



# KM Silicone Coatings Specifications

## Liquid Applied Roof Coating for TPO Roofing Substrates

### KM PS #220 Labor and Material Limited Coating Warranty (10, 15 or 20 Year options)

#### Part 1 – General:

**Qualifications of Contractor:** The Contractor shall be a registered applicator for KM COATING for application of its roof coatings products, and shall have a minimum of three (3) years experience in the application of elastomeric roof coatings.

**Qualifications of Manufacturer:** Manufacturer of the fluid applied elastomeric coating system shall have a proven track record of successful installations of elastomeric technology. Manufacturer must be certified ISO 9001:2008.

**Testing and Labeling:** The coating system to be U.L. Classified tested in compliance to UL 790 Class A fluid-applied system for maintenance and repair of existing Class A, B or C roofing constructions. Products to be subject to Underwriters Laboratory Follow-up Services. The acrylic coating to be FM Global Approved and listed as an acceptable recoating system over existing roof substrates. The acrylic coating to be approved by Miami-Dade County Building Code Compliance with as active Notice of Acceptance (NOA). The Manufacturer shall also provide recognized, third party independent test results confirming the coating system's conformance to ASTM D6694. Individual container labels must include the following information or they will be rejected at the jobsite: Manufacturer's name, product name, type and class of material, all applicable Code and Testing approval logos, batch or lot number, mixing and application instructions, and precautions.

**Field Quality Control:** The overall weather conditions, including surface temperature, surface moisture, ambient temperature, relative humidity and wind velocity shall be recorded by the Contractor, at designated time intervals, on the Daily Quality Control Report form if so requested by the Architect or Owner. Verification of Protective Coating Thickness: During application of the elastomeric coating, the wet film thickness shall be measured and recorded daily, along with the quantity and batch numbers of the material applied and total square feet coated, on the Daily Quality Control form.

**Warranty:** Labor and Material Limited Coating Warranty

#### Part 2 – Products:

KM PS #220 – Silicone Roof Coating  
KM 40/40 FIBERS  
KM Water Based Epoxy Primer.  
KM Fabric

**Product Handling/Storage:** All materials, except those that are shop fabricated shall be delivered to the job site with their original labels intact. Bulk materials, shall be identified by the manufacturer and product name. All materials shall be stored in accordance with the instructions of the manufacturer prior to their application or installation. No wet or damaged materials will be used in the application. Application of all roofing shall be accomplished in such a way that each area will be complete at the end of each day's work. All roof edges and incomplete flashing shall be protected against water entry, particularly between work periods.

#### Part 3 – Execution:

**Surface Inspection:** Inspect all roof surfaces to receive work specified under this section to ensure that the following conditions exist: Roof surfaces shall be clean, dry, and structurally sound, stable and well secured. Roofs should have positive drainage.

**Note:** KM silicone coatings are not affected by ponding water. However, the NRCA (National Roofing Contractors Association.) considers ponding water undesirable and recommends that all roof assemblies have positive drainage. KM COATINGS recommends adherence to the NRCA guidelines.

Inspect condition of flashing details adjacent to protrusions, penetrations, roof mounted equipment, curbs, walls, parapets, drains and roof edge to ensure that details are acceptable and will maintain a weather-tight installation after being properly detailed and coated. All seams must be probed and if found to be deficient, repaired.

KM COATINGS recommends determining moisture content of existing substrate, insulation and deck. If excessive moisture is found, work shall not proceed until the cause of moisture is verified and the condition is corrected.

**Surface Preparation:** All surfaces shall be clean and dry, and free of any dirt, dust, gravel, oil, surface chemicals or other contaminants that may interfere with optimum adhesion. Any unsound areas in the roof deck or insulation, including blisters, delamination, deterioration, excessive moisture content, etc., shall be repaired or replaced. Remove heavy deposits of dirt, leaves, pine needles and other debris using a broom or air blower. Any rocks, branches or other large foreign objects should also be removed. Pressure wash the roof with clean water using a minimum 2,000 psi (13,7PS 220 kPa) pressure washer.

