



Brush



Spray



Notched Squeegee



Notched Trowel



Med. Nap Roller



Self-Adhered



JM Coatings

Coatings Application Guide



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JM Coating Application Guide

The JM Coatings portfolio consists of either a silicone or acrylic coating system utilizing either a bleed blocker base for asphalt substrates, or a primer for single ply systems. Depending on the application and desired guarantee term limit of the system, either a polyester field fabric, polyester strips, or repair tape are utilized as the reinforcement. This product line is used to either patch and/or fully coat aged existing roofing systems to extend the life.

JM Coating Acrylic is designed for use as a reflective top coat either over a smooth or mineral surfaced asphalt-based system or mechanically attached or adhered aged TPO or PVC with KEE membranes.

JM Coating Silicone is designed for use over a variety of substrates, including built-up roofing, modified bitumen, and aged mechanically attached or adhered TPO and EPDM.

The Roofing Mechanic

JM recognizes that the success and long-term performance of our roofing systems depends upon the personal skill, experience and knowledge of the roofing mechanic. Ambient conditions play a significant role for proper application. JM Coating Acrylic, JM Coating Universal Base, and JM Coating Single Ply Primer should be applied in the morning hours to allow maximum cure time. Apply JM Coating Acrylic and JM Coating Universal Base at temperatures above 55° F (12° C) and rising, but not above 110° F (43° C) ambient. JM Coating Single Ply Primer should be applied at temperatures above 5° F (10° C) and rising, but not above 110° F (43° C) ambient. JM Coating Silicone should be completed when ambient temperatures are 40° F (4° C) or higher for 24 hours, but not above 110° F (43° C).

How to Use This Guide

This guide is divided into sections:

1. Equipment
2. Roof Preparation
3. Coating System Installation

This guide is designed for your convenience. These step-by-step instructions should answer your installation questions and help you establish top-quality craftsmanship when applying a JM Coatings Product.

1.0 Equipment

The following equipment may be needed to install JM Coating:

Gloves	Eye Protection
Industrial Scissors	Chalk line
Flat or Serrated squeegee	Utility knife
Measuring tape	Rags
Writing/marketing instruments	T-Square/Straight Edge
Stir sticks	Rollers and brushes
Protective sheeting	Masking/painters tape
Wire brush	Trowels

2.0 Roof Preparation

Surface Preparation

Proper roof deck preparation is essential to simplify installation and prevent future conditions which may lead to defects, such as blistering. Repairs, such as roof leaks, must be completed before application of these systems taking note to minimize the exposure of fresh asphaltic materials in areas that will receive coating. Minor repairs

should be completed with the coatings specific materials outlined in this guide. Mask-off areas with tape and protective film that are not intended to receive a JM Coating.

All surfaces must be clean, dry, and free of any dirt, dust, debris, rust, oils, oxidation, curing compounds, release agents, gross irregularities, loose, unsound or foreign material such as moss, algae growth, ice, snow, water or any other condition that would inhibit the adhesion of JM Coating Universal Base or JM Coating Single Ply Primer.

Smooth or granule surfaced SBS, granule surfaced APP and BUR need to have all loose granules, dust and dirt removed from the surface of the membrane by broom and/or vacuum. For gravel surfaced BUR membranes, gravel should be removed by spudding and power vacuuming.

Failure to not completely clean and dry the existing surface will result in poor adhesion to the membrane which may lead to possible delamination and blistering. Remove contaminants such as oils with a suitable detergent cleaner.

EPDM, TPO, and PVC (KEE) membranes need to have aged for a minimum of one-year prior to any coating application.

BUR Smooth	BUR Gravel	SBS	APP (Cap Only)	EPDM	TPO	PVC
Wet Vac or Power Wash	Complete spudding and removal of all gravel. Vac or Broom and Blow	Wet Vac or Power Wash	Wet Vac or Power Wash	Scrubbing with power wash or detergent	Scrubbing with power wash or detergent	Scrubbing with power wash or detergent

Per the NRCA guidelines, surface must have positive drainage insuring against ponding water (standing 48 hours after precipitation stops).

Adhesion Test

A peel test (test patches) is required per JM Technical on all membrane substrates prior to application of coating, primer, or flashing material. This test will confirm if the existing roof is compatible with the proposed surface coating.

