

Product Evaluation

RC471 | 0119

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: RC-471

Effective Date: January 1, 2019

Re-evaluation Date: February 2023

Product Name: Johns Manville TPO and PVC Single Ply Roofing System

Manufacturer: Johns Manville Corporation
P.O. Box 5108
Denver, CO 80217
(303) 978-2478

Single-Ply Membranes:

Products	Description
JM TPO 45	Nominal 45 mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement
JM TPO 60	Nominal 60 mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement
JM TPO 72	Nominal 72 mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement
JM TPO 80	Nominal 80 mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement
JM TPO FB 115	Nominal 60 mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and polyester fleece backing
JM TPO FB 135	Nominal 80 mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and polyester fleece backing

Single-Ply Membranes (continued):

Products	Description
JM PVC 50	Nominal 50 mil thick thermoplastic membrane composed of polyvinyl chloride and Elvaloy® KEE with polyester scrim reinforcement
JM PVC 50 Fleece Backed	Nominal 50 mil thick thermoplastic membrane composed of polyvinyl chloride and Elvaloy® KEE with polyester scrim reinforcement and polyester fleece backing
JM PVC 60	Nominal and minimum 60 mil thick thermoplastic membrane composed of polyvinyl chloride and Elvaloy® KEE with polyester scrim reinforcement
JM PVC 60 Fleece Backed	Nominal 60 mil thick thermoplastic membrane composed of polyvinyl chloride and Elvaloy® KEE with polyester scrim reinforcement and polyester fleece backing
JM PVC 72	Minimum 72 mil thick thermoplastic membrane composed of polyvinyl chloride and Elvaloy® KEE with polyester scrim reinforcement
JM PVC 72 Fleece Backed	Minimum 72 mil thick thermoplastic membrane composed of polyvinyl chloride and Elvaloy® KEE with polyester scrim reinforcement and polyester fleece backing
JM PVC 80	Nominal and minimum 80 mil thick thermoplastic membrane composed of polyvinyl chloride and Elvaloy® KEE with polyester scrim reinforcement
JM PVC 80 Fleece Backed	Nominal 80 mil thick thermoplastic membrane composed of polyvinyl chloride and Elvaloy® KEE with polyester scrim reinforcement and polyester fleece backing
JM PVC SD Plus	Nominal 50 mil polyester-reinforced thermoplastic PVC membrane
JM PVC SD Plus	Nominal 60 mil polyester-reinforced thermoplastic PVC membrane
JM PVC SD Plus	Nominal 80 mil polyester-reinforced thermoplastic PVC membrane

Insulation and Cover Boards:

Products	Description
DensDeck	Fiberglass faced gypsum cover board; Manufactured by G-P Gypsum, LLC
DensDeck Prime	Coated-fiberglass faced gypsum cover board; Manufactured by G-P Gypsum, LLC
JM ENRGY 3 and tapered	Polyisocyanurate foam insulation board with fiberglass reinforced organic facer
JM ENRGY 3 AGF and tapered	Polyisocyanurate foam insulation board with fiberglass facer
JM ENRGY 3 CGF and tapered	Polyisocyanurate foam insulation board with coated-fiberglass facer
JM ENRGY 3 FR and tapered	Polyisocyanurate foam insulation board with coated-fiberglass facer
JM Invinsa Roof Board	High-density polyisocyanurate foam cover board with coated-fiberglass facer

Insulation and Cover Boards (continued):

Products	Description
JM Invinsa FR Roof Board	High-density polyisocyanurate foam cover board with coated-fiberglass facer
JM DuraBoard	High-density perlite insulation board
JM Retro-Fit Board	High-density perlite insulation board
JM RetroPlus Roof Board	High-density perlite insulation board
JM Fesco Board	Perlite insulation board
JM SECUROCK Gypsum-Fiber Roof Board	Fiber-reinforced gypsum cover board; Manufactured by US Gypsum
JM SECUROCK Glass-Mat Roof Board	Fiberglass faced gypsum cover board; Manufactured by US Gypsum
JM DuraFoam	High-density perlite insulation laminated to polyisocyanurate foam insulation board
JM FescoFoam	Perlite insulation laminated to polyisocyanurate foam insulation board

Vapor Barriers:

