General
This specification is for use on any approved structural deck that provides a suitable surface to receive the roof. This specification can also be used in certain re-roofing applications. Poured and precast concrete decks require priming prior to application of hot asphalt.

This specification is also for use over JM insulations or other rigid insulations which are not nailable and which offer a suitable surface to receive the roof. Specific written approval is required for any roof insulation not manufactured or supplied by JM. This specification is not to be used over poured or precast gypsum or lightweight, insulating concrete fills.

Note: Consider all general instructions contained in the current JM Application Guide as part of this specification.

Design
Consider local conditions and characteristics when designing, specifying and installing any roofing system. Information from the Single Ply Roofing Industry (SPRI), Asphalt Roofing Manufacturers Association (ARMA), FM Global and local building codes can provide guidelines for the designer.

Design and installation of the deck and/or roof substrate must result in the roof draining freely to outlets numerous enough and so located as to remove water substantially within 48 hours of a rain event.

Membrane Substrate
The surface on which the APP modified bitumen membranes is to be applied should be an approved structural substrate. The surface must be clean, smooth, flat and dry. APP modified bitumen should not be applied directly to plastic insulations.

Flashings and Components
Refer to the JM Bituminous Details in the APP Systems Application Tools.

Deck Preparation
Before roofing work is started, the deck should be carefully inspected by the roofing contractor, the deck contractor, and the owner representative to determine that it will be able to receive the roofing system by some method which will hold the system securely, either by adhesion, ballast, or mechanical fasteners.

Refer to the JM Roof Decks document in System Considerations for further information.

Vapor Barrier Application
All surfaces receiving vapor barrier must be clean and free from oil, grease, rust, scale, loose paint and dirt. The substrate may need to be cleaned according to JM Application Instructions, and any required primers installed. An adhesion test may need to be performed to determine if the substrate is adequate. Vapor Barrier attachment methods include Hot Asphalt, Cold Adhesive, Heat Welded, and Self Adhered. Refer to the JM Vapor Barrier SA Installation Guide, the Vapor Barrier Data Sheets, and the Vapor Retarders document for further information.

Thermal Barrier Application
Apply the units of approved JM thermal barrier products with long joints continuous. End joints should be staggered so that they are offset at least 12” (305 mm) from the end joints in adjacent rows. Thermal barriers provide a fire resistant layer in the roof assembly directly above the deck.

Base Sheet Application
The bituminous base sheets for these systems are mechanically fastened. Refer to the "BM" Fastening Patterns section in APP System Application Tools for Base Sheet fastening patterns and further information.

Insulation Application
Roof Insulation plays a key role in energy efficiency shown in codes and standards that have mandated increasingly higher minimum R-values in U.S. climate zones. Local codes dictate the required R-values for commercial and industrial projects and the local jurisdiction should be consulted for this information.

A minimum offset of 6” (152 mm) is recommended from the previous layer of insulation. Loose laid insulations should be positioned with the long side of the boards running perpendicular to the APP sheet orientation and continuous. End joints should be staggered at least 12” (305 mm) from the end joint in adjacent rows. A minimum offset of 6” (152 mm) is recommended from plywood joints. Refer to the Insulation Installation Instructions document for further information.

Appropriate JM Insulation Adhesives Include:
- JM One Step Foamy Adhesive
- JM Roofing System Urethane Adhesive (RSUA)
- JM Two-Part Urethane Insulation Adhesive (UIA)
- JM Green Two-Part Urethane Insulation Adhesive
- Hot Asphalt

Refer to JM drawing UA-12 INS for Adhesive Bead Patterns.

When using a low rise urethane adhesive product for insulation boards, all surfaces must be clean, dry, smooth, compatible and free of dirt, debris, oil/grease and gravel. Apply JM urethane adhesive directly to the substrate and allow it to rise and build body before placing board stock into the adhesive. Board stock attachment requires the board stock to be walked in to ensure positive contact between the board stock, adhesive and substrate. When installing JM One-Step Foamy Adhesive, insulation boards must be set into the adhesive immediately and walked in due to the rapid curing time of the adhesive. Refer to the specific JM product data sheets of JM insulation adhesives listed above for coverage rates and specific application information.

When adhering insulation boards using hot asphalt, firmly set the insulation boards long joints continuous and short joints staggered, into a full width mapping of hot asphalt. Porous substrates may require greater amounts of asphalt. Concrete decks must be primed with Asphalt Primer prior to application of hot asphalt. Refer to the Insulation Installation Instructions document for further information.

