

**3PID-MF-CA; 3PID-MF-CA (CR)
3FID-MF-CA; 3FID-MF-CA (CR)
3CID-MF-CA; 3CID-MF-CA (CR)
Specification for In-Lap Fastened at 6", 12" or 18" O.C.**

Three-Ply SBS Modified Bitumen System With DynaFast Base Sheet In-Lap Fastened at Either 6", 12" or 18" O.C. With Inner Ply Membrane and Cap Sheet Adhered With JM Approved Cold Adhesive. Install Over Approved Decks With Optional JM Insulation(s) and Cover Boards.

Materials per 100 sq. ft. (9.29 m²) of roof area

Base Sheet:	
DynaFast Base Sheet with Sanded Top Surface	1 layer
Inner Ply:	
JM Base Ply Membrane Adhered with Approved Cold Adhesive	1 Layer
Cap:	
JM Cap Sheet Adhered with Approved Cold Adhesive	1 layer

Approved Cold Adhesives:

JM MBR Cold Application Adhesive
(Can also be displayed as 'SBS-CA1' [SBS, Cold-Applied, 1-part])

JM MBR Bonding Adhesive
(Can also be displayed as 'SBS-CA2' [Cold-Applied, 2-part])

JM Premium Cold Application Adhesive
(Can also be displayed as 'SBS-CA3' [SBS, Cold-Applied, 1-part])

JM MBR Low VOC Membrane Adhesive (Cold-Applied, 1-part)

Installed weight per 100 sq. ft. (9.29 m²) of three-ply roof assembly, including cold adhesive and optional insulation and cover board may vary depending upon components utilized.

Deck:

Steel, Concrete, LWIC, Wood, CWF and Gypsum

General

This Specification is for use with DynaFast in-lap fastened systems that are installed over approved decks that comply with IBC Chapter 15 requirements. This specification is for both insulated and noninsulated roof assemblies.

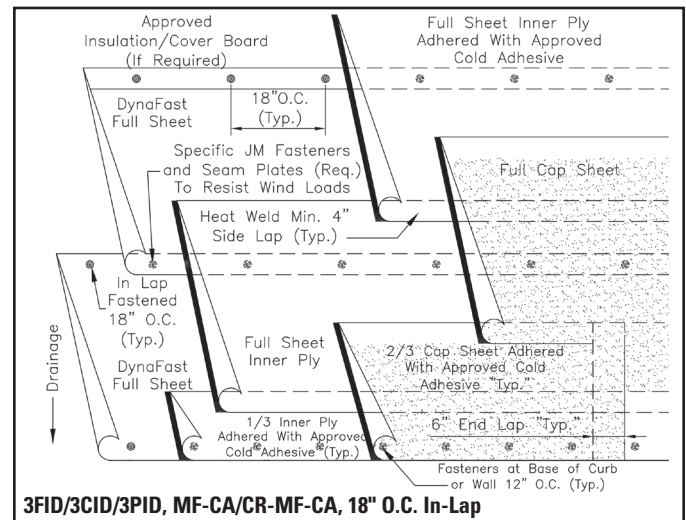
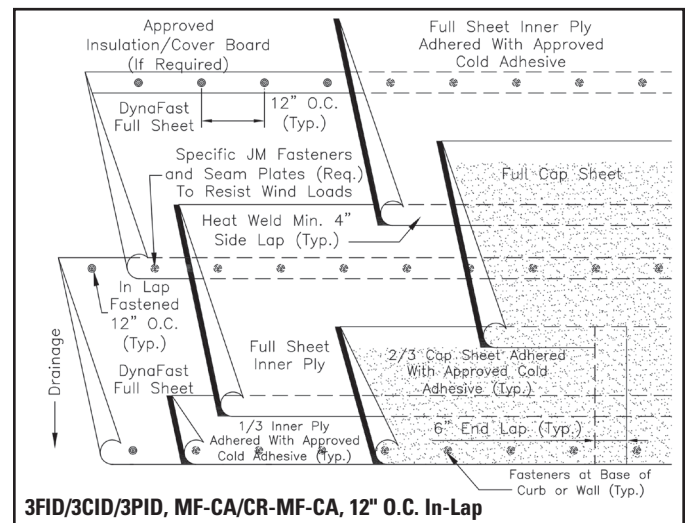
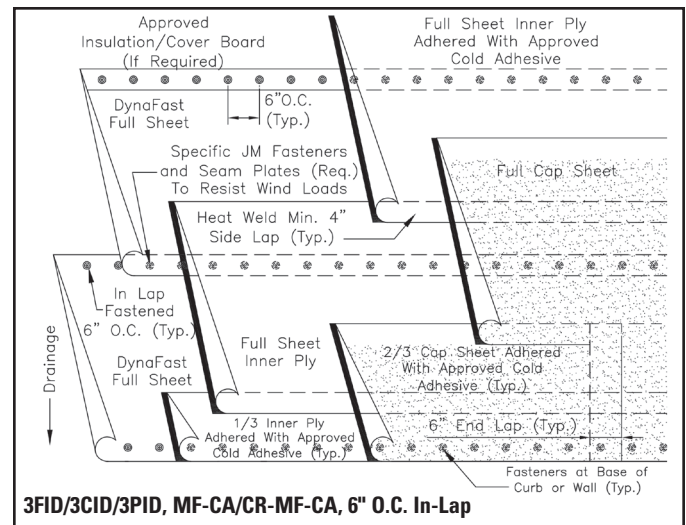
When used, JM roof insulations and/or cover boards shall be installed in accordance with the JM Industrial/Commercial Roofing Solutions Manual, including reference to the "Re-roofing" section of said manual and as found at www.specjm.com