Products	Descriptions
JM Vapor Barrier SA	Self-Adhered to primed wood, gypsum or concrete decks; Min. 3-inch side laps; min. 6-inch end laps
JM DynaBase HW	Min. 3-inch side laps; min. 6-inch end laps; Torch Adhered to primed concrete decks
JM DynaBase	Min. 3-inch side laps; min. 6-inch end laps; Applied with hot or cold approved adhesives

Membrane Adhesives:

Products	Description
JM PVC Membrane Adhesive (Low VOC)	Applied in full coverage to both membrane and substrate at a combined rate of 50 to 90 ft ² /gal.
JM PVC Membrane Adhesive (Water Based)	Applied in full coverage to both membrane and substrate at a combined rate of 90 to 130 ft ² /gal.
JM TPO Membrane Adhesive (Low VOC)	Applied in full coverage to both membrane and substrate at a combined rate of 50 to 90 ft ² /gal.
JM TPO Membrane Adhesive (Solvent-Based)	Applied in full coverage to both membrane and substrate at a combined rate of 50 to 90 ft ² /gal.
JM TPO Membrane Adhesive (Water-Based)	Applied in full coverage to both membrane and substrate at a combined rate of 90 to 130 ft ² /gal.
RSUA (Roofing System Urethane Adhesive)	Two component urethane ribbon adhesive

Insulation Adhesives:

Products	Description
JM Two-Part Urethane Insulation Adhesive	Two component urethane foam adhesive
JM One Step Foamable Adhesive	Urethane ribbon adhesive applied in 3/4" to 1" wide beads
JM Urethane Insulation Adhesive	One-part, cold application adhesive applied in 1/2" wide beads

Fastening Components:

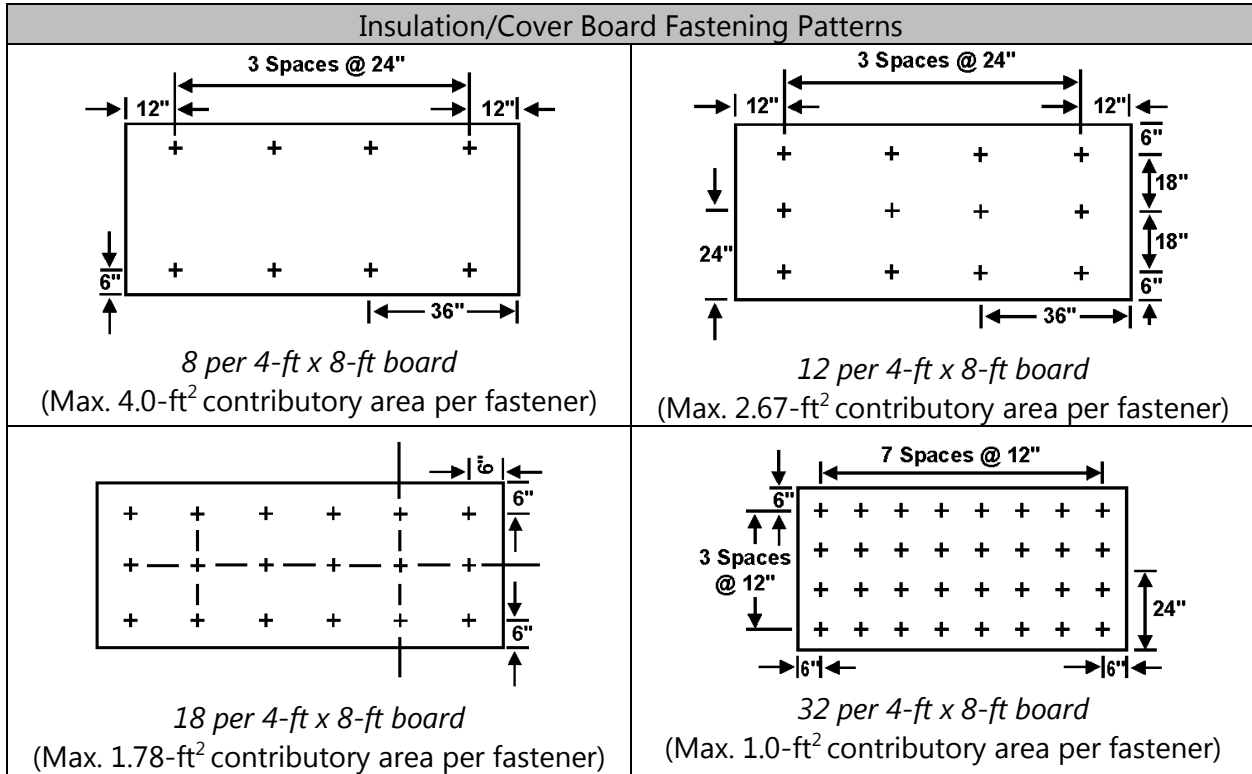
Products	Description
JM All Purpose Fastener	#14 fastener for wood, steel, and concrete decks
JM APB Plates	2-inch diameter galvalume steel plate with reinforcing ribs
JM Extra High Load Fasteners	#21 fastener for steel or wood decks
JM Extra High Load Plates	3-inch diameter galvalume steel plate with eyehooks
JM High Load Plates	2-3/8" diameter galvalume steel plate with eyehooks
JM High Load Fastener	#15 fastener for steel or wood decks
JM High Load LH Fastener	Large Head #15 fastener for steel or wood decks
JM Lightweight Concrete (LWC) CR Base Fastener	Min. 1.7" shank; Pre-Assembled with 2.7-inch galvalume coated steel plate.
JM PVC RhinoPlate	3" diameter plate for induction welding JM PVC membranes
JM TPO RhinoPlate	3" diameter plate for induction welding JM TPO membranes
JM UltraFast Fastener	#12 fastener for steel or wood decks
JM UltraFast 3" Round Metal Plate	3" diameter round galvalume steel plate
JM UltraFast Square Metal Plate	3" square galvalume steel plate
JM UltraLok	1.8" shank with 2.7" diameter integrated plate
JM High Load Plus Plate	2-3/4" diameter, 0.038" thick, galvalume coated seam plate with fourteen barbs

