

## Assembly Identification

### Substrate

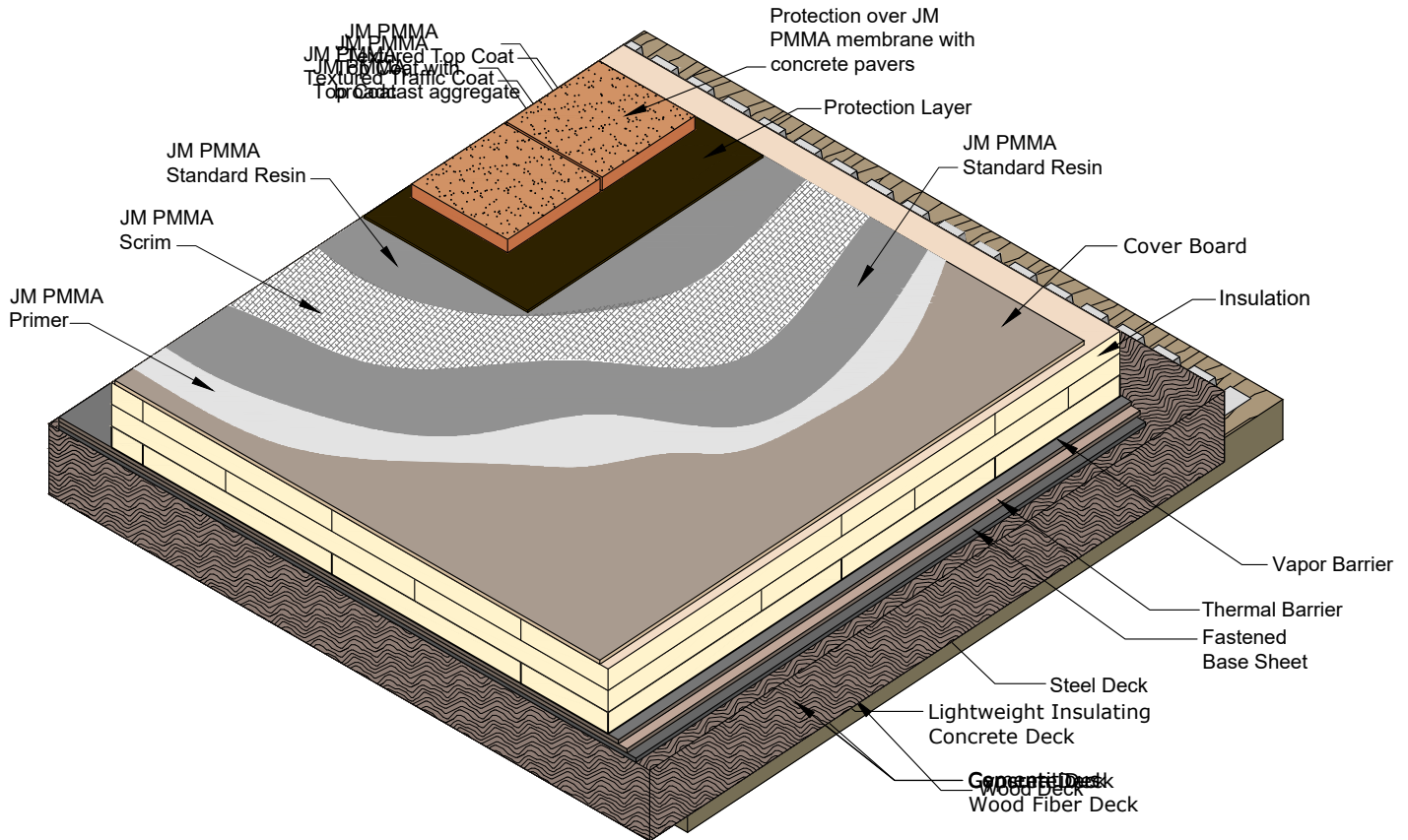
I = Insulated  
N = No Insulation  
(Direct To Deck)

