PROGRESSIVE MATERIALS

PREMIUM COATING SYSTEMS

ACRYLIC ROOF COATING RESTORATION (ARCR) SYSTEM OVER METAL ROOF PANEL

Part 1. General Conditions

1.1 Description

A. Scope of Work
Provide all materials, labor and equipment required for the installation of the ARCR System over the existing metal roof including all ancillary products.

B. Related Work
1. Repair All Sheet Metal Defects
2. Repair All Flashing Defects
3. Surface Preparation
4. Perform Adhesion Tests
5. Install ARCR Membrane

1.2 Performance Requirements

A. All acrylic products must be domestically produced. Products produced outside of the US will not be accepted.

B. Coating manufacturer must produce its own product. Private labeled acrylic coating products will not be accepted.

1.3 Submittals

A. Product Data: Product data on acrylic coating, physical and chemical properties, preparation of substrate required, product limitations, and cautionary requirements.

B. Safety Data Sheets (SDS)

C. Shop Drawings: Roof plan and details showing extent of roofing, intersections with adjacent surfaces, and details of expansion joints, counterflashing, and other items for a complete roofing system.

D. Manufacturer's Installation Instructions: Indicate installation requirements and procedures.

E. Certificates:
1. Product certificates signed by the manufacturer certifying material is in compliance with the specified performance characteristics and criteria, and physical requirements.

F. Sample copy of PM warranty

G. Maintenance Data: For ARCR System to include in maintenance manuals.

H. Final Inspection Report: Copy of roofing system manufacturer's inspection report of completed roofing installation.

1.4 Quality Assurance

A. Manufacturer:
1. Company specializing in the manufacturing of the system specified in this Section.

B. Installer:
1. Installer must be a Certified Licensed Applicator (CLA) by the Manufacturer providing the warranty and must be capable of receiving the specified warranty.
2. CLA to ensure all personnel are properly trained and have a full understanding of all OSHA safety requirements.

1.5 Delivery, Storage, and Handling

A. Deliver and store liquid materials and other products in their original unopened containers or packaging until ready for installation.
B. Materials shall be clearly labeled with the manufacturer's name, product identification, safety information, and lot numbers.
C. Store materials indoors whenever possible.
D. Protect stored products from freezing.
E. Comply with the manufacturer's instructions for handling and safety procedures.
F. Store and dispose of roofing tools, materials, containers, and equipment in accordance with requirements of local authorities having jurisdiction.

1.6 Environmental Requirements

A. Maintain logs of environmental conditions (temperature, humidity, and wind speed) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside of manufacturer's limits.
B. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.
C. Do not install acrylic coating under the following conditions:
1. When ambient temperature is below 50° F or could fall below 32° F within 24 hours of application.
2. When rain or dew is likely to occur before the product dries.
3. In late afternoon, when facing conditions of high humidity, as overnight dew can cause product wash-off.

1.7 Warranty

A. Provide Manufacturer's 10, 15, 20-year warranty year labor & material warranty covering leaks due to acrylic material failure.

Part 2. Products

2.1 Acceptable Products

A. Insulation Board
1. Match existing material
B. Cleaners and Primers
1. Progressive Materials:
a. Pro-Prime P-130 Rust Inhibitive Primer
C. Caulking Sealant
1. Acrylic caulking sealant meeting the following physical properties shall be approved:
a. Elongation: >400%
b. Tensile Strength: >350 psi
c. VOC: <50g/L
2. Manufacturer, product name and number, and product data sheets must be submitted to PM for approval prior to starting any warranted projects.
D. Acrylic Mastic Sealant
1. Progressive Materials AM-400 series mastic
2. Manufacturer, product name and number, and product data sheets must be submitted to PM for approval prior to starting any warranted projects.

E. Reinforcing Fabric
1. Progressive Materials: PF 200 Polyester Fabric
a. PF 206 – 6″
b. PF 212 – 12″

F. Skylight Sealer
1. Progressive Materials: Pro-Seal HS 3220 Clear Silicone Skylight Coating

G. Acrylic Coating
1. Progressive Materials: Pro-Hydro AC 1200 Acrylic Roof Coating

2.2 Acrylic Coating Materials

A. Approved roof coating is Pro-Hydro AC 1200 Acrylic Roof Coating, manufactured by Progressive Materials, LLC and complying with the following minimum properties:
1. Tensile Strength: ASTM D-2370
2. Elongation: ASTM D-2370 388 ±25
3. Water Vapor Permeance: ASTM D-1653 14 ±2
4. Color: Owner to select standard topcoat color.
5. Solids Content: 53 ± 2
6. VOC Content: < 50 grams/liter
7. Initial Solar Reflectivity: .84 * White only
8. Initial Thermal Emissivity: .91 * White only
9. SRI Value:106

Part 3. Execution

3.1 Acceptable Products

A. Verify roof slope prior to beginning installation.
1. Standing water areas of any size will adversely affect the performance of any roofing system. Care should be taken during examination to identify any areas of standing water present on the roof 24 or more hours after the latest rain event. In standing water areas where positive drainage does not exist, measures such as lowering drains, installing additional drains, etc. must be taken to ensure positive drainage and eliminate all instances of standing water on the roof. Any section of the roof exposed to standing water after the completion of the Acrylic Roof Coating Restoration project will be excluded from the warranty.

