2 PLY SBS BONDED TO INSULATION

Assembly Identification

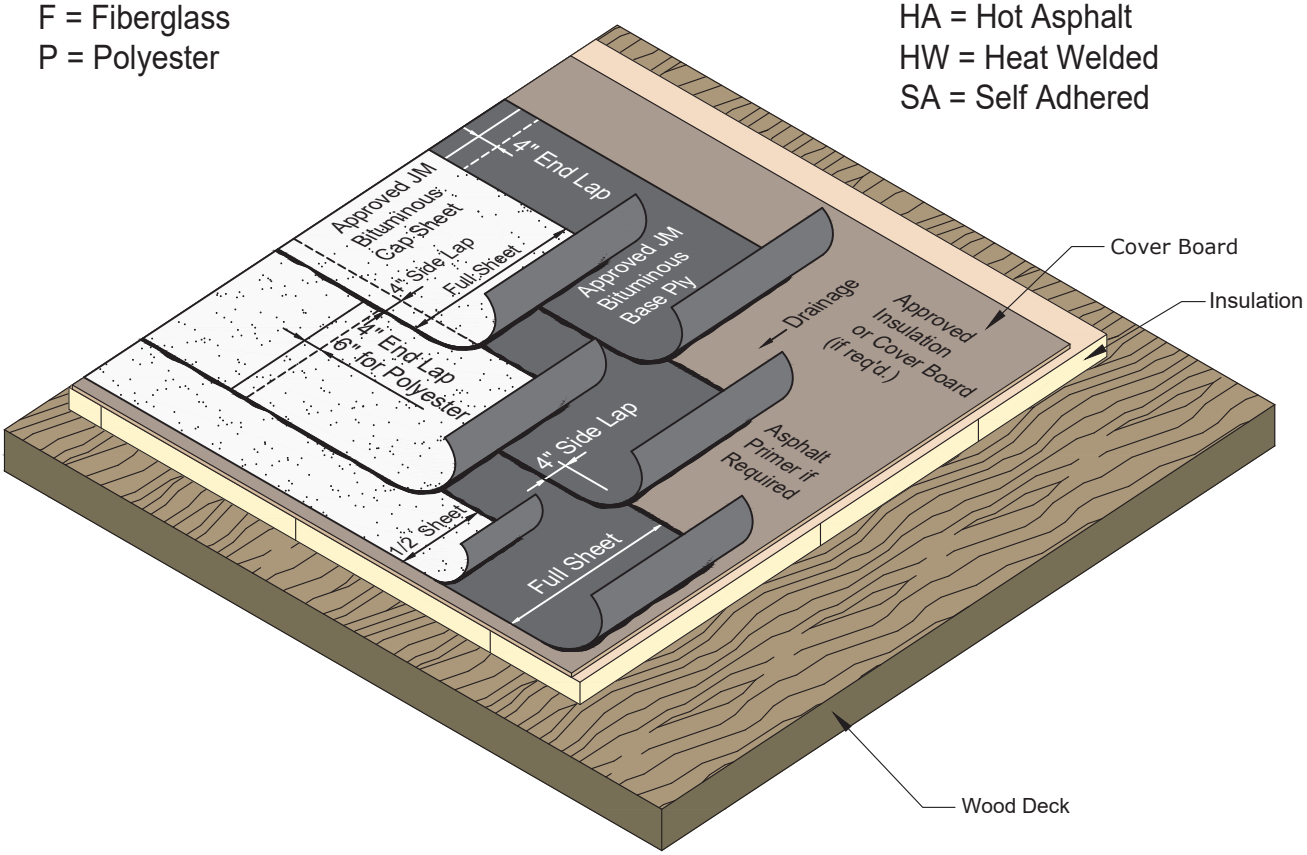
Substrate
I = Insulated

Number of Plies → 2 P I D-CA -CR

Surfacing
D = SBS Cap Sheet (Granule Surface)
CR = Mineral Surfaced Cool Roof Sheet

Cap Sheet
C = Composite
F = Fiberglass
P = Polyester

Cap Sheet Application Method
CA = Cold Adhesive
HA = Hot Asphalt
HW = Heat Welded
SA = Self Adhered



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

Cap Sheet - Cold Applied (Polyester Reinforced - Cool Roof):
- ☐ DynaLastic® 180 FR CR
- ☒ DynaLastic 180 FR CR G
- ☐ DynaLastic 250 FR CR
- ☐ DynaLastic 250 FR CR G
- ☐
- ☐

Base Ply (Cold Applied):
- ☐ DynaBase®
- ☐ DynaBase PR
- ☐ DynaBase XT
- ☒ DynaLastic® 180 S
- ☐ DynaLastic 250 S
- ☐ DynaPly® T1
- ☐ PermaPly® 28
- ☐ GlasTite® Plexible
- ☐ DynaMax™ Smooth
- ☐

