



COOL ROOFS
NON-RESIDENTIAL

The requirements for a cool roof apply to re-roofing permits for **conditioned nonresidential** roofs where replacement is more than 50% or more than 2,000 square feet of the roof, whichever is less, is being replaced, recovered or recoated.(unconditioned doesn't apply per Section 100(e)2.C. by exclusion)


When an application for a building permit is filed, which would include **re-roofing**, the envelope shall be designed and constructed using either the **Performance Approach** or the **Prescriptive Approach** for energy compliance. (2005 Building Energy Efficiency Standards, Section 100 (a) & section 140 (a), (b))

Performance Approach: This would require an energy conservation report showing the building envelope complies and meets the **Energy Budget.** (Section 141)

Prescriptive Approach: This would require that the building envelope (**re-roof**) comply with the minimum requirements for installation for **COOL ROOFS.** (Section 142 & Section 143 (a) 1 A which requires compliance with section 118 and section 143 (a) 1 A i – iii.)

COOL ROOFS: Cool roofs shall be tested and labeled by the Cool Roof Rating Council (CRRC)

SAMPLE:

 COOL ROOF RATING COUNCIL SM	<u>Initial</u>	
	<u>Weathered</u>	
	Solar Reflectance 0.00	Pending
	Thermal Emittance	0.00
	Pending	
	Rated Product ID	XXXXX
	Licensed Manufacturer ID	XXXXX
	Classification	
	Production Line	
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.		

Climate zone 10	section 143 (a) 1 A I - iii
i. & iii.) Low-slope roofs & residential high-rise:	
Minimum Solar Reflectance	.55
Minimum Thermal Emittance or Minimum SRI	.75 64
ii.) Steep-sloped roofs < 5lb per sq.:	
Minimum Thermal Emittance	.20
Minimum Thermal Emittance or Minimum SRI	.75 16
ii.) Steep-sloped roofs ≥ 5lb per sq.:	
Minimum Thermal Emittance	.15
Minimum Thermal Emittance or minimum SRI	.75 10

EXCEPTION: Roof re-coverings allowed by the CBC are not required to meet these requirements when **ALL** of the following occur:

1. The existing roof has a rock or gravel surface, and
2. The new roof has a rock or gravel surface, and
3. There is no removal of existing layers of roof coverings of more than fifty percent of the roof or more than 2,000 square feet of roof, whichever is less; and
4. There is no recoating with a liquid applied coating; and
5. There is no installation of a recover board, rigid insulation or other rigid, smooth substrate to separate and protect the new roof recovering from the existing roof.

Alterations to the roof of an unconditioned building do not trigger the requirements for a cool roof.(100(e)3A)