

**Bulletin Number:** T24-005\*

**Date:** May 29, 2024

**Distribution:** External

\*UPDATE: This bulletin is an update to previously issued bulletin T20-003 to reflect fastening requirements outlined in Technical Bulletin T24-003: Minimum Fastening Patterns for Insulation Boards with Glass-Reinforced Facers under Mechanically Fastened Membranes - issued 2/15/2024. Highlighted items reflect updates made. Please contact JM Technical Services if you have any questions.

## Minimum Fastening Requirements – Attached Membrane To Qualify for a 55 mph JM Peak Advantage® Guarantee (max. 20 year term)

The following requirements represent the minimum fastener and plate attachment criteria to qualify for a 55 mph JM Peak Advantage Guarantee up to a 20 year term. This information does not represent compliance with applicable building codes, FM requirements, or Guarantees above 55 mph and/or greater than 20 years. For compliance with specific wind uplift criteria and systems beyond a standard 20 year Peak Advantage Guarantee, please contact JM Technical Services at 1-800-922-5922 Option 3.

### The following conditions apply to the Minimum Fastening Rates listed below for RhinoPlate® System and Mechanically Fastened Single Ply Membrane assemblies:

1. These attachment rates apply with the following deck types: min. 22 ga steel, structural concrete, and min. 5/8" plywood or wood plank. Contact JM Technical Services for fastening rates into decks not listed.
2. Fastener type is dependent upon deck type. Membrane attachment to steel decks requires the use of JM High Load #15 Fasteners. Membrane attachment to structural concrete decks requires the use of JM All Purpose #14 Fasteners. Membrane attachment to wood decks requires the use of JM High Load #15 Fasteners; All Purpose #14 Fasteners may also be acceptable for use in wood if pull-out values are greater than #15 fasteners.
3. **Enhancements for perimeter and corner attachment are required for all mechanically fastened single-ply membrane systems. Perimeter and Corner Dimensions are defined as follows:**

#### Perimeter and corner dimensions for buildings less than 60 ft. in height:

Equal to the lesser of:

- 0.1 times the building lesser plan dimension (overall length or width), or
- 0.4 times the eave height

but will never measure less than 0.04 times the building lesser plan dimension and never less than 3 ft.

#### Perimeter and corner dimensions for buildings greater than 60 ft. in height:

Equal to 0.1 times the building lesser plan dimension (overall length or width), but never less than 3 ft.

Corners are "L" shaped with legs twice the width of the perimeter.

4. Single ply membrane fastening patterns outlining required enhancements at perimeters and corners are available at [www.jm.com/roofing](http://www.jm.com/roofing). "Picture Framing" is acceptable for 55 mph JM Guarantee up to 20 years; see JM fastening pattern TM-12-PF.

**Bulletin Number:** T24-005\*

**Date:** May 29, 2024

**Distribution:** External

Page 2 of 4

Insulation Fastening Requirements - Mechanically Fastened Membrane							
Without an Air/Vapor Barrier				With an Air/Vapor Barrier			
Insulation Type	Thickness	4' x 4' Board	4' x 8' Board	Insulation Type	Thickness	4' x 4' Board	4' x 8' Board
All, excluding SeparatoR <sup>®</sup> , ENRGY 3 <sup>®</sup> HD, ENRGY 3 <sup>®</sup> - 1" or Less	Greater than 1"	4	5	All	Any	4	8
SeparatoR <sup>®</sup> , ENRGY 3 <sup>®</sup> HD, ENRGY 3 <sup>®</sup> - 1" or Less	1" or Less	4	8	All	Any	4	8

Mechanically Fastened Single Ply Membrane Minimum Requirements <sup>1,2,3,4</sup>			
Membrane Type	Sheet Width	Fastener Spacing	Plate Type
TPO	Max. 12'	12" O.C. (select wind regions)	High Load Plates, TPO RhinoPlates <sup>®</sup>
TPO	Max. 10'	12" O.C.	High Load Plates, TPO RhinoPlates <sup>®</sup>
PVC	Max. 12'	12" O.C. (select wind regions)	High Load Plates, PVC RhinoPlates <sup>®</sup>
PVC	Max. 10'	12" O.C.	High Load Plates, PVC RhinoPlates <sup>®</sup>
EPDM	Max. 10' (Reinforced Only)	12" O.C.	High Load, APB, or Polymer Batten Strip

TPO and PVC RhinoPlate <sup>®</sup> System Minimum Fastening Requirements <sup>1,2,3</sup>			
Insulation Type	Fastener Spacing Field	Fastener Spacing Perimeter/Corner	Plate Type
All, excluding SeparatoR <sup>®</sup> , ENRGY 3 <sup>®</sup> HD, ENRGY 3 <sup>®</sup> - 1" or Less	6 per 4x8' Board	8 per 4x8' Board	JM TPO RhinoPlates <sup>®</sup>
SeparatoR <sup>®</sup> , ENRGY 3 <sup>®</sup> HD, ENRGY 3 <sup>®</sup> - 1" or Less	9 per 4x8' Board	9 per 4x8' Board	JM TPO RhinoPlates <sup>®</sup>