Approved Cover Boards: (If Applicable)
- ☐ 1/2" RetroFit™ Board (HA)
- ☐ DuraBoard® (CA) (HW)
- ☐ Fesco® Board (HA)
- ☐ Fesco Board HD (HA)
  - JM DEXCELL®
  - ☐ FA Glass-Mat Roof Board (CA) (HW) (SA)
  - JM SEUROCK®
  - ☐ Gypsum-Fiber Roof Board (CA) (HA) (HW) (SA)
- ☐ JM DensDeck® Prime (CA) (HA) (HW) (SA)
- ☐ RetroPlus™ Roof Board (CA) (HA)
- ☒ ProtectoR™ HD Cover Board (CA) (SA)
- ☐ SeparatoR® CGF Recover Board (CA) (SA)

Cover Board Thickness _____

Approved JM Insulations:
- ☐ DuraFoam®
- ☒ ENRGY 3®
  - (ENRGY 3 Options)
  - ☐ CGF
  - ☒ 20 PSI
  - ☐ 25 PSI
  - ☐ Tapered
- ☐ Tapered Fesco Board

Layer 1 Thickness _____
Layer 2 Thickness _____
Layer 3 Thickness _____

Approved Thermal Barrier: (If Applicable)
- JM SEUROCK®
  - ☐ 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®

Thermal Barrier Thickness _____

Approved Vapor Barrier: (If Applicable)
- ☐ DynaBase® (CA) (HA)
- ☐ DynaBase PR (CA) (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
- ☐ DynaBase XT
- ☐ DynaFast® 180 S
- ☐ DynaLastic® 180 S
- ☐ DynaLastic 250 S
- ☐ GlasBase™ Plus
- ☐ GlasPly® Premier
- ☐ GlasTite® Flexible
- ☐ PermaPly® 28
- ☐ Ventsulation® Felt

Deck Type:
- ☐ Steel (22 Ga. Min.)
- ☐ Structural Concrete
  - Nailable Decks include:
  - ☐ Cementitious Wood Fiber
  - ☐ Gypsum
  - ☐ Lightweight Insulating Concrete
  - ☒ Wood (Plywood, Plank, OSB)

Cover Board Membrane Compatibility and Application Key (CA) Cold Applied (HA) Hot Asphalt (HW) Heat Weld (SA) Self Adhered

Vapor Barrier Application Key (CA) Cold Applied (HA) Hot Asphalt (HW) Heat Weld (SA) Self Adhered

2 PLY SBS BONDED TO INSULATION

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.

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 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 SBS modified bitumen membrane is to be applied to should be an approved structural substrate. The surface must be clean, smooth, flat and dry. SBS modified bitumen should not be applied directly to foam plastic insulations.

Flashings and Components
Refer to the JM Bituminous Details in the SBS 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 owners 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 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
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
- 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 Cover Boards Selector Guide for JM Cover Boards product information. Refer to section Insulation Application above 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).

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.

Apply a half width sheet of one of the cap sheets listed over the full width adhered base ply into a full mopping of asphalt. The remaining sheets are to be applied in the same manner with 4" (102 mm) side and end laps over the preceding sheets (6" [152 mm] end laps for polyester reinforced products).

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

Modified Bitumen Sheet Application - Heat Welded
Starting at the low point of the roof, heat weld a half 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 for polyester reinforced products. Apply all sheets so that they are firmly and uniformly set, without voids. Maintain a ⅛" (3 mm) to ⅜" (10 mm) bleed out beyond all laps. Refer to the SBS Modified Bitumen Specifications document for further information.

Modified Bitumen Sheet Application - Self Adhered
Unroll the cap sheet and allow it to relax. Position the half width cap sheet (with bottom release film in tact) over the release film of the already installed base ply. Remove the bottom release film and roll in the sheet with a 75 lb. to 100 lb. split steel roller to ensure full adhesion. Position the next full width sheet with the bottom film in tact, so the leading edge is lined up with the perforated side lap line of the previously installed sheet . Install per specifications. Refer to the SBS Modified Bitumen Specifications document for further information.

Roof Coatings
TopGard® 4000 and TopGard 5000 are one part acrylic elastomeric roof coatings. When used over a modified bitumen roof, TopGard Base Coat must be applied as a base coat prior to application of TopGard 4000 and TopGard 5000. It is recommended that TopGard Base Coat be used with all installations of TopGard 4000 and TopGard 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. TopGard 5000 is ideal for cold weather climates. Refer to the TopGard 4000 and TopGard 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.

Steep 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 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-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 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.