Limitations:

General installation Requirements: All International Residential Code (IRC) and the International Building Code (IBC) requirements must be satisfied and manufacturer's installation instructions followed, unless otherwise specified by this product evaluation.

For All applications: The roof must have a minimum slope of 1/4:12.

Insulation and Cover Board Fastening: Insulation and cover boards must be fastened using JM All Purpose Fasteners or JM UltraFast Fasteners in steel or wood roof decks and JM All Purpose Fasteners in concrete roof decks with either the JM UltraFast 3" Round Metal Plate or the JM UltraFast Square Metal Plate.



Insulation and Cover Board Attachment with Adhesives:

JM Two-Part Urethane Adhesive must be applied in 0.75-1.0" wide, continuous beads spaced 12" o.c. JM Urethane Insulation Adhesive must be applied in 0.5-0.75" wide, continuous beads spaced 12" o.c.

JM Roofing System Urethane Adhesive (RSUA), a two-component urethane ribbon adhesive, must be applied in 0.05-0.75" wide continuous beads spaced 12" o.c.

Membrane Adhesives:

Unless otherwise noted, membrane adhesives are applied in full coverage to membrane and substrate at the combined rate listed in the product description tables for each adhesive. Follow manufacturer’s recommendations for proper flashing of the adhesive prior to engaging the membrane to the substrate.

JM Roofing System Urethane Adhesive (RSUA), a two-component urethane ribbon adhesive, must be applied in 0.5-0.75" wide continuous beads spaced 12" o.c.

Membrane:

All side laps must be heat welded with a minimum 1.5" wide continuous weld.

Roof Deck

Concrete: Minimum $f'_c = 2,500$ psi at 28 days.

Steel: Minimum 22-gauge, Grade 33, Type B steel deck. Maximum 6 ft spans. The flutes must be 0.5% vented when used with cellular lightweight concrete.

Wood Deck: Minimum 15/32" thick or 19/32" APA approved plywood.

Wood Roof Frame Supports: Minimum No. 2 Southern Pine spaced a maximum of 24" o.c.

Lightweight Concrete: Minimum 250 psi, unless otherwise noted, the lightweight concrete attachment will include a 1/4" slurry coat with 1" EPS board. After overnight cure a 2" top coat is applied. Curing compound is applied at a rate of 300 ft²/gal after setting of topcoat.