Note: General Instructions found at www.specjm.com and referenced in the current JM Industrial/Commercial Roofing Solutions Manual shall be considered part of this specification.

The designer of record or authority having jurisdiction (AHJ) shall be responsible for the design of the structural components including roof deck securement while their sub-contractors shall install these components in accordance with the IBC, other applicable Code and the contract documents. The Finished deck and above-deck components installed shall result in a substrate that drains freely and to outlets in order to remove water. Roof areas where water ponds for more than 24 hours are unacceptable and are not eligible to receive a Johns Manville Roofing Systems Guarantee.

Flashings

Flashing details can be found at www.specjm.com



Application (General)

DynaFast Base Sheets should be installed perpendicular to steel deck ribs. Fasten through the insulation layer and into the top rib of the steel decking whenever possible; while recognizing when 'picture framing' perimeter rolls, the DynaFast Base Sheet may need to be secured parallel to the ribs. Follow **current JM Industrial/Commercial Roofing Solutions Manual** and detail requirements for DynaFast Base Sheet perimeter securement layouts especially when Wind Rider Guarantees are specified. Current information can be found at www.specjm.com

Project wind uplift pressures are determined by designer of record or AHJ. Depending upon those pressures for Zone 1 (field), Zone 2 (perimeter) and Zone 3 (Corner) mechanically fasten the DynaFast Base Sheet in-lap with one of the available JM Maximum Design Pressure (MDP) tested fastening patterns. JM-approved fasteners are used to secure the DynaFast Base Sheet in-lap at 6", 12" or 18" O.C. Fastener spacing can vary based on the project wind uplift pressure requirements. Wind Riders may require additional fastener rows with watertight cover strips.

Base Sheet Application

Starting at the low point of the roof, fasten a full-width base sheet (bottom layer). Note: minimum side lap and end lap widths are 4" and 6", respectively. Seam plate must be centered to ensure a secure bitumen bond on either side of the plate. The subsequent base sheet (top layer) shall extend past the seam plates of the bottom base sheet a minimum of ¾" (19 mm), creating a minimum 4" wide side lap. Heat weld the side and end laps using a hot-air welder or a medium-sized torch head placed inside the lap using the "torch and roll" heat-welding method. The combination of heat and pressure will ensure a fully bonded lap, producing a 1/8" (3 mm) bleed out visible at the edge of all seams. Verify all seams are watertight and heat weld any voids at the seam. Subsequent layers of base sheets shall be applied in the same manner.

Simultaneously apply heat to the top and bottom surfaces of the lap area only. Mate both surfaces together with pressure to ensure contact and a fully welded seam area. A 1/8" (3 mm) bleed out of SBS compound may be visible at the edge of all seams. Check for watertight seams and heat weld all voids closed. Periodic seam samples can be extracted.

