SOLAR COATING SYSTEMS
ACRYLIC ROOF RENOVATION
Specification for Hypalon/PVC Renovations 07590

Name
Address
City, State, zip

PART 1. GENERAL

1.01 SUMMARY

A. Furnish and install a seamless, waterproof spray applied elastomeric acrylic coating system as outlined in this specification, to preserve the membrane and extend the life of the existing single ply roof.

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

1.02 QUALITY ASSURANCE

A. Supplier Qualifications: The Solar Coating Systems Roof Renovation Systems 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 deck is sound and in good condition. It also assumes the if the deck is plywood, it has no dry has no dry rot, and is in sound condition, or has been repaired.

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. Any wet insulation must be identified and removed. Consult a Solar Coating Systems Technical Consultant regarding the need for moisture surveys and other assessments.

D. Structural cracks should be referred to the appropriate Solar Coating Systems Technical Consultant.

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

F. 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.

G. 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.

H. 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.

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

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

K. 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

A. The roofing system is a 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	>200
% Elongation @ Break (73° F)	D6083	Minimum 100	>100
Wet Adhesion to PVC Substrate	D6083	Minimum 3.0 pli	
Permeance, perms	D6083	Maximum 15	21
Volume Solids %	D6083	> 50	> 50
Weight Solids %	D6083	> 65	> 65
Reflectiviiy	D6083	> 0.70	0.87
Emmissivity	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, cants, 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. On Hypalon and PVC roofs, 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 may require the use of SCS Surface Cleaner, and will require power washing. Cleaning shall always be performed observing good trade practices.

B. Roof membrane shall be repaired and made sound and watertight prior to application of the fluid applied reinforced roofing membrane in accordance with the single ply manufacturer's recommendation, or

C. Inspect all laps and seams. At all loose seams, apply an approved **SCS Acrylic Coating** at the rate of 2 gallons per 100 square feet. Immediately embed 6" width polyester over the loose seams. Immediately apply an approved **SCS Acrylic Coating** over the polyester at a rate of 1 gallon per 100 Square feet.

D. At all other weak areas, cracks, splits etc., and all waterways and other areas where potential water accumulation is a concern, apply an approved **SCS Acrylic Coating** at the rate of 2 gallons per 100 square feet, Immediately embed T272 polyester reinforcing fabric into the wet coating, with a second coat of an approved **SCS Acrylic Coating** being immediately applied on top of the fabric at the rate of 1 gallon per 100 square feet. Both the first and second coats shall extend a minimum of 2 inches beyond the edges of the polyester reinforcing fabric. In any large valley area multiple widths of fabric should be used, overlapping them a minimum of 3 inches so that the coating and fabric extend at least six inches up above the potential waterline.

E. Seal all HVAC ductwork joints as needed with **SCS Brushable Elastic Patch** and reinforcing polyester fabric. Coat entire duct assembly with two 1.0 gallon coats (per 100 sq. ft.) of Solastic Acrylic Coating.

F. Reseal around all mechanical equipment and roof penetrations with **SCS Brushable Elastic Patch**. Install new treated wood supports under pipe supports, where required.

3.04 APPLICATION

A. Solastic Surface Coating:

1. Apply one coat of white an approved **SCS Acrylic Coating** at a rate of 1-1/2 gallons per 100 Square Feet. After the first coat dries, apply a second coat **SCS Acrylic Coating** over the entire system, at the rate of 1 1/2 gallons per 100 square feet. Use crosshatch technique for the second coat. Apply these top coats over all HVAC duct work and over the top of any parapet walls, etc.

2. These minimum recommendations for material usage are for ideal conditions. The number of gallons per 100 square feet may need to increase due to uneven application, rough surface texture, wind conditions while spraying, or other variables.

3. No coating shall be applied if weather will not allow it to dry prior to exposure to precipitation, dew, or freezing temperatures.

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 Acrylic coatings
   a. SCS MB, 100% acrylic coating.
   b. SCS Premium Elastomeric Acrylic Coating
   c. SCS Ultra Premium Elastomeric Acrylic Coating
2. SCS Brushable Elastic Patch 100% acrylic, elastomeric architectural sealant.
3. SCS T272, T325, or T326 Polyester Reinforcing Fabric.
4. Surface Cleaner, water based biodegradable cleaner.