The below images are to be used as a guide with the proceeding directions for either a modified or single ply substrate.

Single Ply Sample:

<p>Step 1: Single Ply Primer</p> 	<p>Step 2: Base Coat (Acrylic or Silicone)</p> 	<p>Step 3: Embed Polyester</p> 
<p>Step 4: Coat Polyester</p> 	<p>Test - With Primer (desired results)</p> 	<p>Test - No Primer (poor adhesion)</p> 

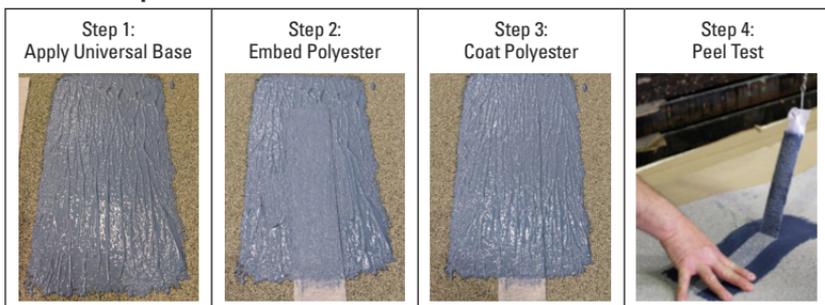
Single Ply

1. JM Coating Single Ply Primer – Apply a minimum 6” wide by 12” long area of primer on the substrate and allow to fully dry.
2. JM Coating Acrylic or JM Coating Silicone – Apply a minimum 6” wide by 12” long area of JM Coating Acrylic or JM Coating Silicone targeting at 48 Mil wet film thickness over the primed area of substrate. While the coating is still uncured, embed a 2” x 10” strip of JM Coating Field Polyester Reinforcing Fabric or JM Coating Polyester Reinforcing Fabric into the coating. Ensure that the fibrous side is facing down and embedded into the coating, leaving a 2” tab of fabric uncoated and extending beyond the base coat. Ensure the coating is sufficiently saturated into the fabric, leaving no dry/white spots. Apply a second top coat of the JM Coating Acrylic or JM Coating Silicone over the fabric. Allow the coating and fabric system to fully cure for 48 to 72 hours before testing.
3. Pull Testing – Conduct the pull test using a 0-20 pound spring loaded fish scale or another suitable substitute. Hook into the 2” tab of exposed fabric and gently pull upward at an angle, as shown below. Pay attention to the scale display while peeling the fabric away from the substrate. Note the pounds displayed on the scale throughout the peel test and record the peak value on the roof test report; note the location on the roof, time, date and cure time.
4. Note: An acceptable pass for the adhesion test will be a minimum of 2 pounds per inch width of fabric. Example – a 2” wide fabric will require a minimum 4 pounds of force prior to failure or release from the substrate.
5. Failing adhesion tests will require alternate substrate cleaning and preparation or do not meet the qualification criteria for coating application.

Peel testing must be conducted at each unique field substrate type; surfacing or age.

A minimum of five peel tests at various locations are required.

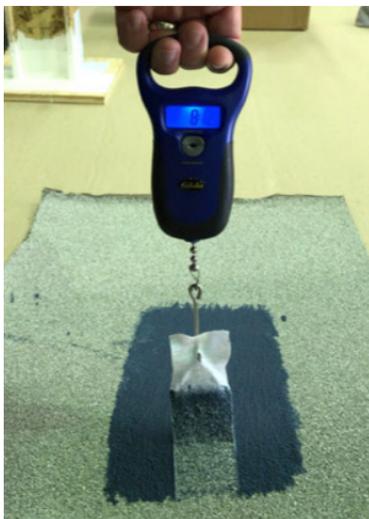
Modified Sample:



Modified Substrates

1. JM Coating Universal Base – Apply a minimum 6” wide by 12” long area of JM Coating Universal Base targeting 48 Mils wet film thickness over the substrate. While the base is still uncured, embed a 2” x 10” strip of JM Coating Field Polyester Reinforcing Fabric or JM Coating Polyester Reinforcing Fabric into the coating. Ensure that the fibrous side is facing down and embedded into the coating, leaving a 2” tab of fabric uncoated and extending beyond the base coat. Ensure the coating is sufficiently saturated into the fabric, leaving no dry/white spots. Allow the coating and fabric system to fully cure for 48 to 72 hours before testing.
2. Pull Testing – Conduct the pull test using a 0-20 pound spring loaded fish scale or another suitable substitute. Hook into the 2” tab of exposed fabric and gently pull upward at a 60 to 75 degrees angle. Pay attention to the scale display while peeling the fabric away from the substrate. Note the pounds displayed on the scale at the point of initial failure and record the value on the roof test report; note the location on the roof, time, date and cure time.

