

COOL ROOF COATING OVER ROOF SYSTEMS – (07 56 10)

1. All applicable parts of the General Roofing Specification (07 30 00) shall be included within this section.
2. Assessment of Cool Roof Acrylic Coating over Roof Systems
 - 2.1. A Cool Roof Acrylic Coating over shall be determined as failed when any of the following conditions exist:
 - 2.1.1. When the Cool Roof Acrylic Coating loses adhesion to the roof system or between applications of Cool Roof Acrylic Coating.
 - 2.1.2. When the Cool Roof Acrylic Coating cracks, peels, flakes or delaminates in any other way due to faulty product.
 - 2.1.3. When coating blisters are present on the majority of the roof system.
 - 2.2. Roof coating manufacturer shall submit the following documents to the Designer for review prior to having their Cool Roof Acrylic Coating being specified:
 - 2.2.1. Product data and safety data sheets.
 - 2.2.2. Test Report from an independent ASTM accredited testing facility validating that the roof coating complies with ASTM D6083.
 - 2.2.3. Sample copy of roof coating manufacturer's 20-year no dollar limit (NDL) material and labor warranty stating that the roof coating will comply with all materials and labor to repair or remove and replace any and all the types of roofing materials that leak or develop any failures due to defective coating or faulty installation for the length of the warranty.
 - 2.2.4. Proof of current Energy Star Rating for the roof coating.
 - 2.2.5. Fire classification for the proposed coating comply with ASTM E108 per Underwriters Laboratories or another ASTM recognized fire testing facility.
 - 2.2.6. A list of five (5) projects in Arizona where the proposed coating has been installed, including project name, project size, address, owner contact, and year applied.
 - 2.2.7. A letter from the Cool Roof Acrylic Coating Manufacturer stating that the Roofing Contractor is an authorized applicator of the roof coating system.

3. Roof Slope Use, as defined in Part 7, General Roofing Specification (07 30 00).
 - 3.1. The Cool Roof Acrylic Coating can be used on the following roof slopes:
 - 3.1.1. Low Slope
 - 3.1.2. Transitional Slope
 - 3.1.3. High Slope, in accordance with the manufacturer's limitations and testing data.
 - 3.2. The recommended minimum slope for Cool Roof Acrylic Roof Coating is ¼" per vertical unit 12 inches per unit horizontal when possible. The absolute minimum slope for elastomeric silicone coatings shall be "positive roof drainage". Ponding water is not acceptable.
4. Repair or replacement of roof, not to contradict Part 6, General Roofing Specification (07 30 00)
 - 4.1. If Cool Roof Acrylic Coating system does not meet the criteria established to be acceptable to receive a new Cool Roof Coating, then the replacement or overlay of the existing roof system with a new roof system is not required. The roofing membrane maybe replaced in lieu of the entire roofing system. This decision has to be made in the Scope Confirmation Meeting.
 - 4.2. If a Cool Roof Acrylic Coating system is deemed beyond repair in the Assessment Report and in the Scope Confirmation Meeting, it shall be either removed or isolated with a recovery board before new roof system is installed.
 - 4.3. Additional information for constitutes a failed Cool Roof Acrylic Coating can be found in Part 2 of this Section.
5. Demolition Requirements
 - 5.1. All items as found in Part 10, General Roofing Specification (07 30 00).
 - 5.2. No special demolition requirements for removing the Cool Roof Acrylic Coating from the roof membrane other than to not damage the roof membrane.
6. Back of Parapet Wall Treatment
 - 6.1. Cool Roof Coating shall be spray or roller applied to fully encapsulate any base or parapet wall flashing.

6.1.1. At locations where the membrane terminates less than the full height of the parapet wall, the back of the parapet wall shall be sealed with either a water repellant or waterproof product as directed by the Designer.

6.1.2. At locations where the Coating System terminates less than the full height of the parapet wall, the back of the parapet wall surface shall be waterproofed with materials suitable to the substrate.

7. High Wall Treatment

7.1. Cool Roof Acrylic Coating shall be applied to any membrane applied to a high wall.

7.2. Areas where the Cool Roof Acrylic Coating over does not extend the full height of the high wall, the high wall shall be sealed with either a water repellant or waterproof material compatible with the substrate as designated by the Designer.

7.3. Areas where the Elastomeric Acrylic Roof Coating System does not extend the full height of the high wall, the high wall shall be waterproofed with materials compatible with the substrate as determined by the Manufacturer in order to provide the required warranty.

8. Components of Cool Roof Acrylic Coating System

8.1. Biodegradable Cleaner.

8.1.1. Biodegradable cleaner should be used in areas that have accumulated dirt or other contaminants before installing the coating. Follow manufacturer application instructions.

8.2. Cool Roof Acrylic Coating

8.2.1. The Cool Roof Acrylic Roof Coating shall be Energy Star Rated and listed on the Cool Roof Rating Council website, www.coolroofs.org. The coating shall possess the following liquid and physical performance properties:

Elongation	250%	ASTM D2370
Tensile Strength	250 psi	ASTM D2370
Volume Solids	55%	ASTM D2697

Solar Reflective Index (Initial) >100 ASTM E1980

Solar Reflective Index (3 Year Aged) > 85 ASTM E1980

8.2.2. No private label coating manufacturers allowed.

8.2.3. The Cool Roof Acrylic Coating shall be considered part of the roof manufacturers' 20-year no dollar limit (NDL) material and labor warranty and the manufacturer of the roofing product must accept or approve the use of the Cool Roof Coating Product and that the Cool Roof Coating will not alter or void the roofing product warranty in any way. A 20-year coating manufacturer product warranty shall be required.

8.2.4. The Cool Roof Acrylic Roof Coating shall be spray or roller applied. If the coating is spray applied, the first coat shall also be back rolled, 25 dry mil coating thickness is required unless coating manufacturer or roof manufacturer requires greater dry mil thickness.

8.2.5. The Cool Roof Acrylic Coating Manufacturers' guide specification, product data sheets, safety data sheets and application instructions shall be considered part of this specification.

9. Closeout Documents

9.1. All items as found in Part 16, General Roofing Specification (07 30 00).

10. Preventive Maintenance Criteria

10.1. All items as found in Part 17, General Roofing Specification (07 30 00).

10.2. Roof Coating manufacturer shall provide District maintenance personnel training in the proper inspection and housekeeping procedures on an annual basis for the entire warranty period. Any deficiencies observed during the annual inspection shall be documented and reported in writing to the District for either warranty repair or third-party damage repair.

11. Budget Cost Range

11.1. This part shall apply only to SFB budgeting and economic projections and analysis. Not to be used for anything else.

11.2. Budget Cost Range Cool Roof Acrylic Coating

11.2.1. \$0.85 - \$1.25 per square foot

11.3. Budget Life Cycle Costs

- 11.3.1. \$0.01 per square foot per year to clear the roof coating of debris and repair minor nicks or damage to the roof coating.
- 11.3.2. Cleaning the roof coating by pressure washing will assist in maximizing the Solar Reflective Index of the coating, at a cost of \$0.10 per square foot per year as needed.
- 11.3.3. Cool Roof Acrylic Coatings are sustainable and can be recoated at the 10-year mark to provide additional reflectivity and UV protection for the roof membrane.