Assembly Identification

Substrate

<table>
<thead>
<tr>
<th>I = Insulated</th>
</tr>
</thead>
</table>

Type of Base Sheet
C = SBS Composite
F = SBS Fiberglass
P = SBS Polyester
G = BUR Fiber Glass

Number of Plies $307 \rightarrow$ Cap Sheet Thickness $\rightarrow$ Cap Sheet $P = PVC$

Membrane Type
T = Thermoplastic

Cover Board

Insulation

Vapor Barrier

Steel Deck
Base Sheet

Fleece Backed Membrane adhered with JM Approved Hot Asphalt

Project Name:
Project Location:
Project Number:

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

Cap Sheet
- PVC FB - 60 MIL/60 MIL MIN (Hot Asphalt)
- PVC FB - 80 MIL - (Hot Asphalt)

Intermediate Ply (Polyester Reinforced):
- DynaBase®
- GlasFlate® Plus
- DynaLastic®
- PermaPly™ 28

Base Ply (SBS Polymerized):
- DynaBase® With
- DynaFlite™ 180 S
- DynaLastic™ 2180 S
- DynaLastic 250 S

Approved Cover Boards:
(If Applicable)
- Fr/2 RetroFit™ Board
- Fresco® Board
- Tapered Fresco Board
- JM DensiDeck Prime Roof Board
- RetroPlus™ Roof Board

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™ Roof Board
- JM DensDeck Prime Roof Board

Approved Base Sheets:
(If Applicable) Over Nailable Deck
- DynaBase®
- DynaBase PR
- DynaBase XT
- DynaFast™ 180 S
- DynaLast™ 180 S
- DynaLast 250 S
- GlasBase™ Plus
- GlasPly® Premier
- Glasrite® Flexible
- PermaPly™ 28
- Ventsulation™ Felt

Approved JM Insulations:
- DuraFoam®
- ENRGY 3 (ENRGY 3 Options)
- AGF
- OGF
- FR
- 20 PSI
- 25 PSI
- Tapered
- Invinsa Foam™

Approved Vapor Barrier:
(If Applicable)
- DynaBase®
- DynaBase PR
- GlasPly® III
- GlasPly Premier
- 8 or 10 mil poly with taped seams

Deck Type:
- Steel (22 Ga. Min.)
- Structural Concrete
- 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. Pour-in-place 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.

Note:
Consider all general instructions contained in the current JM Thermoplastic Membrane with Redundant Bituminous Ply Systems Installation Guide and the JM SBS 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 built up, SBS modified bitumen or thermoplastic fleece backed membrane is to be applied should be an approved structural substrate. The surface must be clean, smooth, flat and dry. Built-up roofing and SBS modified bitumen should not be applied directly to foam insulations.

Flashings and Components
Refer to the JM PVC Hybrid Details and the JM Thermoplastic Membrane with Redundant Bituminous Membrane Systems Installation Guide on the JM website.

Deck Preparation
Before roofing work is started, the deck should be carefully inspected by the roofing contractor, the deck contractor, and the owner’s 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 Vapor Barrier Installation Guide and the JM Thermoplastic Membrane with Redundant Bituminous Ply Systems Installation Guide 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 Nailer 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 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 either mechanically fastened or adhered with hot asphalt. Refer to the “BM” Fastening Patterns section in SBS 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 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.

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
- UHPFast 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 Invinsa 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 above for Cover Board Secrecy Information including Adhered and Fastened methods of attachment.

Asphalt Application
JM BUR, SBS modified bitumen and thermoplastic fleece back products are designed to be installed with hot asphalt. Permanop, coal tar pitch and coal tar asphalt are not permitted.

JM requires the use of approved asphalt within systems which require a JM Peak Advantage Guarantee. Asphalt should meet the requirements of ASTM D 312. JM guarantees require the use of 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).

Modified Bitumen Sheet Application - Hot Asphalt
On roof decks with slopes up to 1/2” per foot (41 mm/m), the roof felts may be installed either perpendicular or parallel to the roof incline. Install each felt so that it is firmly and uniformly set, without voids into the hot asphalt just before the felt at the proper nominal recommended rates. All sheet edges should be well sealed.

SBS Application: Starting with one of the base plies listed, install a JX width ply first into a full mopping of hot asphalt, then over that ply a full width ply with the remaining plies applied full width overlapping the preceding ply by 19” (483 mm) so that at least two plies of existing plies at all joints. Refer to the JM Vapor Barrier SA Installation Guide and the JM BUR Application Guide for additional information.

BUR Application: Starting with one of the base plies listed, install a JX width ply first into a full mopping of hot asphalt, then over that ply a 3/4” width ply then over both plies a full width ply. The following plies are to be applied full width, overlapping the preceding plies by 24” (627 mm) so that at least three plies cover the substrate at all locations.

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.

Thermoplastic Membrane with Redundant Bituminous Systems Over Non-Nailable Decks.
These specifications are for use over any type of deck which is not nailable and which offers a suitable surface to receive the roof. Concrete decks require coating with JM Asphalt Primer prior to the application of hot asphalt. Pre-cast concrete panels also require a layer of approved roof insulation prior to installing a roof membrane. The thermoplastic fleece-backed membrane must be firmly and uniformly placed into a full mopping of hot asphalt without voids. Asphalt must not be applied to the seavage edge of the thermoplastic fleece backed membrane to allow a minimum of 1” (25 mm) weld. Before installation, unroll the JM PVC Fleece Backed membrane and allow it to relax. The laps of JMA TPO Fleece Backed membrane must be hot air welded. Clean all surfaces to be welded. All laps must be a minimum of 1” (25 mm) in width.

JM PVC Fleece Backed membrane for hot asphalt application has a 8 oz. polyester fleece for staining protection against the asphalt. The membrane if furnished in 60 and 80 mil thickness and delivered in 10' widths.

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

Re-Roofing
A large percentage of all commercial and industrial roofing pertains to re-roofing. 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 Guarantee is available up to a 25 year term with approved components and assembly make-up. Refer to the JM Peak Advantage Charges and Requirements-Bituminous 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 SBS Modified Bitumen Specifications document. Not all JM specifications are eligible for all JM Peak Advantage Guarantees 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.