3. Note: an acceptable pass for the adhesion test will be a minimum of 2 pounds per inch width of fabric. Example – a 2" wide fabric will require a minimum 4 pounds of force prior to failure or release from the substrate.
 4. Failing adhesion tests will require alternate substrate cleaning and preparation or do not meet the qualification criteria for coating application.
- Peel testing must be conducted at each unique field substrate type; surfacing or age. A minimum of five peel tests at various locations are required.



Leveling, Patching & Crack Repair

Before application of a JM Coating all joints, cracks, voids, fractures, and indentations in the substrate (vertical and horizontal surfaces) must be repaired. Options for repair are either a three-course application or JM Coating Repair Tape application as described below.

For modified system, repair all cracks, splits, or damaged areas using a three-course application with JM Coating Flashing (Silicone or Acrylic) and JM Coating Reinforcing Fabric.

JM Coating Repair Tape Application

1. Cut tape to length ensuring the tape extends 2" past the repair area. Shorter lengths (less than 4 ft) are easier to work with, unless using a team of two or more applicators.
2. Hold edge of tape with thumb and index finger of both hands about 1-2 inches apart. Repeatedly wiggle tape ends back and forth scrunching the end of the tape. Watch for the edge of release liner to loosen away from tape and peel back release liner.
3. Press tape in place using a gloved hand. Using a steel or rubber roller, roll from the center out to remove trapped air pockets and "fish-mouths."
4. Apply the exact length to predetermined location as tape cannot be peeled up and reset. Puncture air pockets in tape and cut out tape wrinkles before continuing. Reseal puncture and cuts. When working in a corner, start in the corner to eliminate "tenting."
5. JM Coating Repair Tape must be completely saturated and sealed with a JM Coating or JM Coating Flashing after installation.

JM Repair Tape is suitable for aged single ply membranes. JM Coating Single Ply Primer is not required prior to the JM Repair tape installation.

3.0 JM Coating System

Acrylic Substrates

JM Coating Acrylic is approved for built-up, SBS modified, APP Cap sheets, or mechanically attached or adhered aged TPO or PVC with KEE membranes. Acrylic coatings can be recoated, but they cannot be installed over existing silicone-based coatings.

Existing Roof Type						
	BUR	SBS	APP (Cap Only)	EPDM	PVC (KEE)	TPO
JM Coating Acrylic	X	X	Granulated Cap only	-	X	X

- JM Coating Universal Base must be used as the first layer for BUR, SBS, and APP Cap
- JM Coating Single Ply Primer must be used with PVC (KEE) and TPO
- JM PVC SD Plus is not approved at this time

Silicone Substrates

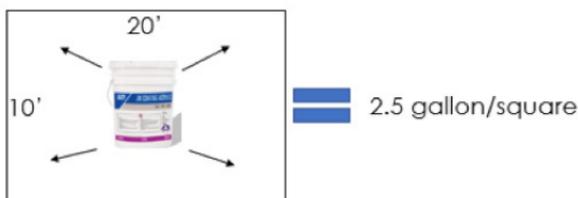
JM Coating Silicone is approved for built-up, SBS modified, APP granulated cap sheets, or mechanically attached or adhered aged TPO or EPDM membranes. Take caution when walking on a silicone coated roof as this surface treatment can be very slippery.

Existing Roof Type						
	BUR	SBS	APP (Cap Only)	EPDM	PVC (KEE)	TPO
JM Coating Silicone	X	X	Granulated Cap only	X	-	X

- JM Coating Universal Base must be used as the first layer for BUR, SBS, and APP Cap
- JM Coating Single Ply Primer must be used with EPDM and TPO

All coatings should be applied in a grid system to insure adequate coverage.

