

SECTION 075600 - ROOF COATINGS

PART 1 GENERAL

1.1 SUMMARY

- A. Section included:
 - 1. Reflective roof coatings.
- B. Related Sections:
 - 1. Section 075216 – SBS Roofing.
 - 2. Section 076200 – Sheet Metal Flashing and Trim.
 - 3. Section 079200 – Joint Sealants.
- C. References and Industry Standards
 - 1. The following reference standards shall be applicable to this Section:
 - a. New York City Building Code, **current** edition, as amended, inclusive of:
 - Chapter 15 Roof Assemblies and Rooftop Structures
 - Section 1504.9 Reflectance
 - b. New York City Energy Conservation Construction Code, **current** edition:
 - Table C402.3 Minimum Roof Reflectance and Emittance Options
 - c. ANSI/CRRC S100 Standard.
 - 2. Industry Standards:
 - ANSI (American National Standards Institute)
 - ASTM (American Society for Testing and Materials)
 - CRRC (Cool Roof Rating Council)

1.2 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- B. Warranty: Submit a sample warranty identifying the terms and conditions stated in Warranty article.

1.3 QUALITY ASSURANCE

- A. Applicator Qualifications: Applicator shall be experienced in applying the same or similar materials.

- B. Regulatory Requirements: Comply with applicable codes, regulations, ordinances, and laws regarding use and application of products that contain volatile organic compounds (VOC).
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship is approved by Architect.
 - 3. Rebuild mock-up area as required to produce acceptable work.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to project site in original, factory-sealed, unopened containers bearing manufacturer's name and label intact and legible with following information.
 - 1. Name of material.
 - 2. Manufacturer's stock number and date of manufacture.
- B. Store materials in protected and well ventilated area. Handle materials to avoid damage.

1.5 PROJECT CONDITIONS

- A. Do not apply when surface temperature or weather conditions conflict with manufacturer's published requirements.
- B. Keep flammable products away from spark or flame. Do not allow the use of spark producing equipment during application and until all vapors have dissipated. Post "NO SMOKING" signs.
- C. Maintain work area in a neat and orderly condition, removing empty containers, rags, and rubbish daily from the site.

1.6 WARRANTY

- A. Warranty: Provide manufacturer's standard limited material warranty.

PART 2 - PRODUCTS

2.1 REFLECTIVE ROOF COATINGS

- A. Low-VOC single component, moisture curing silicone coating.
 - 1. Produces a durable elastic coating with exceptional weathering and water resistance characteristics.
 - 2. ASTM D6694.
 - 3. Solids by Weight, ASTM D1644: 80 percent.
 - 4. Solids by Volume: 70 percent.
 - 5. Hardness, ASTM D2240: 50.
 - 6. Elongation, ASTM D2370: 267 percent at 73 degrees F, 282 percent at 0 degrees F.
 - 7. Tensile Strength, ASTM D2370: 486 PSI at 73 degrees F, 700 PSI at 0 degrees F.
 - 8. Permeance, ASTM E96: 5.9 perms.
 - 9. Color: White.
 - 10. Single Coat, Coverage Rate: 1-1/2 gallons per 100 square feet.
 - 11. Multi Coat, Coverage Rate: 1-1/2 gallons per 100 square feet, per coat.
 - 12. Dry Film Thickness: 22 mils per coat.

13. Solar Reflectance: Initial: 0.87, 3-year: 0.70.
 14. Thermal Emittance: Initial: 0.89, 3-year: 0.90.
 15. SRI: Initial: 110, 3-year: 86.
 16. Service Temperature: -15 to 180 degrees F.
 17. Cure Time: 2 to 8 hours.
- B. Acrylic-based polymer elastomeric roof coating.
1. Provides good resistance to UV degradation and the weather.
 2. Forms a highly elastic membrane to protect a variety of roof substrates.
 3. Solids by Weight: 63 percent.
 4. Solids by Volume: 50 percent.
 5. Elongation, ASTM D412: 450 percent.
 6. Tensile Strength, ASTM D412: 140 PSI.
 7. Color: White.
 8. Coverage Rate: 1-1/2 gallons per 100 square feet per coat.
 9. Wet Film Thickness: 32 mils.
 10. Solar Reflectance: Initial: 0.82.
 11. Thermal Emittance: Initial: 0.91.
 12. Service Temperature: -0 to 180 degrees F.
 13. VOC Content: 47 g/L.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Before work is started, applicator shall thoroughly examine all surfaces for any deficiencies.
- B. Notify Design-Professional-of-Record in writing of any defects.

3.2 SURFACE PREPARATION

- A. All surfaces should be clean, dry and free of dust, dirt, oil and other foreign matter.
- B. Repair all cracks and blisters.
- C. Weather surfaces as recommended by coating manufacturer.

3.3 APPLICATION

- A. Comply with manufacturer recommendations and approved submittals. Mix as recommended by manufacturer.
- B. Mix as recommended by manufacturer.

END OF SECTION 075600