



JM TPO 45, 60, or 80 mil Fully Adhered Membrane System Over Fastened Invinsa® FR OR ENRGY 3® FR (1½" min.) and ENRGY 3 Loose Laid (Optional)

General

This specification is for use over any approved structural wood deck which is suitable to receive a fully adhered roof membrane. This specification can also be used in certain re-roofing applications.

Note: Consider all general instructions contained in the current JM Single Ply Roofing Systems Manual as part of the specification.

Design

Consider local conditions and characteristics when designing, specifying and installing any roofing system. Information from the Single Ply Roofing Industry (SPRI), 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 promptly. Minor ponding is acceptable.

Deck Preparation

Ensure the deck is clean, dry and smooth. All deck fasteners should be driven flush to the deck with no sharp edges. Holes and gaps should be evaluated and patched as appropriate. A pullout test must be conducted using High Load Fasteners and a minimum average value of 500 lb (226.8 kg) achieved. Values less than this must have analysis by JM Technical Services.

Insulation Application

Store products per JM Guarantee Services guidelines. Remove any wet product and discard. Insulation must be a minimum 1.5" (3.8 cm) thick. Position the insulation with the long side of the board running perpendicular to the TPO sheet orientation. No board widths less than 6" (15.2 cm) are allowed. A minimum offset of 6" is recommended from the plywood joints. Keep all boards tight with no gaps greater than ¼" (6 mm) Perimeters and corners fastener density must be enhanced per FM publication 1-29. Fasteners must penetrate through the plywood deck a minimum of ½" (1.25 cm). **Call JM Guarantee Services at (800) 922-5922 for specific code approvals with Invinsa FR/ ENRGY 3 FR products.**

Roof Board Fasteners and Plates

Install UltraFast® Fasteners and Plates at an appropriate rate determined by code, specification, and/or JM guarantee requirements.

Membrane Application

Before installation, unroll the JM TPO Membrane, and "relax":

- 15 minutes when the temperature is above 60°F (16°C)
- 30 minutes when the temperature is below 60°F (16°C)

Once the membrane has been properly positioned, fold the sheet back half of the sheet's length. Apply adhesive as directed on the adhesive instructions.

Membrane Securement – Adhered

Apply adhesive at 40°F (4°C) or above for best drying times and bond strength. Follow the application instructions for the type of adhesive utilized. **Do not apply adhesive to the lap areas of the sheet that will be welded.** Ensure the membrane is smooth and free of wrinkles or buckles.

Welding of Lap Areas

The laps of JM TPO adhered systems must be hot-air welded. Clean all surfaces to be welded. Follow manufacturer's operating instructions for welding equipment. All welds must be a minimum of 1.5" (3.8 cm) in width.

Quality Control of Seams

After heat welding, check the seams for integrity with a blunt-ended probe. Repair any cold welds or "fishmouths". Each day, take test cuts at the seams and pull until failure to test the quality of the welds. Should the welds be deficient, a more thorough examination of the work performed must be carried out and necessary repairs made.

Perimeter Attachment

Secure attachment of the TPO roofing membrane at the perimeter and at penetrations by mechanical fastening using High Load Fasteners and Plates or other approved fasteners appropriate for substrates.