



Johns Manville

**SBS Modified Bitumen Specifications
Specification 3CLD/3FLD/3PLD**

Three Ply Hot Mopped Modified Bitumen Mineral Surfaced Roofing System. For use over approved lightweight, insulating fill decks on inclines up to 3" per foot (250 mm/m).

Materials per 100 sq. ft. (9.3 m²) of Roof Area

Felts:

Base: Ventsulation, GlasBase Plus, DynaBase or PermaPly 28 1 layer

Intermediate: DynaBase, DynaPly, GlasBase Plus, GlasPly Premier, GlasPly IV, PermaPly 28 or DynaLastic 180 S 1 layer

Note: DynaBase, DynaLastic 180 S and DynaPly – Full Sheet width is 39" (1 m)
GlasBase Plus, GlasPly IV, GlasPly Premier, PermaPly 28 and Ventsulation – Full Sheet width is 36" (0.92 m)

Cap: ♦

3CLD—DynaKap or DynaKap FR
3FLD—DynaGlas, DynaGlas FR or DynaGlas 30 FR*
3PLD—DynaLastic 180, DynaLastic 180 FR, DynaLastic 250 or DynaLastic 250 FR 1 layer

* DynaGlas 30 FR must be used in conjunction with DynaBase, DynaPly or DynaLastic 180 S only.

Incline per foot	Asphalt	Total Weight
Up to ½" (41.6 mm/m)	190°F (88°C), Type III, Steep	46 lbs. (21 kgs.)
½" to 3" (41.6 to 250 mm/m)	220°F (104°C), Type IV, Special Steep	46 lbs. (21 kgs.)

Approximate installed weight: 165 - 360 lbs. (75 - 163 kgs.).

General

This specification is for use over any type of approved, lightweight, insulating fill deck (without insulation) which can receive and adequately retain mechanical fasteners that may be recommended by the deck manufacturer. Examples of these decks are lightweight, insulating concrete, either cellular-type or aggregate-type. Ventsulation venting base felt is recommended over any wet fill deck, and may be required as a condition of guarantee. JM also recommends the use of FP-10 One-Way Roof Vents over some types of wet fill decks.

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 promptly and completely. Areas where water ponds for more than 24 hours are unacceptable and will not be eligible for a JM Roofing System Guarantee.

Note: All general instructions contained in the current JM Commercial/Industrial Roofing Systems Manual shall be considered part of this specification.

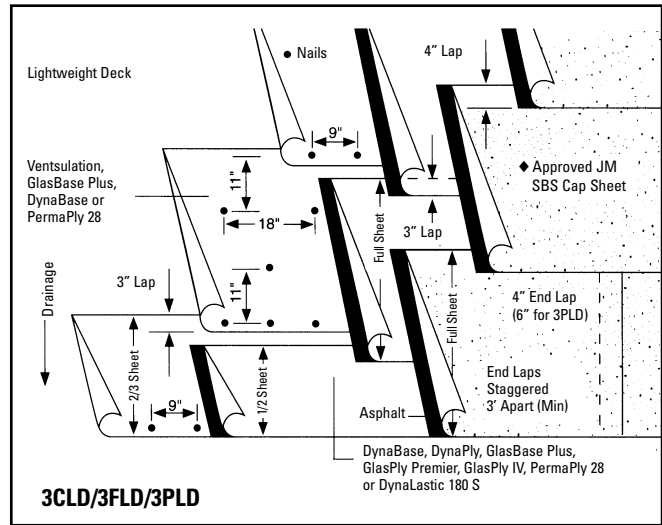
Flashings

Flashing details can be found in the "Bituminous Flashings" section of the JM Commercial/Industrial Roofing Systems Manual.

Application

On roof decks with slopes up to ½" per foot (41.6 mm/m), the roofing felts and modified bitumen sheets may be installed either perpendicular or parallel to the roof incline.

Using one of the base felts listed, start with a piece ¾ sheet wide. The remaining felts are to be applied full width with 3" (76 mm) side and 4" (102 mm) end laps over the preceding sheets. Nail the laps at 9" (229 mm) centers, and down the longitudinal center of each felt place two rows of nails, with the rows spaced approximately 11" (279 mm) apart, and nails staggered on approximately 18" (457 mm) centers. Use nails or fasteners appropriate to the type of deck, with 1" (25 mm) minimum diameter caps. Consult the current Factory Mutual Approval Guide for the



appropriate base sheet, fastener type and pattern. For additional fastener information, refer to the fastener data in the "Roof Decks" section of the current JM Commercial/Industrial Roofing Systems Manual.

Roll an ½ width piece of one of the intermediate felts listed into a full mopping of asphalt. The remaining felts are to be applied full width, in the same manner, with 3" (76 mm) side and 4" (102 mm) end laps over the preceding sheets.

Apply a full width piece of one of the cap sheets listed into a full mopping of asphalt. Subsequent 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 DynaLastic products).

Apply all felts so that they are firmly and uniformly set, without voids, into the hot asphalt. Asphalt temperature should be at the Equiviscous Temperature (EVT), ±25°F (±14°C), at the point of application. All felt edges shall be well sealed. The asphalt shall be applied just before the felt, at a nominal rate of 23 lbs. per square (1.1 kgs./m²). For modified bitumen sheets, the asphalt temperature shall be at a minimum of 400°F (204°C) when the sheet is set into it. This higher temperature maximizes the bonding of the modified bitumen sheet.

Note: When using metric and English sized base and cap sheets in the same system, care must be taken to avoid lap over lap configurations.

For cold weather application techniques, refer to **Paragraph 7A.24**.

Base sheets and cap sheets with polyester reinforcement must be allowed to relax in an unrolled position prior to installation.

Steep Slope Requirements

Special procedures are required on inclines over ½" per foot (41.6 mm/m). Refer to **Paragraph 7A.21**.

Surfacing

No additional surfacing is required.

Asphalt

Asphalt should meet the requirements of ASTM D 312.

JM Guarantees require the use of Trumbull® asphalt or another JM Approved Asphalt.

* Trumbull is a registered trademark of Owens Corning.