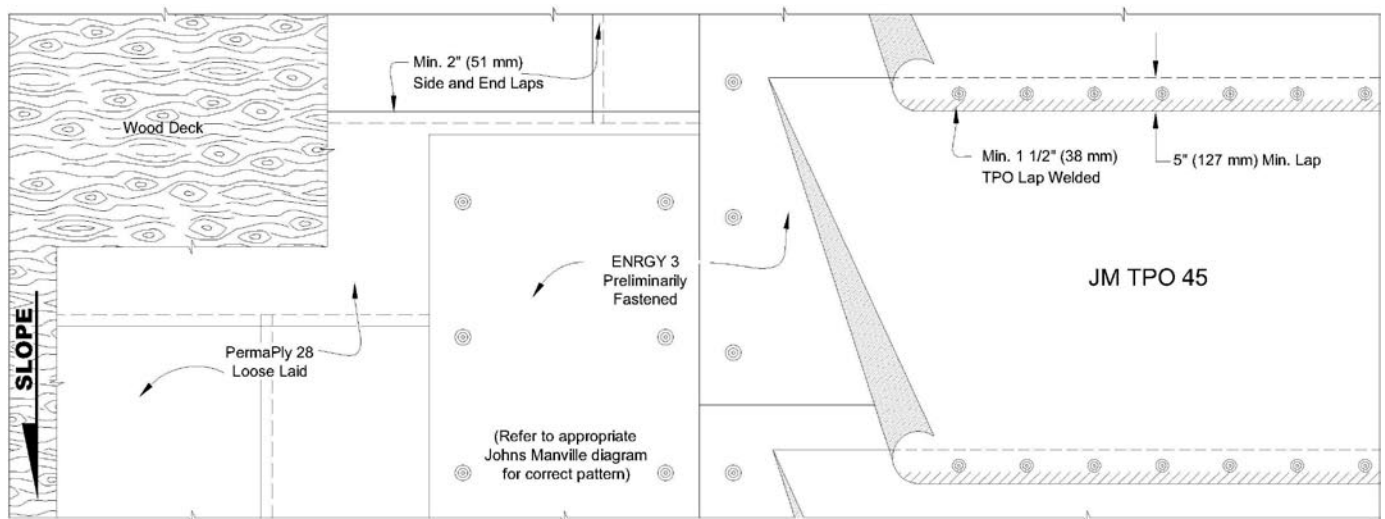


45WIT-LM-M



JM TPO 45 Mil Mechanically Fastened Membrane System Over ENRGY 3® Insulation and PermaPly® 28 Base Sheet Loose Laid on a Wood Deck

General

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

Install all slip sheets to run perpendicular to TPO sheets.

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 screws and a minimum value of 500 lbs (226.8 kg) average must be achieved. Values less than this must have analysis by JM Technical Services.

Base Sheet Securement – Loose Laid

The PermaPly 28 base sheet is to be installed in the same direction of the TPO membranes. While fasteners are not necessary.

Insulation Application

Store products per manufacturer's recommendations. Remove any wet product and discard. Insulation must be a minimum 1.4" (36 mm) thick.

Position the insulation with the long side of the board running perpendicular to the TPO sheet orientation. No board widths less than 6" (152 mm) are allowed. Perimeters and corners fastener density must be enhanced per FM publication 1-29. **Call JM Technical Services at (800) 922-5922 for specific approvals for ENRGY 3 insulation.**

Insulation Securement – Mechanically Fastened

Install UltraFast Fasteners and Plates at a minimum rate of five fasteners per 4' x 8' (1.22 m x 2.44 m) board. Fasteners must pierce the top flute of the deck at a minimum of 1" (25 mm).

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)

Membrane Securement – Mechanically Fastened

Install High Load Fasteners and Plates in the 5" (127 mm) lap at a minimum rate of one fastener every 12" (305 mm) on center. Position plates so that the back edge of the plate is no closer than ½" (13 mm) from the edge of the membrane. Fasteners must pierce the top flute of the deck a minimum of 1" (25 mm).

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" (38 mm) 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 mechanically 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" (152 mm) 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.