	Prescriptive	Additions	Nonresidential, high-rise residential, and hotel/motel buildings	All	See code	See code	See code	See code	See code for exceptions	249
141.0(b)1.A	Mandatory	Alterations	Nonresidential, high-rise residential, hotel/motel buildings, and relocatable public school buildings	All	See code	See code	See code	See code	See code for exceptions	250-
141.0(b)2Bia	Prescriptive	Re-Roofing (Replacements, recovering or recoating)	Nonresidential	Low Slope	Zones ALL	0.63	0.75	64	Where more than 50% of the roof or more than 2,000 square feet of roof, whichever is less is being replaced, recovered or relocated. See code for exceptions	251-252

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Section		Topic	Occupancy Type	Slope	Climate Zone	Minimum 3 year Aged Solar Reflectance	Minimum Thermal Emittance	Minimum Solar Reflectance Index (SRI)	Notes	Page
141.0(b)2Bib	Prescriptive	Re-Roofing (Replacements, recovering or re-coating)	Nonresidential	Steep Slope	Zones ALL	0.20	0.75	16	Where more than 50% of the roof or more than 2,000 square feet of roof, whichever is less is being replaced, recovered or relocated. See code for exceptions	251-252
141.0(b)2Biaa	Prescriptive	Re-Roofing (Replacements, recovering or re-coating)	High rise residential buildings, hotels, motels	Low Slope	Zones 10,11,13,14,15	0.55	0.75	64	Where more than 50% of the roof or more than 2,000 square feet of roof, whichever is less is being replaced, recovered or relocated. See code for exceptions	251-252
141.0(b)2Biib	Prescriptive	Re-Roofing (Replacements, recovering or re-coating)	High rise residential buildings, hotels, motels	Steep Slope	Zones 2 - 15	0.20	0.75	16	Where more than 50% of the roof or more than 2,000 square feet of roof, whichever is less is being replaced, recovered or relocated. See code for exceptions	251-252
150.1(c)11A	Prescriptive	New Construction	Low Rise Residential	Steep Slope	Zones 10-15	0.20	0.75	16		288
150.1(c)11B	Prescriptive	New Construction	Low Rise Residential	Low Slope	Zones 13 and 15	0.63	0.75	75	See code for exceptions	288
150.2(b)1I	Prescriptive	Re-Roofing (Replacements, recovering or re-coating)	Low Rise Residential	Steep Slope	Zones 10-15	0.20	0.75	16	Where more than 50% of the roof or more than 1,000 square feet of roof, whichever is less is being replaced, recovered or relocated. See code for exceptions	308
150.2(b)1I	Prescriptive	Re-Roofing (Replacements, recovering or re-coating)	Low Rise Residential	Low Slope	Zones 13 & 15	0.63	0.75	75	Where more than 50% of the roof or more than 1,000 square feet of roof, whichever is less is being replaced, recovered or relocated. See code for exceptions	308

Equation to obtain an aged value if the product does not yet have an aged value listed in the CRRS Directory:

$$* \text{Aged Reflectance}_{\text{calculated}} = (0.2 + \beta [p_{\text{initial}} - 0.2])$$

* p_{initial} = Initial Reflectance listed with the CRRS

β = 0.65 for Field Applied Coating, or 0.70 for Not a Field Applied Coating

Title 24 Energy Hotline

(800) 772-3300 (within CA)

(916) 654-5106 (outside CA)