

SECTION 07 56 00
APOC GUIDE SPECIFICATION
METAL ROOF RESTORATION
AM-ME-252 19

PART I – GENERAL

1.01 RELATED DOCUMENTS

- A. Requirements of Division 1 General Requirements
- B. Related sections – Sheet metal

1.02 DESCRIPTION

- A. Restoration of existing metal roof membrane by cleaning surface, treating seams, coating fasteners and applying an acrylic coating.
- B. Replace deteriorated metal panels.
- C. Replace missing or damaged foam and/or metal closures.
- D. For Kynar polymer coated metal panels contact APOC technical department.

1.03 SUBMITTALS

- A. Sample of coating material, reinforcing tapes and repair mastic
- B. Applicator approval letter from the manufacturer
- C. Product literature
- D. Sample Warranty as required.

1.04 QUALITY CONTROL

- A. Comply with manufacturer's installation instructions for all phases of work including substrate preparation, application of materials and protection of adjacent surfaces.
- B. All substrates must be peel tested for adhesion and those results provided to APOC for analysis. If peel test is over 2 pounds per inch width without primer, or if the failure mode is cohesive rather than adhesive, APOC #252 may be applied directly to the metal surface.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Package labels must be clearly visible on pallets.
- B. Store all roll goods in a dry, protected environment.
- C. Store coatings and mastics at recommended temperatures appropriate for time of year materials are being installed. Product must be installed at temperatures as stated on the product label.

Keep polyester rolls and tape dry. Do not allow water based products to freeze.

1.06 PROJECT CONDITIONS

- A. Ambient air temperature must be between 55° F and 110° F.
- B. Roof surface must be dry with no precipitation in the forecast for the next 48 hours.
- C. Contractor must follow local, state and federal codes and safety requirements.

1.07 WARRANTY

- A. Warranty issued shall be for coating application only. This warranty does not cover the existing roof, structural deck or any labor associated with this project.
- B. Warranties will be issued for completed projects on entire building.
- C. For L&M Warranties, all details including job site photographs, Intent to install form and specifications must be submitted to APOC via Fax to (813) 342-3823 5 days prior to the start of the roofing project. Installing contractor MUST be an APOC Approved Contractor. Labor and Material warranties may be available after project inspection and review of roof condition.
- D. No APOC field representative has the authority to change the requirements for submissions or Approved Contractor status if Material and Labor Warranties are required.

PART II – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. APOC Roofing Systems

2.02 MATERIALS

- A. Roof Restoration System: AM-ME-252 19
- B. Material quantities:
 - APOC #252 base coat 1.5 gallons per square
 - APOC #252 finish coat 1.5 gallons per square
- C. Physical properties for APOC #252 acrylic coating
 - 12 lbs/gallon
 - Reflectivity 90% (CRRC)
 - Emissivity 87% (CRRC)
 - Elongation 463%
 - Tensile Strength 365 psi
 - Viscosity 110-140 ku

Solids by Weight (+or- 3%)	66%
Solids by Volume (+or- 3%)	54%
Permeability ASTM D-1653	<5 perms
Clean-up product	Warm water & soap

- D. Related Materials
 - APOC #264 acrylic patch
 - APOC Incredible Fleece Top tape
 - APOC #483 polyester reinforcement
 - APOC #1 Green Seal
 - APOC #291 metal primer
 - Self-tapping screws to secure panels
 - Preformed or custom cut foam closures to match panel profiles

PART III – EXECUTION

3.01 INSPECTION

- A. Perform total inspection of all roof areas. Notify owners' rep of any unacceptable substrates.

3.02 SURFACE PREPARATION

- A. Replace deteriorated and damaged metal panels with new panels. Wash new galvanized panels with a 50% vinegar and water solution. New panels should have matching profiles.
- B. Install test patches on each panel type found on roof. Perform peel adhesion tests before proceeding with coating application. Contact APOC technical department before installing test patches.
- C. Remove and replace loose, missing and stripped screw fasteners with new larger fasteners. New fasteners must be secure. Prime all rusted areas with APOC #291 rust inhibitive primer at the rate of 1 gal per square before installing new fasteners.
- D. Metal crickets must be installed on the high side of all curbs according to original metal roof manufacturer's specifications.
- E. Remove non-functional penetrations and curbs. Repair with panels of equal profile. Owner should be notified if structural support joist or beams are missing. Structure must be repaired before proceeding with panel installation.
- F. Replace missing foam or metal enclosures.
- G. Replace deteriorated gutters. Secure existing gutters to wall and/or roof and prime with APOC #291 rust inhibitive primer. Slope gutters or add downspouts to eliminate ponding water in gutter.
- H. Eliminate all water ponding conditions in valleys and waterways prior to the application of APOC products. "Ponding water" is

defined as water that does not properly drain and remains for more than 48 hours.

