

# Silicone MR System

## Silicone Roof Coating System for Metal Roofs

### **PART 1 – GENERAL**

#### **1.1 Description**

- A. Work included: all labor, materials, equipment and accessories to furnish and install fluid-applied Activate HS over approved metal roof decks.
- B. Related work specified elsewhere:
  - 1. Sheet metal work
  - 2. Prefabricated roof specialties
  - 3. Roof accessories

#### **1.2 Quality Assurance**

- A. Certification of materials: Conklin Company Inc. shall provide, upon written request, notarized certification that the material furnished meets the physical properties set forth in this specification.
- B. Requirements of regulatory agencies: furnish and install all roofing materials required to meet regulatory agency standards and appropriate building codes. If changes are required of 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 architect before work commences.

#### **1.3 Submittals**

- A. Product data: shall include manufacturer's product specifications and installation instructions.
- B. Certified tests: submit copies of certified test reports, which indicate compliance with the specified minimum physical properties and performance requirements for materials.

#### **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 materials so they will not freeze.

- C. Handling and protection of materials: meet requirements of manufacturer's recommendations for handling and protection of materials during installation. Handle materials so that they are not contaminated by foreign materials.
- 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.
- 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 Silicone for Metal Roofs**

- A. Acceptable manufacturer: Conklin Company Inc., Shakopee, Minn., "Silicone MR System"
- B. Description: a seamless membrane system consisting of Activate HS Silicone Coating over the seams and field of Metal Roof.

### **2.2 Miscellaneous Materials**

- A. Primer: Encase Metal Primer as furnished by membrane manufacturer.
- B. Cleaner: Rust Off® cleaner for galvanized surfaces.
- C. Butyl Tape as furnished by membrane manufacturer.

## PART 3—EXECUTION

### 3.1 Inspection

- A. Inspect roof surface receiving work specified to ensure that the following conditions exist:
  - 1. Metal roof surfaces shall be dry, clean and free of dirt, rust, corrosion and other coatings or conditions which could affect the bond of the roof membrane system.
  - 2. Roof surface shall be free of ponding water. Slope of roof area shall be no less than  $\frac{1}{4}$ " per foot. A roof surface containing 36 or more square feet of water in an area  $\frac{1}{4}$ " 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. Roof surfaces which are chalky, friable, waxy or oily are not acceptable to receive membrane.
  - 4. Inspect condition of flashing details adjacent to protrusions, penetrations, curbs, walls, drains and roof edge to ensure that details are acceptable and will maintain a weather tight installation.
  - 5. System can only be applied over factory-applied finishes. **System cannot be applied over field-applied finishes.**
  - 6. All joining metal sections shall be properly closed and mechanically fastened or welded.
  - 7. Acceptable gauge for metal shall be 18 to 26 gauges.
- B. Metal Roofing System is recommended for bare metal (steel, galvanized steel and aluminum) and pre-finished (factory-applied coating) metal panels.

### 3.2 Preparation

- A. Preparation of metal deck:
  - 1. Acid etch surface of galvanized metal with a 1:20 solution of Rust Off® cleaner to remove all conditions which will affect bond of roof membrane and follow with a thorough water rinse. Power wash and scrub all other approved surfaces.
  - 2. Clean rusted areas until free of loose and flaky rust.
  - 3. Retighten all fasteners and secure substrates firmly. Replace fasteners or washers where missing. When prior movement has enlarged the fastener hole, install a new oversized fastener to effectively tighten and secure the deck substrate. Replace all loose nails with approved fasteners.
  - 4. Prior to coating the field of the roof, spot apply Activate HS Silicone Roof Coating to all fasteners. This may take up to 2 coats.
  - 5. Just prior to application, remove all dirt, dust and other contaminants by brushing, vacuuming or power blowing.

### 3.3 Application

- A. Application method: both base coat and top coat shall be applied by airless spray, brush or  $\frac{3}{4}$ " to  $1\frac{1}{4}$ " nap roller.
- B. Application procedure:
  1. Develop a systematic method for application of coating and fabric to metal seams.
  2. For horizontal (end lap) seams: Install 6" wide Butyl Fleece Tape over lap joint and apply 25 mils of Activate HS Silicone Roof Coating over the tape.
  3. For vertical seams: Install 3" wide Butyl Fleece Tape over lap joint and apply 25 mils of Activate HS Silicone Roof Coating over the tape.
  4. Finish coat: the entire roof surface must be coated with Conklin Activate HS Silicone at a rate of 1.5 gallons per square.
- C. Butyl Tape application:
  1. Develop a systematic method for application of Butyl Tape to metal seams.
  2. For horizontal (end lap) seams: apply the 6" wide Butyl Tape over the center of panel seam. Peel back three to four inches of release liner. Press down firmly. While holding roll slightly above surface, peel back 5" to 6" more of release liner and press down, keeping it centered on seam. Roll tape down firmly and evenly. The use of a hand held roller is recommended. DO NOT stretch the Butyl Tape.
  3. For vertical seams: apply the 3" wide Butyl Tape over the metal panel seam. Peel back three to four inches of release liner. Press down firmly. While holding roll slightly above surface, peel back five to six inches more of release liner and press down, keeping it over the seam. Roll tape down firmly and evenly. The use of a hand held roller is recommended. DO NOT stretch the Butyl Tape.
  4. The 3" tape should not overlap onto the 6" wide tape. Cut the tape to ensure it ends tightly adjacent to all horizontal tape.

#### Cleaning:

1. Powerwash entire roof surface and all other areas to receive new coating.
2. Any rust areas should be cleaned with Rust-Off and then receive Conklin Encase Rust Inhibitive Primer.

#### Surface Prep:

3. Flashings receive 3" wide Butyl Tape and 25 mils of Activate HS Silicone Roof Coating over the tape.
4. Repair or replace any sheet metal that does not provide a watertight condition.
5. Identify and replace all fasteners that are loose or backed out.
6. Prior to coating the field of the roof, spot apply Activate HS Silicone Roof Coating to all fasteners. This may take up to 2 coats.
7. For horizontal and vertical laps:
  - a. If there is a gap larger than  $\frac{1}{8}$ " at lap joint, install additional stitch fasteners.
  - b. Install 6" wide Butyl Fleece Tape over lap joint and apply 25 mils of Activate HS Silicone Roof Coating over the tape.

**Coating Installation:**

8. Ensure the surface is completely dry.
9. Install silicone at a rate of 20 mils minimum for a 10 year warranty
10. Care should be taken to ensure proper coverage of vertical rib surfaces.

END OF SECTION



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