TABLE 1: WIND UPLIFT RESISTANCE
Adhered Membranes over Fastened Insulation

System No.	Deck	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
1-A	Steel (Min. 22 ga. grade 33, Type B)	Min. 2" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF	Fastened rate of one fastener per 4 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate or JM UltraFast 3" Round Metal Plate	None	None	Min. 45 mil JM TPO fully adhered with JM TPO Membrane Adhesive (Solvent-Based), or JM TPO Membrane Adhesive (Low VOC), or JM TPO Membrane Adhesive (Water-Based)	-45

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Adhered Membranes over Fastened Insulation

System No.	Deck	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
1-B	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF	Simultaneously fastened with top layer	Min. 3/8" JM SECUROCK Max. 4 ft. x 4 ft.	Fastened rate of one fastener per 2.67 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate	Min. 50 mil JM PVC fully adhered in JM PVC Membrane Adhesive (Low VOC) or Min. 50 mil JM PVC Fleece Backed fully adhered in JM PVC Membrane Adhesive (Water Based) or Min. 45 mil JM TPO fully adhered with JM TPO Membrane Adhesive (Solvent-Based), or JM TPO Membrane Adhesive (Low VOC), or JM TPO Membrane Adhesive (Water-Based) or Min. JM TPO FB 115 fully adhered in JM TPO Membrane Adhesive (Water-Based)	-45

TABLE 1: WIND UPLIFT RESISTANCE
Adhered Membranes over Fastened Insulation

System No.	Deck	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
1-C	Steel (Min. 22 ga. grade 40, Type B)	Min. 1.5" ENRGY 3	Fastened a rate of one fastener per 1.45 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate or JM UltraFast 3" Round Metal Plate	Min. ¼" Invinsa Roof Board	JM Roofing System Urethane Adhesive or JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	Min. JM TPO FB 115 adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-52.5
1-D	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF	Fastened a rate of one fastener per 1.78 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate or JM UltraFast 3" Round Metal Plate	None	None	Min. 45 mil JM TPO fully adhered with JM TPO Membrane Adhesive (Solvent-Based), or JM TPO Membrane Adhesive (Low VOC), or JM TPO Membrane Adhesive (Water-Based)	-52.5

**TABLE 1: WIND UPLIFT RESISTANCE
Adhered Membranes over Fastened Insulation**

System No.	Deck	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
1-E	Steel (Min. 22 ga. grade 33, Type B)	Optional Min. 1/2" ENRGY 3, ENRGY CGF, ENRGY 3 AGF, ENRGY 3 FR	Simultaneously fastened with top layer	Min. 2" ENRGY 3 CGF or ENRGY 3 FR	Fastened a rate of one fastener per 2.67 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate or JM UltraFast 3" Round Metal Plate	Min. 45 mil JM TPO fully adhered with JM TPO Membrane Adhesive (Solvent-Based), or JM TPO Membrane Adhesive (Low VOC), or JM TPO Membrane Adhesive (Water-Based)	-52.5

**TABLE 1: WIND UPLIFT RESISTANCE
Adhered Membranes over Fastened Insulation**

System No.	Deck	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
1-F	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF	Simultaneously fastened with top layer	Min. 1/4" SECUROCK	Fastened rate of one fastener per 1 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate	Min. 50 mil JM PVC fully adhered in JM PVC Membrane Adhesive (Low VOC) or JM PVC Membrane Adhesive (Water Based) or Min. 50 mil JM PVC Fleece Backed fully adhered in JM PVC Membrane Adhesive (Water Based) or Min. 45 mil JM TPO fully adhered with JM TPO Membrane Adhesive (Solvent-Based), or JM TPO Membrane Adhesive (Low VOC), or JM TPO Membrane Adhesive (Water-Based) or Min. JM TPO FB 115 fully adhered in JM TPO Membrane Adhesive (Water-Based)	-60

