**SECTION 07 56 00 - FLUID-APPLIED ROOFING**

1. **GENERAL**
	1. SUMMARY
		1. Section Includes: Remedial roof coating system applied over existing [TPO] [PVC] [EPDM] roof systems.
	2. SUBMITTALS
		1. Action Submittals:
			1. Product Data: Manufacturer’s current technical data sheet for proposed products.
			2. Shop Drawings: Illustrate scope of work; include roofing details.
		2. Informational Submittals:
			1. Sample warranty.
	3. QUALITY ASSURANCE
		1. Manufacturer Qualifications:
			1. Minimum 25 years experience in manufacture of silicone roof coatings.
			2. ISO 9001 certified.
		2. Roof Coating:
			1. UL Listed.
			2. FM Class 1, 4470 approved.
			3. NSF P151 Certified.
		3. Applicator Qualifications:
			1. Approved by roof coating manufacturer.
			2. Eligible to offer manufacturer’s warranty.
	4. DELIVERY, STORAGE AND HANDLING
		1. Handling and Storage:
			1. Store roof coating containers between 15 and 109 degrees F (minus 9 to 43 degrees C).
			2. Store other materials in accordance with manufacturer’s instructions.
			3. Keep products out of direct sunlight.
	5. PROJECT CONDITIONS
		1. Rooftop equipment and accessories in place prior to surface preparation and roof coating application.
		2. Apply roof coatings at temperatures above 0 degrees F (minus 18 degrees C).
		3. Contact manufacturer for recommendations if applying coating to substrates over 120 degrees F (49 degrees C).
	6. WARRANTIES
		1. Provide roof coating manufacturer’s labor and material warranty for period of [10] [15] [20] years.
2. **PRODUCTS**
	1. MANUFACTURERS
		1. Contract Documents are based on products by Momentive Performance Materials, Inc. [www.siliconeforbuilding.com](http://www.siliconeforbuilding.com)
		2. Substitutions: [Under provisions of Division 01.] [Not permitted.]
	2. MATERIALS
		1. Silicone Roof Coating:
			1. Source: Enduris 3500 or 3525.
			2. Description: High solids, solvent-free, alkoxy-based, moisture-cured, silicone roof coating by Momentive Performance Materials.
			3. Physical properties, tested to ASTM D6694:
				1. Tensile strength: 200 PSI, tested to ASTM D2370.
				2. Elongation at break 500 percent, tested to ASTM D2370.
				3. Water vapor transmittance: 9.3 perms, tested to ASTM E96/E96M.

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* + - * 1. Water vapor transmittance: 5.2 perms, tested to ASTM E96/E96M.
				2. Volume solids: Minimum 90 percent, tested to ASTM D2697.
	1. ACCESSORIES
		1. Seam Treatment Materials:
			1. Enduris Silicone Liquid Flashing by Momentive Performance Materials.
			2. UltraSpan UST / USM pre-cured silicone transition sheets and molded corners by Momentive Performance Materials.
			3. Reinforcement fabric: GE RF100 series, 100 percent polyester spun-laced textile reinforcing fabric.
			4. Sealant: SWS silicone sealant by Momentive Performance Materials.
		2. Walkway Coating: GE Enduris 3500 Protection silicone coating, [yellow,] [contrasting color,] with granules installed in coating at minimum rate of 30 pounds per 100 square feet.
		3. Cover Board: Greenboard, recycled and pressed material cover board by Kelly Green Products, or plywood, non-treated, minimum 1/2 inch thick, or DensDeck sheathing, preprimed, [1/4] [1/2] inch thick.
1. **EXECUTION**
	1. PREPARATION
		1. Prior to beginning coating, conduct adhesion test in accordance with manufacturer’s adhesion testing procedures; determine if primer or other surface preparation is required.
		2. [Evaluate existing shrinkage and tenting, and contact roofing manufacturer for required preparation.]
		3. Mask or otherwise protect surfaces not to be coated.
		4. Review existing and imminent weather conditions including potential for extreme temperatures, relative humidity, frost, dew, and precipitation; ensure that coating and accessory materials will have sufficient curing time.
		5. Core existing roofing at least once every 10,000 square feet. If moisture is detected a moisture survey is required.
		6. Surface Preparation:
			1. Inspect underside of deck for rot, rust, and deterioration. Take corrective measures before beginning coating preparations. Repair failed, damaged, and open areas that could allow water infiltration during cleaning.
			2. Remove and replace water-saturated insulation:
				1. Make three-sided cut in roof membrane; pull back membrane to expose insulation.
				2. Install new insulation.
				3. Lay roof membrane back in place and repair with three course repair consisting of liquid flashing, fabric, and liquid flashing.
			3. Pressure wash roof surface at 2500 to 4000 PSI utilizing manufacturer’s recommended roof preparation wash or approved biodegradable cleaner; remove oils and other materials that could interfere with adhesion. Rinse with clean water. Allow to dry thoroughly.
			4. Seal curbs, gaps, flashings, angle changes, and penetrations with minimum 40 mils of liquid flashing or seam sealant.
			5. When possible remove coping caps and seal walls below with liquid flashing before reinstalling coping cap.
			6. Treat exposed membrane scrim with base coat of roof coating.
			7. Install cover boards when required, attached with fasteners and plates in accordance with manufacturer’s fastening pattern.
				1. Fasteners: Penetrate roof decking minimum 1 inch.
				2. Set plates in liquid flashing and cover in liquid flashing minimum 60 mils thick.
				3. Treat seams between cover boards with three courses of liquid flashing.
			8. Fill new pitch pockets with minimum 3 inches of liquid flashing.
			9. Restore existing pitch pockets with liquid flashing.
		7. Required Condition of Surfaces: Clean, sound, dry, and free of materials, laitance, membrane chalk, and loose coatings that could inhibit proper adhesion of coatings or sealants.
	2. APPLICATION
		1. Apply roof coating in accordance with manufacturer’s instructions and approved Shop Drawings.
		2. Apply roof coating at rate of 1.5 gallons per 100 square feet to minimum 21 mils cured coating thickness.

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* + 1. Apply roof coating at rate of 2.0 gallons per 100 square feet to minimum 28 mils cured coating thickness.

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* + 1. Apply roof coating at rate of 2.5 gallons per 100 square feet to minimum 36 mils cured coating thickness.
		2. Apply coating by brush, roller, or airless sprayer. Minimize back-rolling.
		3. Apply seam sealant by brush, trowel, or gloved hand.
		4. Final Roof Coating: Monolithic and seamless, encapsulating entire roof surface.
		5. Apply walkway coating at rate recommended by manufacturer.
	1. CLEANING
		1. Remove construction debris and waste materials.
		2. Ensure that drainage components have free water flow.
		3. Ensure that condensation lines are connected to AC units and terminate at drain or gutter.
	2. PROTECTION
		1. Protect roof coating from foot traffic and damage during curing process.
	3. FIELD QUALITY CONTROL
		1. Verify cured mil thickness of coating at end of work and prior to warranty inspection.
		2. Repair deficient areas with liquid flashing or roof coating as applicable to size of deficient area.
		3. Roof coating is subject to pre-job, progress, and final inspections by coating manufacturer or its designated third-party inspectors.

END OF SECTION