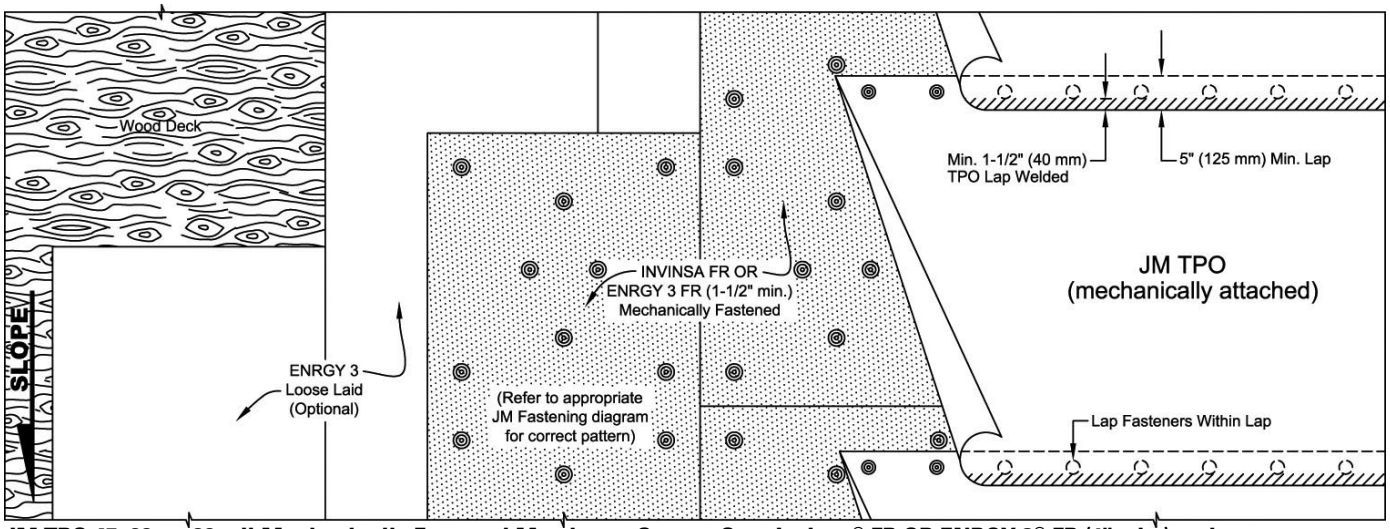
Specification STRM-W



JM TPO 45, 60, or 80 mil Mechanically Fastened Membrane System Over Invinsa® FR OR ENRGY 3® FR (1" 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 mechanically fastened insulation. 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" (2.5 cm) thick. Loose lay 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. **Call JM Guarantee Services at (800) 922-5922 for specific code approvals with Invinsa FR/ ENRGY 3 FR products.**

Roof Board Fasteners and Plates

Position the cover board with a minimum 6" (15.2 cm) offset from the previous layer of insulation. Install UltraFast® Fasteners and Plates at a minimum rate of 5 fasteners per 4' x 8' (1.22 m x 2.44 m) board. Fasteners must penetrate through the plywood deck a minimum of ½" (1.25 cm).

Membrane Application

Before installation, unroll the JM TPO Membrane, and "relax":
- 15 minutes when the tem perature is above 60°F (16°C)
- 30 minutes when the temperature is below 60°F (16°C)

Position the membrane so that all field sheets run perpendicular to the long side of the boards. Begin fastening once the membrane has been properly positioned.

Membrane Securement – Mechanically Fastened

Install High Load Fasteners and Plates in the 5" (12.7 cm) lap at a minimum rate of 1 fastener every 12" (30.5 cm) on center. Position plates so that the back edge of the plate is no closer than ½" (1.3 cm) from the edge of the membrane. Fasteners must penetrate through the plywood deck a minimum of ½" (1.25 cm). Perimeters and corners fastener density must be enhanced per FM publication 1-29.

Welding of Lap Areas

The laps of JM TPO mechanically fastened 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" (3.81 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". To test the quality of the seams, each day take test cuts at the seams and pull until failure. 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. JM allows the use of picture framing with half sheets, or adding additional rows of fasteners in the field sheet and welding a 6" (15.2 cm) minimum width cover strip. The minimum width of the perimeter enhancements should be 6' (1.83 m). Increase perimeter width as necessary to comply with FM 1-29 and 1-28.