

# Membrane Coating System Section 07 55 53

Fluid Applied Reinforced Elastomeric Latex Membrane for Aged Membranes

\*Approved membranes: EPDM, PVC, TPO, CSPE, CPA, Modified Bitumen

## PART 1 – GENERAL

### 1.1 Description

- A. Work included: all labor, materials, equipment and accessories to furnish and install a fluid applied Rapid Roof® III, Benchmark®, PUMA XL (Benchmark and PUMA XL are not approved for use on EPDM) elastomeric latex roof coatings over aged, fully- adhered or factory approved mechanically fastened, “Approved” membranes.

**\*(BALLASTED MEMBRANES ARE NOT APPROVED FOR THIS APPLICATION)**

- B. Related work specified elsewhere:
1. Prefabricated roof specialties
  2. Roof accessories

### 1.2 Quality Assurance

- A. Certification of materials: (Applicable for a Material Warranty only.) Upon completion of the roofing system, an inspection shall be made by the manufacturer to ascertain that the roofing system has been installed according to manufacturer’s published specifications and details.
- B. Certification of materials: Manufacturer of Rapid Roof III, Benchmark, PUMA XL, WAC II™ and Tack Coat™ shall furnish, upon written request, notarized certification that the material furnished meets the physical properties set forth in the specification.
- C. Requirements of regulatory agencies: Furnish and install all roofing materials required to meet regulatory agencies and approved building codes. If changes are required to drawings or specifications in order to meet requirements of regulatory agencies specified or to provide guarantee specified, cost of such changes shall be included. Any changes to drawings or specifications shall be approved by the architect before work commences.

### 1.3 Submittals

- A. Shop drawings: Shall include outline of roof and roof size, location and type of penetrations, perimeter and penetration details, and special details, location of anchors and bill of materials.
- B. Product data: Shall include manufacturer’s product specifications and installation instructions.
- C. Certified test: Submit copies of certified test reports that indicate compliance with the specified minimum physical properties and performance requirements.

## 1.4 Product Delivery, Storage and Handling

- A. Delivery of materials:
  - 1. Membrane materials shall be delivered to the job site in Conklin Company's original, unopened containers bearing manufacturer's original label.
  - 2. Related miscellaneous items shall be delivered to job site in new condition, and where applicable, properly labeled.
- B. Storage of materials:
  - 1. Store materials in accordance with manufacturer's recommendations.
  - 2. Store Rapid Roof III, Benchmark, PUMA XL, WAC II and Conklin Tack Coat at 50°F to 90°F.
- C. Handling and protection of materials:
  - 1. Meet requirements of manufacturer's recommendations for handling and protection of materials during installation.
  - 2. Handle materials so that they are not contaminated by foreign materials.
  - 3. See Rapid Roof III, Benchmark, PUMA XL, WAC II and Conklin Tack Coat product labels and SDS documents for current and pertinent safety and general information.
- D. Damaged materials: contaminated or damaged materials shall not be used in the installation and shall be removed from site immediately upon discovery.
- E. **SAFETY & FIRST AID**  
**See product Safety Data Sheets or product container label to review safety information provided.**

## 1.5 Job Conditions

- A. Environmental requirements:
  - 1. General requirements: application of coatings shall not proceed unless environmental conditions are suitable as prescribed by the manufacturer of the material being supplied.
  - 2. Application temperature requirements:
    - a. Ambient: application shall not proceed when ambient temperature is less than 40°F and rising or greater than 100°F.
    - b. Surface: application shall not proceed when surface temperature is less than 40°F and rising or greater than 120°F.
    - c. Surface temperature must be at least 5°F above dew point and relative humidity less than 80 percent to ensure dry surfaces.
- B. Protection of unrelated work: take all measures necessary to protect unrelated work and surfaces to avoid overspray from coatings.