Example:



Built Up Application

A built-up coated system consists of an application of JM Coating Universal Base, which helps reduce the bleed through when installed over the asphalt substrates. Incorporated into this phase of the application is either JM Coated Polyester Reinforcing fabric or JM Coating Field Polyester Reinforcing Fabric. Both fabrics provide strength and elongation to the system. Acrylic and silicone coatings by themselves have elongations of 300% or more. The reinforcing fabrics have elongations ranging from 16% to 72%. JM Coating Field Polyester Reinforcing Fabric has a firmer stitch-bond and is offered in a greater width, while the JM Coating Polyester Reinforcement is used more in details and small repair sections. This process is followed by either a silicone or acrylic coating.



JM Coating Universal Base should be applied in the morning hours to allow maximum cure time. Temperatures shall be above 55°F (12°C) and rising, but not above 110°F (43°C) ambient. Do not apply if rain or freezing temperatures are predicted within 24 hours. Excessive heat can cause flash drying, thus it is not recommended for application to surfaces 140°F (60°C) or greater.

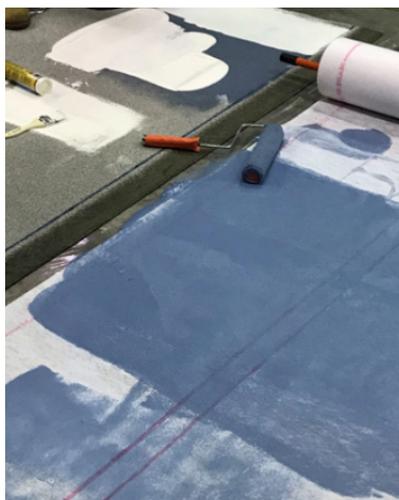
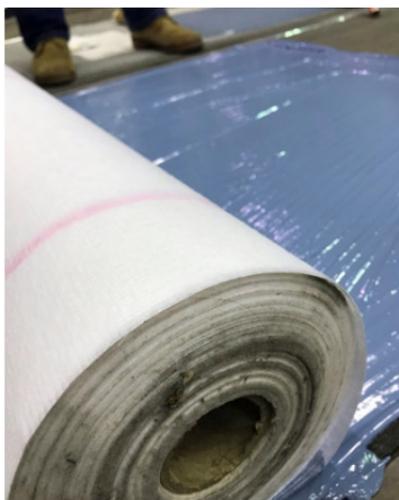
Apply to the clean and prepared membrane by spreading evenly with an approved medium nap roller, brush or by spraying and back-rolling to obtain a full coverage coating without voids. Do not thin.

JM Coating Universal Base Coverage Rate*

With JM Reinforcing Fabric	4 gal/sq.
Without JM Reinforcing Fabric	1.5 gal/sq.

*Coverage, open and dry time rates can vary dramatically depending on the particular substrate and environmental conditions. Coverage rates stated herein are approximate only.

When applicable, immediately roll the JM Coating Polyester Reinforced Fabric or Field Fabric into this layer while still wet. Use a roller to work the base into the fabric. For JM Coating Field Fabric roll from the center out. The fabric should darken in appearance, with no white spots showing. White spots are indications of unsaturated fabric or lack of adhesion. It is important to correct these voids before the Universal Base cures. Use caution not to spread too thin.



JM Coating Universal Base should extend 2" (51 mm) past the fabric in all directions. The first application should be allowed to cure for a minimum of 24 hours prior to the application of the surfacing, weather permitting. Any repairs should cure a minimum of 48-72 hours. This is all dependent on weather and drying conditions.

Single Ply

An aged single ply membrane coating system is comprised of primer, repair tape and either an acrylic or silicone coating surfacing. Coatings should only be applied to a single ply substrate that has aged a minimum of one year prior to application. PVC system compatibility currently excludes JM PVC SD Plus.

JM Coating Single Ply Primer should be applied in the morning hours to allow maximum cure time. Temperatures shall be above 55°F (12°C) and rising, but not above 110°F (43°C) ambient. Do not apply if rain or freezing temperatures are predicted within 24 hours. Excessive heat can cause flash drying, thus it is not recommended for application to surfaces 140°F (60°C) or greater.

Apply JM Coating Single Ply Primer to the clean and prepared membrane by spreading evenly with an approved medium nap roller or by spraying and back-rolling to obtain proper coverage.

JM Coating Single Ply Primer Coverage Rate*

Coverage Rate*	0.25 gal/sq.
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*Coverage, open and dry time rates can vary dramatically depending on the particular substrate and environmental conditions. Coverage rates state herein are approximate only.