**Adhesion Test:** Recommended to determine positive adhesion will be achieved. One (1) test every 10,000 sq. ft.



Procedure: In accordance with ASTM D 903. Clean area at least 12 inches by 12 inches. Prime area and permit to cure. Coat area at specified rate. While coating is still wet, embed 2-inch wide polyester fabric across test patch leaving 6-inch long dry section outside of test patch. Apply second coat to totally encapsulate flashing fabric and allow to cure for 14 days minimum. Pull dry end of flashing fabric at 180 degree angle with calibrated scale to failure of adhesion. Passing criteria: two (2) pounds minimum resistance prior to failure. If adhesion test fails, additional cleaning and/or priming may be required.

Apply base coat of KM Epoxy Primer at a minimum rate of 300 square feet per gallon. Color: Gray. If primer is left exposed for over 36 hours, re-prime the roof's surface.

**Flashing and Repairs:** Tighten or re-secure all terminations, and caulk termination bars and counter lashing. On all mechanically fastened, as well as fully adhered single-ply systems, remove and reinstall all fasteners that are backed out or "tenting". Relocate the fastener no more than six (6) inches (15 cm) from its original location. Use FM Global approved stress plates and fasteners when replacing defective or worn fasteners. Repair all loose, torn or open seams in the roof membrane using silicone roof coating and KM Polyester Fabric.

If necessary all seams can be reinforced with KM Polyester Fabric and silicone roof coating or silicone roof coating modified KM 40/40 FIBERS. KM Polyester Fabric must be coated with base coat material each day of application. Minimum width of fabric over seam shall be six (6) inches. Repair any tears, breaks, holes (including those from fastener relocation or protruding fasteners), or other openings in the roof membrane as previously described.

Reinforce detail areas, around the base of all vents, stacks, fans and other protrusions, around all drains and scuppers, and around the base of all HVAC units and other roof-mounted equipment as previously described. All flashing reinforcement to cover entire flashing surface and must extend a minimum of three (3) inches onto the horizontal roof surface.

At drip edges, refasten all metal flanges and reinforce using KM silicone and KM Polyester Fabric.

**Field Application:** All roof preparation materials shall be allowed to fully dry prior to full roof surface application of the elastomeric coating. Immediately prior to application of the coating, all dust, dirt and other contaminants shall be blown off the roof surfaces to be coated using high pressure compressed air. The roof surface should be inspected after application of the first coat for any damage that was not detailed previously. The entire roof substrate shall receive elastomer coating applied as follows:

**Note:** Airless spray is the preferred method of application. A medium to heavy nap roller may be used for application over flat substrates. Brush or roller may be used for touch-up or detail work or for small areas that are not practical for spray application.

After allowing all details and reinforcing to dry, Apply base coat of KM PS #220 at a minimum rate of 1 gallon per 100 sq. ft., 16 wet mils (0.6 l/m<sup>2</sup>), 11 mils dry film thickness (DFT).

After allowing the base coat to dry, apply one (1) or more coats of KM PS #220 at a minimum rate of 1 gallon per 100 sq. ft., 16 wet mils (0.6 l/m<sup>2</sup>), 11 mils dry film thickness (DFT) per coat. Apply consecutive coats in a perpendicular direction to the previous coat.

Total dry mil thickness (DMT) to be a minimum of 22 mils for a 10 year warranty.

Apply additional coats of KM PS #220 to achieve longer warranty terms:

15 year 2 coats @ 1.25 gallons per 100 sq. ft. 27 DMT.

20 year 2 coats @ 1.50 gallons per 100 sq. ft. 33 DMT.

**Quality Control:** Upon completion of the roof coating, the Applicator shall make a final inspection to determine the dry film thickness of the fluid applied membrane and to verify that the coating meets the Manufacturer's requirements for warranty. As a condition of the project's completion and acceptance, deliver to the Owner a copy of the fully executed, specified warranty from the Coating Manufacturer, following individual warranty guidelines.

**Disclaimer: This General Coatings Specification is for general application use. A pre-inspection prior to the application of KM COATING products, may be required. Consult your KM COATING Sales Representative for details.**