## PART 2—PRODUCTS

### 2.1 Fluid Applied Reinforced Elastomeric Latex Membrane

- A. Acceptable manufacturer: Conklin Company Inc., Shakopee, Minn.
- B. Acceptable Coatings: Rapid Roof III & Equinox.
- C. Rapid Roof III, Benchmark, & PUMA XL coatings are acrylic latex, elastomeric, roof coatings designed for use on “Approved” membranes.
- D. Acceptable Primers: Tack Coat water based modified acrylic latex specifically designed to improve the adhesion of Rapid Roof III, Benchmark, & PUMA XL acrylic coatings to clean, aged “Approved” membranes.
- E. Acceptable Cleaners: WAC II, a blend of special surfactants, is a cleaner for weathered acrylic coatings and “Approved” membranes.

### 2.2 Miscellaneous Materials

- A. Caulking: Kwik Kaulk® acrylic caulking compound or 360-S® urethane sealant as approved by membrane manufacturer.

## PART 3—EXECUTION

### 3.1 Inspection

- A. Inspection of “Approved” membrane: System shall be applied only to “Approved” membranes which meet the following requirements.
  - 1. The roof shall have positive drainage in accordance with ICC requirements.
  - 2. Roof surface shall be free of ponding water. A roof surface which has 36 or more square feet of water in any area, ¼ inch deep or more, 48 hours after a rain, shall be considered unacceptable. Small “bird baths” cannot account for more than 5% of the entire roof surface.
  - 3. Contains no blistering or tunneling.
  - 4. Is securely bonded to substrate (must be fully-adhered or factory-approved mechanically fastened system only – **\*BALLASTED MEMBRANES ARE NOT APPROVED FOR APPLICATION**)
  - 5. Is clean, dry, free of contaminants and capable of accepting acrylic coatings.
  - 6. Is free of pinholes and voids.
  - 7. Adhesion tests are required and must be performed as follows:

Roof Size	Required # of tests	Notes
< 5,000 sq. ft.	3	Minimum 2 tests in corners or at parapet walls of roof
5,000 - 20,000	6	Minimum 4 tests in corners or at parapet walls of roof
20,000 - 80,000	10	Minimum 6 tests in corners or at parapet walls of roof
> 80,000	1 per 10,000 sq. ft.	Minimum 60% of all test performed in the field of roof.

### 3.2 Preparation

- A. Cleaning: Clean surface with WAC II to ensure it is free of all contaminants that could affect the bond of Tack Coat™ to the existing “Approved” membrane.
- B. Specifications: Refer to WAC II & Tack Coat specification data sheets.

### 3.3 Application

- A. Application method: Rapid Roof III or Benchmark, PUMA XL base coats and top coats shall be applied by airless spray, brush or ¾” to 1¼” nap roller.
- B. Application rate Procedures:

1. Apply WAC II cleaner, at full strength, to the “Approved” membrane at a rate of 400-500 square feet per gallon using portable or airless spray equipment equipped with a .019 to .022 spray tip.
2. Allow cleaner to remain on roof surface a minimum of 20 minutes prior to water rinse, i.e. with high-pressure spray. Heavily soiled areas or loose granules may require additional cleaning and/or use of a floor broom or stiff-bristled brush. Waste or rinse water may be harmful to fish and aquatic plants. Dispose of in accordance with local, state and federal regulations.
3. Make sure to remove all residues and let roof surface dry thoroughly prior to application of primer.

4. In situations where the “Approved” membrane has pulled away from or has “bridged” transition areas, such as parapet walls and protrusions, cut the membrane so that it can lie in a relaxed state. Mechanically fasten a new piece of the “Approved” membrane with Conklin-approved fasteners and 3-inch plates in the areas where the shrunken membrane no longer covers the roof surface. Clean and prime these areas per specifications and address these repaired areas in accordance with “Approved” membrane seam application.