Inner Ply Cold Adhesive Application

Starting at the low point of the roof, align a 1/3-width roll of inner ply membrane in order to maintain a 12" (305 mm) stagger from the DynaFast side lap and embed into a full coating of approved cold adhesive applied at a coverage rate of 1-2 gal/sq., unless otherwise specified. Use pressure to apply the inner ply into the approved cold adhesive to ensure contact and a full bond without wrinkles or air pockets. The inner ply shall maintain 4" (102 mm) wide side laps, 6" (152 mm) wide end laps and approx. 12" side lap stagger from DynaFast side laps and cap sheet side laps. **Keep side and end laps free of adhesive** in order to seal these laps in one of the following manners:

- A) The typical 4" wide side laps and 6" end laps are fully heat welded and sealed watertight with an automated hot air-welder using a min. 4" wide air nozzle.
- B) Use a hand-held, 220v hot-air welder with a 3" wide air nozzle.

A 1/8" (3 mm) bleed out of SBS compound may be visible at the edge of all hot-air welded seams. Check for watertight seams and heat weld all voids closed. Bond the subsequent full width inner ply sheets in the same manner over the preceding inner ply sheets.

Cap Sheet Cold Adhesive Application

Starting at the low point of the roof, install a ½-width roll of cap sheet into a full coating of an approved cold adhesive at the approved coverage rate. Maintain a minimum 12" (305 mm) cap sheet side lap stagger from the DynaFast and inner ply side laps. Use pressure to apply the cap sheet into the approved adhesive to ensure contact and a full bond without wrinkles or air pockets. The cap sheet shall have 4" (102 mm) wide side laps and 6" (152 mm) wide end laps. **Keep side and end laps free of adhesive** in order to seal these laps in one of the following manners:

- A) The typical 4" wide side laps and 6" (152 mm) end laps are fully heat welded and sealed watertight with an automated hot-air welder using a min. 4" wide air nozzle.

- B) Use a hand-held, 220v hot-air welder with a 3" (76 mm) wide air nozzle.

A 1/8" (3 mm) bleed out of SBS compound may be visible at the edge of all seams. Check for watertight seams and heat weld all voids closed. Bond the subsequent full width cap sheets in the same manner over the preceding membranes.

Note: Due to the highly reflective surface, CR cap sheets require additional relaxation time prior to application.

Standard Cap Sheet Surface

At the end laps, soften the bitumen by heating the granule surface with a detail torch or a hand-held, 220v hot-air welding tool with a 3" (76 mm) wide air nozzle. When the granules start to sink into the bitumen, stop heating and with a hot trowel, press/embed the granules into the bitumen. Afterward, simultaneously hot-air weld or heat weld with a detail torch the top and bottom surfaces of the end lap area only, mating both surfaces together with pressure to ensure contact and a fully welded seam area. Check for watertight seams and weld all voids closed.

For special precautions on heat weld applications, see **section 7A.31 of the JM Industrial/Commercial Roofing Solutions Manual** at www.specjm.com. Base sheets, inner ply and cap sheets must be allowed to relax in an unrolled position prior to installation.

Surfacing

No additional surfacing is required. Refer to the "Modified Bitumen Specifications" section of the JM Industrial/Commercial Roofing Solutions Manual at www.specjm.com

CR Cap Sheet End Lap Surfaces

Preparation of the 6" wide (152 mm) end lap of the CR cap sheet requires heating up and removing the white coating (not the bitumen layer). Discard removed coating onto a slop sheet. Soften the bitumen by heating the granule surface with a detail torch or a hand-held, 220v hot-air welding tool with a 3" (76 mm) wide air nozzle. When the granules start to sink into the bitumen, stop heating and with a hot trowel, press/embed the granules into the bitumen. Afterward, simultaneously hot-air weld or heat weld with a detail torch the top and bottom surfaces of the lap area only, mating both surfaces together with pressure to ensure contact and a fully welded seam area. Check for watertight seams and weld all voids closed.

Finishing

When applying the coated SBS cap sheet, care is required to limit scorch or black marks. However, if marks are a concern of the building owner, consultant or applicator, then the marks could be dressed up with coating to give the roof surface a uniform white appearance. This is an optional step. JM recommends using a heavy nap roller, in a min. 4" (102 mm) width, to coat the exposed adhesive with JM CR Seam Coating.

Note: The CRRC label for each Johns Manville "CR" cap sheet may be found on the Product Data Sheets.

Refer to the Material Safety Data Sheet and product label prior to using this product.