Asphalt Application
Asphalt should meet the requirements of ASTM D 312. JM guarantees the requirement of use of Trumbull asphalt or another* JM approved asphalt. The slope of the roof as well as the climate governs the grade of asphalt to be used. JM endorses the guidelines established by the NRCA and ARMA for heating asphalt for proper applications. Asphalt should be applied at the Equivapcescous Temperature (EVT) (+/-25°F (+/-4°C)).

Appropriate JM Insulation Fasteners Include:
- All Purpose Fastening Systems
- UltraFast Fasteners and Plates
- Structural Concrete Deck Fasteners and Plates
- Polymer Auger Fasteners

Install JM insulation Fasteners and Plates at an appropriate rate determined by building code, specification, and/or JM Guarantee requirements. Refer to the JM Minimum Insulation Fastening Requirements-Adhered Membrane bulletin for further information.

Cover Board Application
Cover boards may be installed using asphalt, mechanical fasteners, or adhesives. A minimum offset of 6” (152 mm) is recommended from previous layers of insulation. No board widths less than 6” (152 mm) are allowed. Refer to the JM Insulinvia Roof Board Codes and Application Brochure for further information.

Refer to the JM Cover Boards Selector Guide for JM Cover Boards product information. Refer to section Insulation Application below for Cover Board Securement Information including Adhered and Fastened methods of attachment.

Base Sheet Application
Using one of the base sheets listed, start with a 3’ x 10’ width sheet. The remaining sheets are to be applied full width/3’ (76 mm) side and 4” (102 mm) end laps over preceding sheets. Polyurethane reinforced sheets require a 6” (152 mm) end lap. Refer to the JM Application Guide for additional information.

Modified Bitumen Sheet Application - Cold Adhesive
Apply a full width piece of one of the cap sheets listed over the installed base ply into a full coating of MBR Cold Application Adhesive, Premium Cold Application Adhesive or MBR Modified Bitumen. The remaining sheets are to be applied in the same manner with 4” (102 mm) side laps and 6” (152 mm) end laps over preceding sheets. Apply all sheets so that they are firmly and uniformly set, without voids. Refer to the JM Application Guide for further information.

Modified Bitumen Sheet Application - Heat Welded
Starting at the low point of the roof, heat weld a full width piece of one of the Cap Sheets listed over the installed base ply. Remaining sheets are to be applied in the same manner, with 4” (102 mm) side laps and 6” (152 mm) end laps over the preceding sheets. Apply all sheets so that they are firmly and uniformly set, without voids. Maintain a 3’ (3 mm) to 6” (10 mm) bleed out beyond all laps. Refer to the APP Application Guide for further information.

Roof Coatings
TopGuard 4000 and TopGuard 5000 are one part acrylic elastomeric roof coatings. When used over a modified bitumen roof, TopGuard Base Coat must be applied as a base coat prior to application of TopGuard 4000 and TopGuard 5000. It is recommended that TopGuard Base Coat be used with all installations of TopGuard 4000 and TopGuard 5000. Drying time between coats is normally 4 to 12 hours depending on weather conditions. Apply when temperature is 50°F (10°C) and rising using a brush, roller or spray equipment. TopGuard 5000 is ideal for cold weather climates. Refer to the TopGuard 4000 and TopGuard 5000 data sheets for further information.

Note:
Sheets with polyester reinforcement must be allowed to relax in an unrolled position prior to installation. Allow the membrane to relax for at least 15 minutes when the temperature is above 60°F (16°C), or 30 minutes when the temperature is below 60°F (16°C) prior to installation.

Deep Slope Requirements
Special procedures are required on inclines over 1/2” per foot (41 mm/m). Refer to the JM APP Application Guide for further information.

Re-Roofing
A large percentage of all commercial and industrial roofing pertains to re-roofing of existing buildings. Refer to the JM Re-Roofing document for inspection, testing, components and other valuable information pertaining to re-roofing projects.

JM Guarantee Requirements
JM Peak Advantage ® Guarantees are available up to a 25 year term with approved components and assembly make-up. Refer to the JM Peak Advantage Charges and Requirements-Multi Ply document for additional guarantee information.

Refer to the JM Peak Advantage Guarantee Information document for additional guarantee information and guidelines.

Re-Roofing
Refer to the JM Peak Advantage Guarantee Specimen document to see a JM Peak Advantage Guarantee sample.

All guaranteed installations must follow the guidelines for the requested guarantee as outlined in the APP Modified Bitumen Specifications document. Not all JM specifications are eligible for all JM Peak Advantage Guarantee terms or enhanced coverage. Please contact JM Guarantee Services at (800) 622-5922 Option 3 for specific requirements.

All projects requiring a guarantee from JM must be applied for a minimum 14 days in advance of job start.

Refer to the Preventative Maintenance Brochure for roof and building maintenance guidelines.