Note: It is recommended to prepare new EPDM membrane pieces by wiping the new piece of EPDM with Xylene and then wiping the piece dry prior to coating. Apply Conklin Tack Coat primer at a rate of 250-300 square feet per gallon with a brush, roller, or spray equipment. On most surfaces, the primer will appear an opaque, light gray color upon application and will dry to a glossy black appearance. (Do NOT proceed until primer is completely dry and has a glossy black appearance.) ***Granulated Modified Bitumen has more surface area and for this reason, the above application rates will need to be increased and will vary depending on the surface!***

5. Primer dry time is approximately 2-8 hours depending on temperature and humidity.
6. For “Approved” membrane seams: Apply a 6-inch wide strip of Rapid Roof III or Benchmark base coat at a rate of 1.5 gallons per sq. or approx. 150 lineal feet per gallon and immediately embed 4-inch wide Spunflex or Spunflex II polyester fabric into the wet coating with a brush or roller, making sure the fabric is relaxed, flat and wrinkle-free by brushing or rolling from the center out at 45° angles.
7. After the application of coating and fabric, immediately apply a second coat of Rapid Roof III or Benchmark base coat at a rate of 0.5 gallons per square for a total of 2.0 gallons per square (coating, fabric and coating). Back rolling the second application of base coat is recommended. ***Granulated Modified Bitumen has more surface area and for this reason, the above application rates will need to be increased and will vary depending on the surface!***

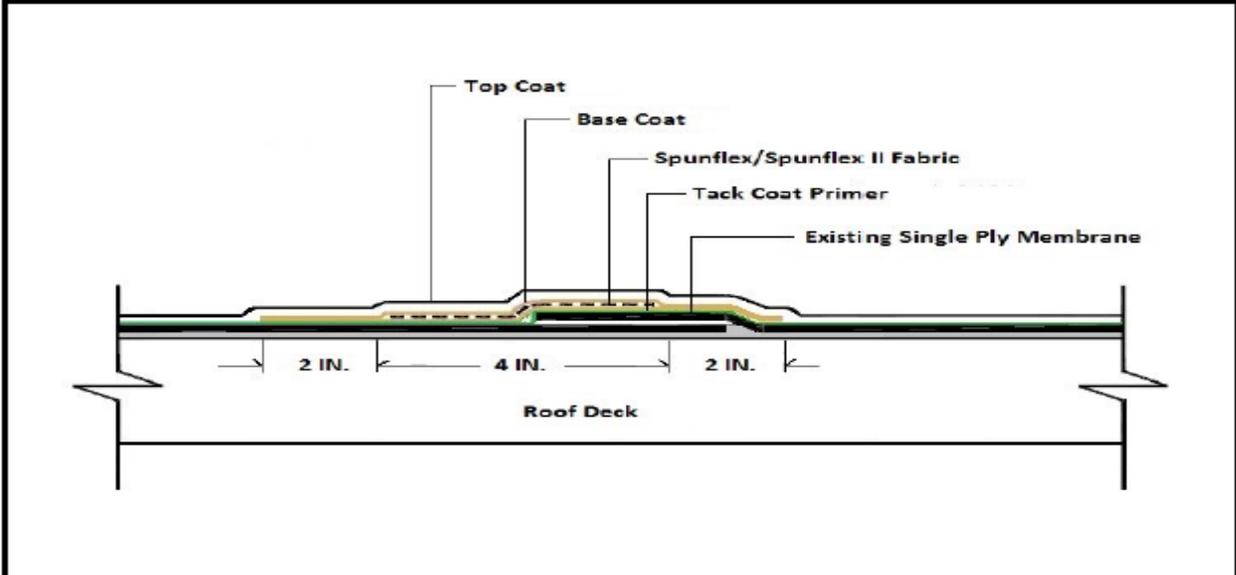
8. After the coating and fabric application has dried completely, apply Rapid Roof III, Benchmark, or PUMA XL top Coat over the entire field of the roof at a rate of 1.9 gallons per square. The top coat dry mil thickness must be no less than 12 dry mils.
9. Develop a systematic method for application of coating to surface.
10. Allow each application to dry thoroughly prior to additional applications. Do not allow less than 12 hours drying time between coats, unless otherwise specified.
11. Do not apply coating in excess of 2.0 gallons per square per coat for Rapid Roof III, Benchmark, or PUMA XL.
12. Back rolling top coat is optional after applications by airless spray.

