

**Bulletin Number:** T15-003

**Date:** February 12, 2015

**Distribution:** External

## 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 RhinoBond and Mechanically Fastened Single Ply Membrane assemblies:

- 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
- 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.
- 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.
- 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

**Mechanically Fastened Single Ply Membrane Minimum Requirements**

<u>Membrane Type</u>	<u>Sheet Width</u>	<u>Fastener Spacing</u>	<u>Plate Type</u>
TPO	Max. 10'	12" O.C.	High Load Plates, TPO RhinoPlate®
PVC	Max. 10'	12" O.C.	High Load Plates, PVC RhinoPlate®
EPDM	Max. 10' (Reinforced Only)	12" O.C.	High Load, APB, or Polymer Batten Strip

**Bulletin Number:** T15-003

**Date:** February 12, 2015

**Distribution:** External

Page 2 of 3

<b>Insulation Fastening Requirements - Mechanically Fastened Membrane</b>							
<i>Without an Air/Vapor Barrier</i>				<i>With an Air/Vapor Barrier</i>			
<u>Insulation Type</u>	<u>Thickness</u>	<u>4' x 4' Board</u>	<u>4' x 8' Board</u>	<u>Insulation Type</u>	<u>Thickness</u>	<u>4' x 4' Board</u>	<u>4' x 8' Board</u>
All	Any	4	5	All	Any	4	8

<b>RhinoBond Minimum Fastening Requirements</b>			
<u>Membrane Type</u>	<u>Fastener Spacing field</u>	<u>Fastener Spacing Perimeter/Corner</u>	<u>Plate Type</u>
TPO	6 per 4x8' Board	8 per 4x8' Board	JM TPO RhinoPlate®
PVC	6 per 4x8' Board	8 per 4x8' Board	JM PVC RhinoPlate®

**The following conditions apply to the Minimum Fastening Rates listed below 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.

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

**Bulletin Number:** T15-003

**Date:** February 5, 2015

**Distribution:** External

Page 3 of 3

**The following conditions apply to the Minimum Fastening Rates listed below for Fastened Bituminous Base Sheet 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.

<b><u>Fastened Base Sheet Over Nailable Deck Minimum Fastening Requirements</u></b>		
<b><u>Membrane Type</u></b>	<b><u>Fastener Spacing</u></b>	<b><u>Fastener/Plate Type</u></b>
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)

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

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.*

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

Matt Sayer  
Guarantee Services Manager