SOLAR COATING SYSTEMS
SCS METAL RESTORATION SYSTEM
Specification for Metal Restoration 07590

Name
Address

PART 1. GENERAL

1.01 SUMMARY

A. Furnish and install all labor and materials necessary to apply an elastomeric acrylic metal restoration coating system as outlined in this specification, preserving and extending the life of the existing metal roof.

B. The manufacturer's application instructions for each product used is considered part of these specifications and should be followed at all time.

1.02 QUALITY ASSURANCE

A. Supplier Qualifications: The Solar Coating Systems Roof Renovation System is approved for use on the project.

B. Applicator Qualifications: The applicator shall be approved by Solar Coating Systems to apply the system.

1.03 SUBMITTALS

A. Submit product data sheets and literature verifying physical and performance properties of materials.

B. Submit material safety data sheets.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Containers and Packaging: Deliver materials in original sealed containers, clearly marked with: manufacturer's logo; full product name; and lot number(s).

B. Storage and Handling: Store materials between 40°F and 100°F with careful handling to prevent damage to products. If conditions exceed these ranges, special consideration in storage must be taken. Do not store at high temperatures in direct sunlight.

C. Protection: Protect all materials from freezing and other damage during transit, handling, storage, and installation.

1.05 PROJECT CONDITIONS

A. This installation guide specification assumes that the metal is sound and in good condition. It also assumes the if portions of the metal roof are rusted through and structurally unsound, necessary repairs have been made and are required prior to installation of the acrylic restoration system.

B. The minimum recommendations for material usage are for ideal conditions. The specified rate of application per 100 square feet may vary and need to be increased due to uneven application, rough surface texture, wind conditions while spraying or other variables.

C. Do not apply materials unless surface to receive acrylic roofing system is clean, dry and prepared as specified.

D. Install all material in strict accordance with all published safety, weather, or applicable regulations of the manufacturer and/or local, state, and/or federal agencies which have jurisdiction.

E. The entire system shall be fully adhered to the surface on which it is applied. Voids left under the system by creating bridges are not acceptable.

F. Do not proceed with application of coating or sealing materials when temperature is less than 50°F. No coating system shall be applied if weather will not permit it to dry prior to exposure to precipitation or freezing.

G. Heavy puddles of coating on the roof are not acceptable.

H. Instructions for use of all roofing materials and application equipment should be read and followed at all times.

I. As a general principal, to prevent the ponding of water, install additional drains or tapered insulation drainage systems as necessary.

1.06 DETAIL WORK

A. This specification does not extensively outline procedures for preparation and finishing of drains, vents, ducts, flashings, parapet walls, sheet metal work, etc. This work should be outlined by the contractor before work commences, and shall be performed observing good trade practices.

PART 11. PRODUCTS

2.01 SOLAR COATING SYSTEMS ROOF RENOVATION SYSTEM

A. The roofing system is a and 100% acrylic, elastomeric, spray-applied SCS Roofing System manufactured by Solar Coating Systems.

B. The reinforcing fabric shall meet the following physical property requirements:

Properties	Test Method	Typical Value
Weight (per sq. yard)	Calculated by formula	2.75-3.0 oz
Bursting Strength (lbs)	ASTM D3786	127-177
Tensile Strength (psi)	ASTM D1682	41-57
Tear Strength (lbs)	ASTM D1117	14.2-16

Elongation (%)	ASTM D1682	25.8-62

C. Physical Properties of Cured Roofing System: The testing of the coating shall be done under ASTM-D6083, "Standard Specification for Liquid Applied Acrylic Coating Used in Roofing", unless otherwise specified.

D. The protective acrylic coating system shall meet the following physical property requirements:

Properties	ASTM Method	Requirements	Results
Tensile Strength, psi (Max @ 73° F)	D6083	Minimum 200	>250
% Elongation @ Break (73° F)	D6083	Minimum 100	>250
Wet Adhesion to PVC Substrate	D6083	Minimum 3.0 pli	
Permeance, perms	D6083	Maximum 15	<15
Volume Solids %	D6083	> 50	> 52
Weight Solids %	D6083	> 65	> 65
Reflectivity	D6083	> 0.70	0.87
Emissivity	D6083	> 0.75	0.90

2.02 RELATED MATERIALS

A. All materials used shall be applied in accordance with its manufacturer's recommendations. Solar Coating Systems shall approve of all flashing materials, adhesives, elastomeric caulking compounds, primers, and other similar materials either manufactured by Solar Coating Systems or others.