### Surfacing

C = Coated  
N = Non Coated  
P = Protected

### Liquid Membrane

**L N C**



For JM Guarantee Requirements Contact JM Technical Services at (800) 922-5922 Option 3 or Refer to the JM Peak Advantage Charges and Requirements-Multi Ply document

#### Approved Cover Boards:

(If Applicable)  
JM DEXCELL®  
Cement Roof Board (HA) (HW) (SA)  
JM SECUROCK®  
Cement Roof Board (HA) (HW) (SA)  
ProtectoR®HD  
Cover Board Thickness \_\_\_\_\_

#### Approved Thermal Barrier:

(If Applicable)  
JM SECUROCK®  
Gypsum-Fiber Roof Board  
Glass-Mat Roof Board  
JM DEXCELL®  
FA Glass-Mat Roof Board  
Glass-Mat Roof Board  
JM DensDeck®  
JM DensDeck Prime  
DuraBoard®  
ProtectoR®HD  
Thermal Barrier Thickness \_\_\_\_\_

#### Approved Vapor Barrier:

(If Applicable)  
DynaBase® (HA)  
DynaBase PR (HA)  
GlasPly®IV (HA)  
GlasPly Premier (HA)  
APPeX®4S (HW)  
DynaWeld™Base (HW)  
DynaBase HW (HW)  
DynaWeld 180 S (HW)  
JM APP™Base Sheet (HW)  
DynaGrip®Base SD/SA (SA)  
JM BaseGrip™ SD/SA (SA)  
JM Vapor Barrier SA (SA)  
6 or 10 mil poly with taped seams

#### Approved Base Sheets:

(If Applicable) Over Nailable Deck  
DynaBase®  
DynaBase PR  
GlasBase™ Plus  
GlasPly®Premier  
GlasTite®Flexible  
PermaPly®28  
Ventulation®Felt

#### Approved JM Insulations:

DuraFoam®  
ENRGY 3®  
(ENRGY 3 Options)  
CGF  
20 PSI  
25 PSI  
Tapered  
Layer 1 Thickness \_\_\_\_\_  
Layer 2 Thickness \_\_\_\_\_  
Layer 3 Thickness \_\_\_\_\_

#### Deck Type:

Steel (22 Ga. Min.)  
Nailable Decks include:  
Cementitious Wood Fiber  
Gypsum  
Lightweight Insulating Concrete  
Wood (Plywood, Plank, OSB)

## General

This specification is for use over 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.

### Note:

Consider all general instructions contained in the current JM PMMA 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 JM PMMA membrane is to be applied to should be an approved structural substrate. The surface 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 the JM PMMA primer or resin. Applying JM PMMA Liquid Membrane to any substrate that is not completely clean and dry will result in poor adhesion of the membrane to the substrate which may lead to blistering and possible failures. Remove contaminants such as oils with a suitable solvent cleaner. For best results it is recommended that surfaces such as metals, masonry, concrete and plastics be abraded.

## Deck Preparation

Before roofing work is started, the deck should be carefully inspected by the roofing contractor, the deck contractor, and the owners representative to determine that it will be able to receive the roofing system by some method which will hold the system securely. 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, Heat Welded, and Self Adhered. Refer to the JM Vapor Barrier SA Installation Guide, the Vapor Barrier Data Sheets, and the Vapor Retarders section in SBS Roofing Systems 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 resistive 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 SBS System Application Tools for Base Sheet fastening patterns and further information.

## Insulation Application

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 SBS 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 Foamable 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 using JM One-Step Foamable 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, board size must be no greater than 4' x 4' (1.22 m x 1.22 m) If installing over an existing layer of insulation or in multiple layers, all joints must be offset a minimum of 6" (152 mm) between layers. 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.

Appropriate JM Insulation Fasteners Include:

- All Purpose Fasteners
- 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.

Roof Insulation plays a key role in energy efficiency shown in codes and standards that have mandated increasingly higher minimum R-values in all 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.

## 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 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.

## Asphalt Application

Asphalt should meet the requirements of ASTM D 312. JM guarantees require the 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 Equiviscous Temperature (EVT) +/- 25°F (+/- 4°C).