B. Identify all seam failures, flashings failures and inadequate sheet metal details.

C. Inspect all roof drains to ensure proper performance.

D. Inspect all roof system fasteners for back out.

3.2 Preparation

A. Cleaning
1. Thoroughly power wash roof surface and all other areas to receive new coating with a minimum of 2,000 psi water pressure. Be sure not to damage existing metal panels during this process.
2. After the surface has dried, perform an adhesion test. If the coating does not properly adhere to the surface, apply Pro-Prime P-130 primer at a rate of ½ gallon per square.
3. Any areas of grease contamination are to be cleaned with an industrial strength detergent.
4. Any existing roofing or mastic materials must be removed as the warranty will not cover failure of underlying materials.
5. All loose coating or paint material must be removed by wire brush, power washing or scraping.

B. Rust Contamination
1. Any rust areas should be cleaned with a wire brush to remove scaling.
2. Apply Pro-Prime P-130 Rust Inhibitive Primer at a rate of ½ gallon per square.

C. Flashing Details
1. Ensure all existing flashings provide a watertight condition. If necessary, re-flash any areas required with a three-course method: coating-fabric-coating by applying one coat of Pro-Hydro AC 1200 at 1.5 gallons per square, laying PF 200 Polyester Fabric into wet coating, then apply another coat of Pro-Hydro AC 1200 1.5 gallons per square.

D. Sheet Metal
1. Ensure all sheet metal accessories are in good condition and will provide a watertight condition. If necessary, replace or repair any sheet metal required to provide a watertight condition.

E. Fasteners
1. Identify and replace all fasteners that are loose or backed out and replace with oversized fastener.
2. Prior to coating the field of the roof, spot apply AM – 400 series mastic to all fasteners. Generously apply mastic to ensure complete encapsulation of fastener.

F. Horizontal Laps:
1. Apply pressure to lower lap panel, if more than 1/8" gap appears at lap joint, install additional stitch fasteners.
2. Clean any residual roofing material from lap area.
3. Required options for sealing horizontal seams:
    a. Install A three-course method, coating-fabric-coating by applying one coat of Pro-Hydro AC 1200 at 1.5 gallons per square, laying PF 200 Polyester Fabric into wet coating, then apply another coat of Pro-Hydro AC 1200 1.5 gallons per square.
    b. Install AM 400 at a minimum of 45 mils on all horizontal seams in a 4" pass.

G. Vertical Laps:
1. Apply pressure to vertical lap joint, if more than 1/8" gap appears at lap joint, install additional fasteners and treat fastener as outlined above.

3.3 Acrylic Coating Installation

A. Ensure surface is completely dry.

B. Ensure subsequent coats of primer or acrylic coating are completely cured.

C. Ensure adhesion tests have been completed and results are satisfactory with the manufacturer's requirements.

D. Install acrylic coating in two passes over entire roof surface to achieve a final thickness of:

10-Year Warranty	15-Year Warranty	20-Year Warranty
10-Year Warranty: 25 dry mils (two passes at 1.5 gal/sq. total 3 gal).	15-Year Warranty: 34 dry mils (three passes for a total of 4 gal).	20-Year Warranty: 42.5 dry mils (three passes for a total of 5 gal).
Base Coat		
1.5 gal/sq.	1.5 gal/sq.	1.75 gal/sq.
Intermediate Coat		
1.5 gal/sq.	1.5 gal/sq.	1.75 gal/sq.
Topcoat		
—	1 gal/sq.	1.25 gal/sq.

E. NOTES:

1. Care should be taken to ensure proper coverage of vertical rib surfaces.
2. Passes should be applied perpendicular to each other (crosshatched) and completely cured
3. Any subsequent roof repairs after the coating installation should be performed with a three-course coating and fabric if needed.

3.4 Skylight Coating Installation

A. Skylights should not be coated until after the surrounding roof surface has received Pro-Hydro AC 1200 Acrylic Roof Coating to ensure adequate adhesion to the roof-skylight flashing surface.

1. The skylight surface must be completely clean, dry, and free of loose particles.
    a. HS 3220 Pro-Eco Skylight coating should be applied to receive a final dry mil thickness of 30 mils (approximately 2.25 gallons/square). It is advised that HS 3220 be applied in multiple coats to eliminate sag or runoff.

3.5 Field Quality Control

A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation upon completion and submit report to Owner/Architect. There shall be no items on the roof that could inhibit the inspection process, such as solar panels, decking systems.

1. Notify Owner 48 hours in advance of date and time of inspection.
    a. Repair or remove and replace components of roofing system where inspection results indicate that they do not comply with specified requirements.

3.6 Cleaning

A. Remove any overspray from adjacent surfaces using cleaning agents and procedures recommended by manufacturer of affected construction.

B. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their instructions.

C. Repair or replace defaced or disfigured finishes caused by work of this section.

3.7 Protection of Finished Work

A. Ensure roof surface is free of traffic for minimum of 12 hours after acrylic coating application or until coating is completely cured.

B. Ensure any subsequent work does not cause damage to finished roof system. If necessary, install protection over finished roof area.