2.03 EQUIPMENT

A. Recommended spray equipment is the Graco GH-5030 pump or Graco GM-7000 pump, or Garlock equivalent. Use a Reverse-A-Clean tip with a minimum tip size of .033 up to about .045.

Note: For alternative equipment recommendations consult the spray equipment manufacturer directly.

PART 111. EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

A. Compliance: Comply with manufacturer's product data, including product technical bulletins and product guide specification instructions.

3.02 GENERAL CONDITIONS

A. Substrate surfaces must be dry, clean, and void of any dirt and debris.

B. Verify that all roof penetrations, mechanical equipment, edge metal, and other on-roof items are in place and secure.

C. Verify that all critical areas around the immediate vicinity of the spray area are suitably protected.

D. Verify all roof drains are clean and in working order.

3.03 PREPARATION of EXISTING MEMBRANE

A. The surface must be clean, sound, dry and free of any loose materials or existing coatings that would inhibit proper adhesion of the coating system. Achievement of this condition will require the use of will require power washing. Cleaning shall always be performed observing good trade practices.

B. Metal panels, which have corroded and deteriorated to the point being structurally unsound or broken will require replacement.

C. Prime all rust areas with **SCS Rust Inhibitor** at a rate of ½ to 1 gallon per 100 Square Feet. Rate depends on whether the rust is heavy or light.

D. Tighten all loose fasteners, and replace as necessary

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E. Reseal around all mechanical equipment and roof penetrations with **SCS Brushable White Elastic Patch**.

F. Seal all tight vertical joints and seams with SCS **Brushable White Elastic Patch** in a caulking bead at a rate of 75-100 LFT/gallon.

G. Seal nails and fasteners with **SCS Brushable White Elastic Patch**

H. At all horizontal seams and loose vertical seams, 3 course with **SCS Brushable White Elastic Patch** at a rate of 20 LFT /gallon with 6" T272 or T325 polyester, or 25 LFT/gallon with 4" T272/T325 polyester.

3.04 APPLICATION

A. After metal has been thoroughly prepared, the entire roof shall receive the SCS Restoration System consisting of 3 gallons per 100 square feet of an approved **SCS Acrylic Coating**, applied evenly in two separate coats.

B. The first coat shall be spray or roller applied at the rate of 1½ gallons per 100 square feet.

C. After thorough drying of the first coat (normally 4 to 12 hours), the second coat shall be applied using a crosshatch technique, at the rate of 1½ gallons per 100 square feet.

D. All coating edges shall be cut in evenly in a uniform manner so as to provide an aesthetically pleasing appearance.

3.05 FIELD QUALITY REQUIREMENTS

A. Manufacturer's Field Services: Inspection by the coating manufacturer's representative shall be made to verify the proper installation of the system. Any areas that do not meet the minimum

standards for application as specified herein shall be corrected at the contractor's expense. Manufacturer's inspection or verification shall not constitute acceptance of responsibility for any improper application of material.

3.06 CLEANING

A. Surfaces not intended to receive elastomeric coating materials shall be protected during the application of the system. Should this protection not be effective, or not be provided, the respective surfaces shall be restored to their proper conditions by cleaning, repairing or replacing. All debris from completion of work shall be completely removed from the project site.

PART 1V. MATERIALS

The following materials listed in these recommendations are available from Solar Coating Systems:

1. **Approved SCS Coatings**
   a. **SCS Premium Elastomeric Coating**
   b. **SCS Ultra Premium Elastomeric Coating**
   c. **SCS BUR Elastomeric Coating**
2. **SCS Brushable White Elastic Patch, elastomeric architectural sealant.**
3. **SCS T272, T325, or T326 Polyester Reinforcing Fabric, 4 inch, 6 inch, 10 inch, 20 inch and 40 inch.**
4. **SCS Rust Inhibitor**