**The following conditions apply to the Minimum Fastening Rates for Mechanically Fastened Modified Bitumen Polyester Reinforced Base Sheet assemblies:**

1. These attachment rates apply with the following deck types: min. 22 ga steel, structural concrete, and min. 5/8" plywood or wood plank. Contact JM Technical Services for fastening rates into decks not listed.
2. Fastener Type is dependent upon deck type. Membrane attachment to steel decks requires the use of JM High Load #15 Fasteners. Membrane attachment to structural concrete decks requires the use of JM All Purpose #14 Fasteners. Membrane attachment to wood decks requires the use of JM High Load #15 Fasteners; All Purpose #14 Fasteners may also be acceptable for use in wood if pull-out values are greater than #15 fasteners.
3. Perimeter and corner enhancements are not required for 55 mph JM Guarantee up to a 20 year term with the rate listed below.

This information is only to inform of minimum requirements for Johns Manville specifications. Any decks or substrates not listed in the current JM Roofing Systems Manual must be approved by a JM Technical Services Specialist prior to the installation of a roof which is to receive a Peak Advantage Guarantee. Such approval only indicates that JM accepts the deck surface to receive a JM roofing system. By such acceptance, JM accepts no responsibility of the structural adequacy or performance of the deck. Providing a deck for the roof system that meets these criteria is the responsibility of the designer of the building, who is in a position to integrate these requirements with other structural and use considerations. In the event there is a question about acceptability of questionable decking situations please contact a certified structural engineer for specific structural solutions.

**Bulletin Number:** T24-005\*

**Date:** May 29, 2024

**Distribution:** External

Page 3 of 4

Mechanically Fastened Modified Bitumen Polyester Reinforced Base Sheet Minimum Requirements <sup>1,2</sup>		
Membrane Type	Fastener Spacing	Plate Type
DynaLastic® 180 S, DynaLastic® 250 S, DynaFast® 180 S or DynaFast® 250 S DynaFast® 180 HW or DynaFast® 250 HW	18" O.C. In-Lap	High Load or APB Plates

**The following conditions apply to the Minimum Fastening Rates for Fastened Bituminous Base Sheets Over Nailable Deck assemblies:**

1. These attachment rates apply with the following deck types: lightweight insulating concrete, cementitious wood fiber, gypsum and wood decks. Contact JM Technical Services for fastening rates into decks not listed.
2. Fastener type is dependent upon deck type. UltraLok® Locking Impact Fastener is acceptable for use in gypsum, lightweight insulating concrete, and cementitious wood fiber decks. Lightweight (LWC) Concrete Base Sheet Fastener is acceptable for use in lightweight insulating concrete and gypsum (1.2" fastener length only) decks.
3. **Enhancements for perimeter and corner attachment are required for all mechanically fastened base sheet over nailable deck assemblies. Perimeter and Corner Dimensions are defined as follows:**

Perimeter and corner dimensions for buildings less than 60 ft. in height:

Equal to the lesser of:

- 0.1 times the building lesser plan dimension (overall length or width), or
- 0.4 times the eave height

but will never measure less than 0.04 times the building lesser plan dimension and never less than 3 ft.

Perimeter and corner dimensions for buildings greater than 60 ft. in height:

Equal to 0.1 times the building lesser plan dimension (overall length or width), but never less than 3 ft.  
Corners are "L" shaped with legs twice the width of the perimeter.

4. See JM fastening pattern BM-9,18,18 for required minimum perimeter and corner enhancements.

Base Sheet Minimum Fastening Requirements		
Membrane Type	Fastener Spacing	Fastener/Plate Type
Any JM bituminous base sheet	9" O.C. at laps & 2 equally spaced rows between laps staggered at 18" O.C.	Lightweight Concrete Base Sheet Fasteners, UltraLok™ Locking Impact Fastener, or UltraFast® Fasteners and Plates (Dependent Upon Deck Type)



# GUARANTEE GUIDELINES

## Roofing Systems

717 17th St. Denver, CO 80202 (800) 922-5922

**Bulletin Number:** T24-005\*

**Date:** May 29, 2024

**Distribution:** External

Page 4 of 4

**The following conditions apply to the Minimum Pullout Resistance:**

1. The pullout resistance information listed for Adhered Systems, Mechanically Attached Membrane Systems, and Base Sheet Attached with Screws/Plates is applicable to the following deck types: min. 22ga steel, structural concrete, min. 5/8" plywood, and wood plank.
2. The pullout resistance information listed for Base Sheet Attached with Nailable Fastener is applicable to the following deck types: lightweight insulating concrete, cementitious wood fiber, and gypsum decks.
3. Contact JM Technical Services when minimum pullout requirements are not attained or applicable decking not listed above is encountered.

Minimum Pullout Resistance			
Adhered Systems	Mechanically Attached Membrane Systems	Base Sheet Attached with Screws/Plates	Base Sheet Attached with Nailable Fastener
300 lbs (136.1 kg)	400 lbs (181.4 kg)	300 lbs (36.1 kg)	40 lbs (18.1 kg)

**Todd Nathan**  
Technical Services Director