

Specification (Spec. ID)-C1

Johns Manville (JM) Cold Adhesive APP and PAO Modified Bitumen Roofing System, Squeegee Method. One-Part Adhesive for use in Cold Process APP and PAO Modified Bitumen Systems on inclines up to 3" per foot (250 mm/m).

For Regions 1, 2 and 3

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

Primer (if required):
JM Concrete Primer 1 gallon (3.8 liters)

Felts:
Base Ply: JM APP Base Sheet, BICOR S or TRICOR S 1 layer
Top Ply: TRICOR M FR, TRICOR S or BICOR S 1 layer

Note: DO NOT USE GlasPly IV or GlasPly Premier in any cold adhesive systems. DO NOT USE APP or PAO products with polyolefin film in contact with adhesive.

Adhesive:
Over base ply 1½ to 2 gal. (5.7-7.6 liters) per layer
Over porous substrate 2 to 3 gals. (7.6-11.4 liters) per layer

Approximate installed weight: 175-200 lbs. (79-91 kgs.)

Refer to the APP and PAO heat welded membrane specification for diagram.

General

JM has developed an adhesive, MBR® Cold Application Adhesive, for use with APP and PAO modified bitumen products which can be used as a direct substitute for Type III and IV asphalts in hot application with PAO or heat weld applications with APP specifications. We do not recommend other solvent based mastic adhesives for use with APP and PAO products. Most of these products contain excessive quantities of solvent which can damage the modified bitumen compound. The JM adhesive has about one third of the solvent found in most other brands of "Modified Bitumen Adhesives".

MBR Cold Application Adhesive is ideal for applications where hot asphalt is prohibited, not desirable or impractical.

The surface on which the modified bitumen membrane is to be applied should be one of the JM roof insulations or an approved substrate. Poured and precast concrete, and any other surface with dust present requires priming with JM Concrete Primer. The primer must completely dry before adhesive application begins. The finished surface must be clean, dry, flat and smooth.

Design and installation of the deck and/or 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: This specification is also for use with JM PAO (Classic) products. 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

Refer to the APP and PAO modified bitumen specifications for the "Spec ID" portion of the specification designation and specific layout details. The number of starter sheets and their sizes vary depending on the number of plies being used in the membrane.

On roof decks with slopes up to ½" per foot (41.6 mm/m) the roofing felts and modified bitumen sheet may be installed either perpendicular or parallel to the roof incline. For slopes over ½" per foot (41.6 mm/m) roofing felts must be installed parallel to the incline and must be nailed. Refer to the hot asphalt modified bitumen specifications for fastener spacing and specific felt lay-up recommendations.

Caution: MBR Cold Application Adhesive is combustible and may cause eye, skin and respiratory irritation. Avoid contact with skin: Use impervious clothing and rubber gloves to avoid prolonged or repeated contact with skin. Read container label and follow all safety instructions. Harmful or fatal if swallowed.

MBR Cold Application Adhesive is intended for use as supplied and does not require mixing. Do not thin with additional solvents. MBR Cold Application Adhesive can be applied within an ambient temperature range of 40°-100°F (4°C-38°C). If ambient application temperature is below 50°F (10°C), the material should be stored at 70°F (21°C) for 24 hours prior to application to facilitate spreading.

Squeegee Application: The adhesive is applied at a nominal rate of 1½ to 2 gallons (5.7-7.6 liters) per square over non-porous substrates, e.g., primed concrete or fiber glass base felts. If over porous materials, such as insulations, the application rate will increase to approximately 2 to 3 gallons (7.6-11.4 liters) per square or more depending on the absorbency of the material.

The simplest means of adhesive application is by pouring a 2" to 4" (51 mm-102 mm) wide bead of the adhesive along the substrate, about 12" (305 mm) from the lower edge of the work area. The adhesive is spread with a ¼" (6 mm)(max.) saw toothed rubber squeegee to obtain a uniform bed of adhesive. (The Roofer-Rite Brand squeegee has been found to work very well for these applications.) Spread the adhesive first toward the lower edge of the work area. Then continue to spread the adhesive up the roof until the bed of adhesive is wide enough to receive several sheets.

The base ply sheet is then rolled into the adhesive. No adhesive should be applied in the side lap or end lap area. If this occurs this adhesive must be removed prior to heat welding the seams. The sheet must be firmly and uniformly set, without voids, into the adhesive. Brooming is recommended to assure embedment. Repositioning or straightening of the sheet can be accomplished while it is being laid out. All safety guidelines for heat welding application must be followed.

All cap sheets or top plies should be rolled out and allowed to relax. Starting at the low edge of the roof the adhesive is poured onto the area where the modified bitumen sheet will be installed. The adhesive is spread along the roof in the same manner used for the base ply. Once this portion of the adhesive bed has been completed, continue spreading the adhesive up the roof until the bed is wide enough to receive several sheets. After the cap sheet has been placed into the bed of adhesive and aligned properly with the adjoining sheet, the side and end laps must be heat welded. Roll the seams with a 3" (76 mm) rounded edge roller and press a ⅛" to ⅜" (3 mm-10 mm) bead of compound out of the lap. Roofing granules can be applied to any exposed adhesive if appearance is a factor.

Steep Slope Requirements

Contact the JM Technical Services Specialist in your area.

Surfacing

A heavy coating of adhesive may be applied over smooth surfaced products in which roofing gravel or granules may be embedded.

UL Compliance: See Underwriters Laboratories Roofing Materials and Systems Directory.

For an identical copy of this specification, ask for RS-4341.