- I. Wire brush or for best results, blast rusted areas with appropriate blasting media, rinse with water, let dry and apply APOC #291 metal primer by roller at the rate of 1 gallon per square. Do not apply primer to wet or damp surfaces. Do not apply primer when surface temperatures are over 180° F.
- J. Power wash the entire metal roof area with minimum 3000 psi water pressure. Use scrubbing and detergent to remove all dirt, dust, oil, grease, animal secretions, peeling paint, peeling coating, etc., which may cause adhesion problems. In some cases sand blasting may be required for proper cleaning of surface.
- K. Prior to spray work, post notices a minimum of 48 hours around building and parking lots. Protect adjacent surfaces where product is not to be applied using masking tape, plastic, paper sheets, stretch wrap, tarps, or plywood, which ever is appropriate. Owner should be notified of start times so that fresh air intakes may be sealed off and or HVAC units shut down. Contractor should constantly monitor wind direction to prevent coating cars and adjacent surfaces. If winds become excessive, application should stop.
- L. Contractor must remove drain screens and seal the drainpipe to prevent plugging of drain during the coating operation. Unplug drains and reinstall screens after spray operation has been completed.

3.03 MEMBRANE APPLICATION

- A. Fasteners: seal all fasteners with a 1" diameter cap of APOC # 264 acrylic patch. Allow to cure before applying field coat.
- B. Seams, Roof Penetration Curbs and Skylights: seal all vertical seams with min. 2" wide, APOC Incredible Fleece Top tape. Seal Roof penetrations with a hula wrap of Fleece Top tape followed by a target embedded in APOC #264 acrylic patch. Flash curbs and skylights with a min. 4" wide APOC Incredible Fleece Top tape. Horizontal seams shall be loosened and APOC #1 Green Seal sealant injected between the panels. Refasten panels using new fasteners. Crimped standing seams do not need reinforcement but do need a bead of AP #264 or AP #1 at the seam.
- C. Base coat – after primer coat has cured, apply APOC #252 acrylic base coat at the rate of 1.5 gallons per square.
- D. Finish coat – after base coat has cure, apply APOC #252 at the rate of 1.5 gallons per square to ensure a smooth and continuous film over the surface. Total coverage of APOC #252 shall be 3.0 gallons per square. Application of coatings should be completed a

minimum of 4 hours prior to sunset. Apply in morning hours to allow maximum cure time.

- E. Material Requirement Guide –
Corrugated Metal: Total Roofing Squares X Gallons/sq X 1.15
Standing Seam: Total Roofing Squares X Gallon/sq X 1.20.
- F. Skid resistant surface (Optional): Let the APOC #252 acrylic roof coating cure till walkable. Mix 3-5 lbs of crushed walnut shells into a 5 gal pail of coating and stir till uniform. Apply using a roller at a minimum rate of 1 gallon per square. Skid resistance can be increased or decreased by adding varying amounts of crushed walnut shells. For source of crushed shells contact:
Composition Materials Co., Inc.
249 Pepes Farm Road
Milford, CT
203-874-6500

3.04 FINAL INSPECTION

- A. Contact APOC inspector two weeks before project is completed to allow time to schedule final inspection.

3.05 JOB SITE CLEAN UP

- A. Remove all roofing related trash and debris from jobsite.
- B. Dispose of containers in accordance with local regulations.

Note: APOC does not practice Engineering or Architecture. Any review of the buildings construction or inspection of roof plans or inspection of the building's structural roof deck by APOC representatives shall not constitute any warranty by APOC of such plans, specifications or construction. Any roof inspections are solely for the benefit of APOC. APOC is not responsible for the failure of previously applied coatings.