JM Coating Single Ply Primer applied on a clean membrane surface will be fully cured after a minimum of 30 minutes.

Coatings

Coating application options include either spray with back-roll or direct application with a medium nap roller. Coverage range is based on guarantee minimum requirements as listed below:

	BUR/SBS/APP Cap 5 year	BUR/SBS/APP Cap 10 year
JM Coating Acrylic JM Coating Acrylic CR	1.5 gal/sq. Universal Base 1 coat @ 1.5 gal/sq. Acrylic	4.0 gal/sq. Universal Base Reinforcing Fabric 2 coats @ 1.5 gal/sq. Acrylic
JM Coating Silicone	1.50 gal/sq. Universal Base 1 coat @ 2.0 gal/sq. Silicone	4.0 gal/sq. Universal Base Reinforcing Fabric 1 coat @ 2.5 gal/sq. Silicone

	EPDM 5 year	EPDM 10 year
JM Coating Acrylic JM Coating Acrylic CR	-	-
JM Coating Silicone	0.25 gal/sq. Primer 1 coat @ 2.5 gal/sq. Silicone Spot repair and flashings	0.25 gal/sq. Primer 1 coat @ 4.0 gal/sq. Silicone Repair Tape all seams and flashings

	PVC (KEE) 5 year	PVC (KEE) 10 year
JM Coating Acrylic JM Coating Acrylic CR	0.25 gal/sq. Primer 2 coats @ 1.5 gal/sq. Acrylic Spot repair and flashings	0.25 gal/sq. Primer 2 coats @ 2.0 gal/sq. Acrylic Repair Tape all seams and flashings
JM Coating Silicone	-	-

	TPO 5 year	TPO 10 year
JM Coating Acrylic JM Coating Acrylic CR	0.25 gal/sq. Primer 2 coats @ 1.5 gal/sq. Acrylic Spot repair and flashings	0.25 gal/sq. Primer 2 coats @ 2.0 gal/sq. Acrylic Repair Tape all seams and flashings
JM Coating Silicone	0.25 gal/sq. Primer 1 coat @ 2.5 gal/sq. Silicone Spot repair and flashings	0.25 gal/sq. Primer 1 coat @ 4.0 gal/sq. Silicone Repair Tape all seams and flashings

JM Coating Acrylic Considerations

JM Coating Acrylic, Acrylic CR, and Flashing should be applied when air, surface, and material temperatures are 55°F (12°C) or higher for 24 hours, but not above 110°F (43°C). Apply only when weather conditions will permit drying before rain, dew or freezing temperatures. Do NOT apply if rain or freezing temperatures are predicted within 24 hours. Allow a minimum of 24 hours for JM Coating Universal Base and fabric to set up prior to coating application. A minimum of a ½" slope is recommended. In low lying areas, such as valleys or drain sumps, an additional layer of silicone over the acrylic coating will enhance the longevity and performance of the system.

Spray application should be at 2000 – 3000 PSI with a .030 – .041 tip size, 1 – 3 GPM.

Equipment can be cleaned with water and soap.

JM Coating Silicone Considerations

JM Coating Silicone and Flashing application should be applied when air, surface and material temperatures are 40°F (4° C) or higher (for 24 hours) but not above 110°F (43° C). Take special precautions to ensure there is NO MOISTURE, DEW or FROST present on the roof. Apply only when weather conditions will permit curing before rain, dew or freezing temperatures. Do NOT apply if rain or freezing temperatures are predicted within 24 hours. If surface temperatures become hot (over 140° F / 60° C) during application, wait for roof to cool.

Dependent on humidity and weather conditions, JM Coating Silicone will dry (skin-over) in a minimum of 6-8 hours. The coating will be fully cured in 24-48 hours. Curing starts immediately upon opening the container.

JM Coating Silicone and Silicone Flashing should be used within one day of opening. Equipment can be cleaned with Naptha.

Take caution when walking on any silicone coated system, as it can be slippery.

PEAK *Johns Manville* ADVANTAGE

One manufacturer, one full-system guarantee

Johns Manville offers one of the most comprehensive guarantees in the roofing industry. That's the advantage you can expect from a longtime, dependable leader with the financial backing of Berkshire Hathaway.



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