## JM PMMA Liquid Membrane System

The JM PMMA Liquid Membrane and Flashing System consists of a two component, fast curing, polymethyl-methacrylate (PMMA) resin and a non-woven chopped strand fabric reinforcement. The system provides an elastomeric, monolithic roofing and waterproofing membrane. JM PMMA is ideal for small irregular shaped roofs or for roofs with many penetrations. In addition to paving tiles, pedestal systems, and garden roofs, JM PMMA can also be surfaced with a variety of other aggregates, including roofing granules, and white or other roof coatings.

## JM PMMA Primer Installation

After mixing the catalyst with the JM PMMA Primer or JM PMMA Primer - High Traffic, apply the primer to the clean and prepared substrate by spreading evenly on the substrate with an approved roller, brush or notched squeegee to obtain a full coverage coating, without voids at a rate consistent with the coverage provided on the product data sheet.

## Board Joint Seaming

If the JM PMMA Liquid Membrane System is being installed over board stock, after the primer has fully cured, the joints of the boards must be covered with JM PMMA Repair Paste, or a 4" (102 mm) width of JM PMMA Liquid Membrane.

All fasteners and plates must also be sealed with JM PMMA Repair Paste. Follow the instructions in the JM PMMA Liquid Membrane System Application Guide.

## Liquid Membrane Installation

The JM PMMA membrane system consists of a primer, waterproofing resin and fleece reinforcement, as well as optional surfacing. Once the primer has fully cured, install the membrane components following the instructions regarding mixing, measuring and application methods. The amount of JM PMMA Catalyst added to JM PMMA resins and primers varies based on the resin type, resin quantity and temperature. Each resin has different densities, so the volume of each resin will vary slightly for the same weight of measure. JM recommends using a scale to measure each resin component and catalyst when batch mixing. When a scale is not available, a culinary measuring tablespoon can be used to measure the appropriate quantity of JM PMMA catalyst needed. For all resins, thoroughly mix the entire container of resin for 2 - 3 minutes before each use, and prior to pouring off resin into a second container if batch mixing. Catalyze only the amount of material that can be used within 10 - 15 minutes. Follow the mixing chart in the JM PMMA Liquid Membrane System Application Guide. Once the primer has fully cured, spread the JM PMMA Resin evenly on the substrate with an approved roller, brush, or notched squeegee to obtain full coverage coating without voids at the appropriate recommended rate. Immediately roll the JM PMMA Scrim into the resin while still wet. Use a roller to work the scrim into the resin, saturating from the bottom up, and apply another coat of resin directly over the scrim. The liquid membrane should extend 2" (51 mm) past the scrim in all directions. If a surfacing is being added, the JM PMMA Resin should be allowed to cure for a minimum of one hour prior to application of the surfacing.

## Roof Coatings and Coverings

A variety of surface coatings are available with the JM PMMA Liquid Membrane System. JM PMMA Top Coat, JM PMMA Textured Top Coat, JM PMMA Traffic Coat, and JM PMMA Top Coat with broadcast aggregate. Follow the instructions for installation of these surface coatings in the JM PMMA Liquid Membrane System Application Guide. Protection (rock or pavers) over Cementitious Wood Fiber Decks, Gypsum Decks, or Wood Decks require a base sheet or cover board applied to the deck. Protection over Steel Decks requires a cover board or insulation applied to the deck.

## Liquid Flashings and Components

The JM PMMA Flashing membrane consists of a primer, waterproofing resin and fleece reinforcement. Follow installation instructions in the JM PMMA Application Guide, and refer to the JM PMMA Details in the Liquid Applied Roofing Systems section on the JM website.

## JM Guarantee Requirements

JM Peak Advantage® Guarantees are available up to a 20 year term with approved components and assembly make-up. Refer to the JM Peak Advantage Charges and Requirements-Multi Ply Systems document for additional guarantee information.

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

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 JM PMMA Application Guide. Not all JM specifications are eligible for all JM Peak Advantage Guarantee terms or enhanced coverage. Please contact JM Guarantee Services at (800) 922-5922 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.