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| CERTIFICATE OF COMPLIANCE | | | | | | | | | | | CF1R-ALT-05-E | |
| Prescriptive Residential Alterations That Do Not Require HERS Field Verification | | | | | | | | | | | (Page 3 of 8) | |
| Project Name: | | | | | | | Page 3 of 8 | | Date Prepared: | | | |

C. Roof Replacement (Prescriptive Alteration, Section 150.2(b)1H)

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 |
|----------------------|------------|-----------|------------------------|--------------|-------------------------|---------------------------|------------------------|-------------------|----------------|------------------------|-------------------|----------------|
| Method of Compliance | Roof Pitch | Exception | CRRC Product ID Number | Product Type | R-value Deck Insulation | Proposed | | | | Minimum Required | | |
| | | | | | | Initial Solar Reflectance | Aged Solar Reflectance | Thermal Emittance | SRI (Optional) | Aged Solar Reflectance | Thermal Emittance | SRI (Optional) |
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NOTES:

- Roof area covered by building integrated photovoltaic panels and solar thermal panels are exempt from the above Cool Roof requirements.
- Liquid field applied coatings must comply with installation criteria from Section 110.8(i)4.

D. Fenestration/Glazing Allowed Areas and Efficiencies (Section 150.2(b)1)

| 01 | 02 | 03 | 04 | | 05 | | 06 | | 07 |
|-----------------|---|---|--|---|------------------------------------|--------------------------------------|--------------------------------|----------------------------------|----------|
| Alteration Type | Maximum Allowed Fenestration Area For All Orientations (ft ²) | Maximum Allowed West-Facing Fenestration Area Only (ft ²) | Existing Fenestration Area for All Orientations (ft ²) | Existing West-Facing Fenestration Area (ft ²) | Maximum Allowed U-factor (Windows) | Maximum Allowed U-factor (Skylights) | Maximum Allowed SHGC (Windows) | Maximum Allowed SHGC (Skylights) | Comments |
| | | | | | | | | | |

C. Roof Replacement (Prescriptive Alteration, Section 150.2(b)1H)

When 50% or more of the roof is being replaced the roofing requirements are triggered. Any areas of roof covered by building integrated photovoltaic panels and solar thermal panels are exempt, but the area of roof not covered by photovoltaic panels would still need to meet any applicable cool roof requirements. Additionally, there are many alternatives/exceptions to when a cool roof is required.

When the roof is steep slope (pitch greater than or equal to 2:12) the roof requirements include a cool roof in climate zones 10-15. The minimum requirement is 0.20 Aged Solar Reflectance, 0.75 Thermal Emittance, or a minimum SRI of 16.

1. Method of Compliance: Indicate if the method of compliance is going to be based on Aged Solar Reflectance and Thermal Emittance, the Solar Reflectance Index (SRI), or an Exception.
2. Roof Pitch: Expressed as 4:12, for example, which means the roof rises 4 foot within a span of 12 feet. When roofs have multiple pitches the requirements are based on the pitch of 50% or more of the roof.
3. Exception: If meeting one of the exceptions. Indicate which exception is, or will be, met.

EXCEPTIONS AND ALTERNATIVES FOR STEEP SLOPE ROOFS:

- (a) Mass roof 25 lbs/ft² or greater (uncommon situation such as sod roof);
- (b) Air space 1" from top of roof deck to bottom of roofing;
- (c) Roofing product has a profile ratio of rise to width of 1 to 5 for 50 percent or greater of the width of the roofing product;
- (d) Ducts already meet Section 150.1(c) insulation and duct leakage requirements;
- (e) Roof has R-38 insulation;
- (f) Roof has a radiant barrier;
- (g) No ducts are installed in the attic; or
- (h) R-2 insulation above the roof deck.

In climate zones 13 & 15, when there is a low slope roof (pitch less than 2:12) the cool roof requirements are for a minimum Aged Solar Reflectance of 0.63, a minimum 0.75 Thermal Emittance, or a minimum SRI of 75.

EXCEPTIONS AND ALTERNATIVES FOR LOW SLOPE ROOFS:

- (a) Mass roof 25 lbs/ft² or greater (uncommon situation such as sod roof);
- (b) No ducts are installed in the attic; or
- (c) Roof deck insulation—by installing roof deck insulation, a lower aged solar reflectance is required: R-2 (0.62-0.60), R-4 (0.59-0.55), R-6 (0.54-0.50), R-8 (0.49-0.45), R-12 (0.44-0.40), R-16 (0.39-0.35), R-20 (0.34-0.30), R-24 (0.29-0.25).

NOTE: If one of the exceptions above has been selected then the rest of Section C. is Not Required.

4. CRRC Product ID Number: The CRRC Product ID Number is obtained from the Cool Roof Rating Council's Rated Product Directory at www.coolroofs.org/products/results. Products are listed by manufacturer, brand, type of installation, roofing material, and color, as well as product performance.
5. Product type: See Cool Roof Rating Council's directory. Generally product types include single-ply roof, wood shingles, asphalt roof, metal roof, tile roof.
6. R-value Deck Insulation: If one of the exceptions selected includes adding roof deck insulation, indicate the R-value of the insulation.
7. Proposed Initial Solar Reflectance: Based on the product chosen from the Cool Roof Rating Council's Rated Product Directory. If using default assumption indicate N/A since the Aged Solar Reflectance is available.
8. Proposed Aged Solar Reflectance: Value is from the Cool Roof Rating Council's Rated Product Directory. If the aged value is not available, calculate the Aged Solar Reflectance using the Solar Reflectance Index (SRI) Calculator located on the California Energy Commission website or the aging equation $\rho_{aged} = [0.2 + \beta(\rho_{initial} - 0.2)]$, where $\rho_{initial}$ = the initial solar reflectance and soiling resistance β is listed by product type below.

VALUES OF SOILING RESISTANCE β BY PRODUCT TYPE