*\*To achieve minimum requirement, the application rates listed include 15% for application loss and 10% to compensate for surface texture.*

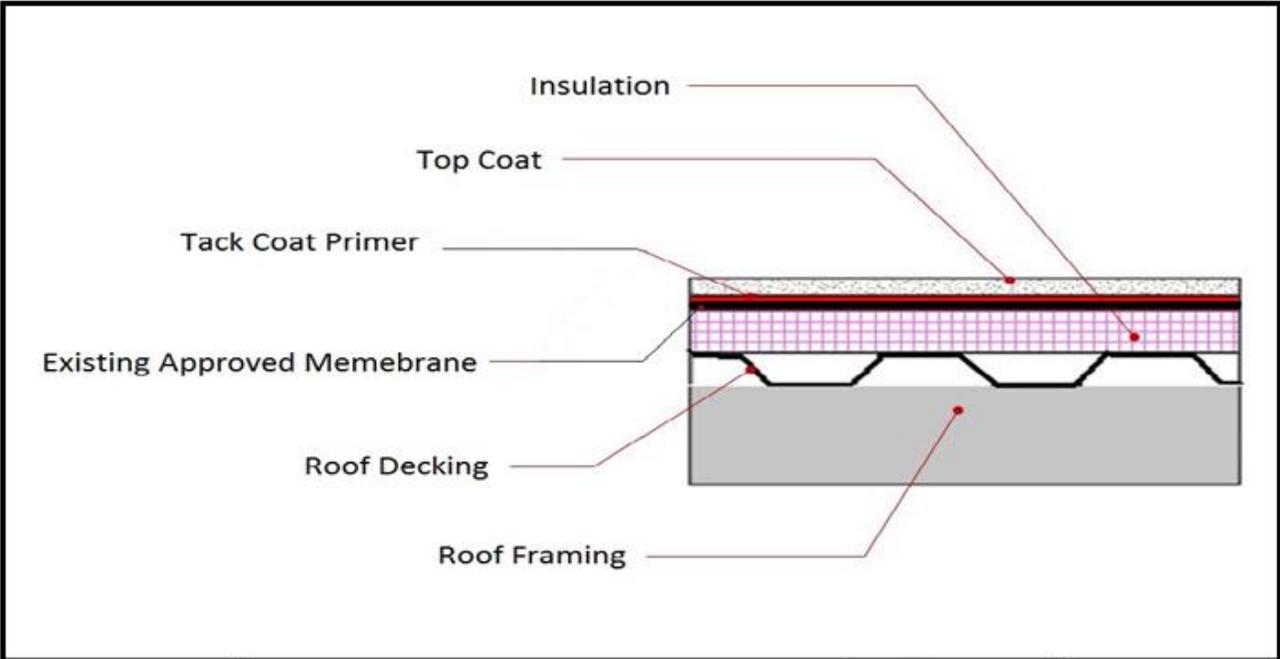
C. Service Walkways:

1. Walkways shall be constructed following complete drying of roof membrane system.
2. Mark off area for walkways and apply an additional 1.5 gallon per sq. of Rapid Roof III or Benchmark base coat. Embed 3/8-inch Spunflex or Spunflex II fabric and immediately apply an additional coat of base coat at a rate of .5 gallons per square, then back roll and allow coating to dry.
3. Apply top coat at 0.5 gallons per square and allow to dry completely.
4. Rapid Roof III colored top coat, base coat or Equinox base coat can be used to designate the walkway as a different color.
5. For additional protection or better traction: Apply additional top coat at a minimum of 1 gallon per square, and while still wet, broadcast roofing granules on the surface at a rate of 40 to 50 pounds per square.
6. Spaghetti walkways are also available through Conklin Company Inc. for use in these traffic areas.

END OF SECTION



	Approved Membrane Seam		ISSUE / REVISION Date: <b>1/30/2017</b>	Detail Number. <b>MC - 1</b>
	Membrane Coating System	Acceptable Products <b>Rapid Roof III, Equinox</b>	NOT TO SCALE	



	<b>Approved Membrane System</b>		ISSUE / REVISION Date:	Detail Number.  <b>MC - 2</b>
	Membrane Coating System	Acceptable Products <b>Rapid Roof III, Equinox</b>	2/10/2017	
			NOT TO SCALE	