TABLE 1: WIND UPLIFT RESISTANCE
Adhered Membranes over Fastened Insulation

System No.	Deck	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
1-G	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3	Fastened a rate of one fastener per 1.78 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate or JM UltraFast 3" Round Metal Plates	Min. ½" SECUROK Gypsum Fiber Roof Board	JM Roofing System Urethane Adhesive, JM Two Part Urethane Insulation Adhesive or JM One Step Foamable Adhesive applied in ribbons spaced 12" o.c.	Min. 45 mil JM TPO fully adhered with JM TPO Membrane Adhesive (Solvent-Based), or JM TPO Membrane Adhesive (Low VOC), or JM TPO LVOC Membrane Adhesive or Min. JM TPO FB 115 fully adhered in JM TPO Membrane Adhesive (Water-Based) or Min. 50 mil JM PVC fully adhered with JM PVC Membrane Adhesive (Low VOC) for JM PVC Only or Min. 50 mil JM PVC Fleece Back fully adhered with JM PVC Membrane Adhesive (Water Based) for JM PVC Fleece Back only.	-60

TABLE 1: WIND UPLIFT RESISTANCE
Adhered Membranes over Fastened Insulation

System No.	Deck	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
1-H	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3	Fastened at a rate of one fastener per 1.78 ft ² with JM UltraFast 3" Round Metal Plate or JM UltraFast Square Metal Plate and UltraFast Fasteners	Min. ½" SECUROK Gypsum Fiber Roof Board	JM Roofing System Urethane Adhesive, JM Two Part Urethane Insulation Adhesive or JM One Step Foamable Adhesive applied in ribbons spaced 12" o.c.	Base Ply: DynaBase HW torch adhered And JM PVC Fleece Back Membrane adhered with Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-60
1-I	Steel (Min. 22 ga. grade 33, Type B)	Optional Min. 1/2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 FR	Simultaneously fastened with top layer	Min. 1.5" ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF or ENRGY 3 FR	Fastened a rate of one fastener per 1.78 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate or JM UltraFast 3" Round Metal Plates	Min. 45 mil JM TPO fully adhered with JM TPO LVOC Membrane Adhesive	-60
1-J	Steel (Grade 40)	Min. 1.5" ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF or ENRGY 3 FR	Simultaneously fastened with top layer	Min. ½" SECUROK Gypsum Fiber Roof Board	Fastened a rate of one fastener per 1.78 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate or JM UltraFast 3" Round Metal Plates	Ply: DynaBase HW torch adhered And Min. JM 50 mil PVC Fleece Back Membrane adhered with Roofing System Urethane Adhesive applied in ribbons spaced 12" o.	-60

TABLE 1: WIND UPLIFT RESISTANCE
Adhered Membranes over Fastened Insulation

System No.	Deck	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
1-K	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3, ENRGY 3 AGF, ENRGY CGF or ENRGY 3 FR	Fastened a rate of one fastener per 1.0 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate or JM UltraFast 3" Round Metal Plates	Min. ½" SECUROK Gypsum Fiber Roof Board, Invinsa Roof Board or RetroPlus (not for TPO)	JM Roofing System Urethane Adhesive or JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 6" o.c.	Min. JM TPO FB 115 adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c. or Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-67.5
1-L	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3	Fastened a rate of one fastener per 1.33 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate or JM UltraFast 3" Round Metal Plates	Min. ½" SECUROK Gypsum Fiber Roof Board	JM Roofing System Urethane Adhesive or JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	Min. 45 mil JM TPO adhered with JM TPO Water Based Membrane Adhesive Or Min. JM TPO FB 115 with JM TPO Water Based Membrane Adhesive	-67.5

TABLE 1: WIND UPLIFT RESISTANCE
Adhered Membranes over Fastened Insulation

System No.	Deck	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
1-M	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3, ENRGY 3 AGF, ENRGY CGF or ENRGY 3 FR	Fastened at a rate of one fastener per 1.0 ft ² with JM All Purpose Fasteners and JM UltraFast 3" Round Metal Plate or JM UltraFast Square Metal Plate	Min. ½" SECUROK Gypsum Fiber Roof Board	JM Roofing System Urethane Adhesive, JM Two Part Urethane Insulation Adhesive or JM One Step Foamable Adhesive applied in ribbons spaced 6" o.c.	Ply: DynaBase HW torch adhered And Min. 50 mil JM PVC Fleece Back Membrane adhered with Roofing System Urethane Adhesive applied in ribbons spaced 12" o.	-67.5
1-N	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3	Fastened at a rate of one fastener per 1 ft ² with JM UltraFast 3" Round Metal Plate or JM UltraFast Square Metal Plate and UltraFast fasteners	Min. 1/2" RetroPlus (not for TPO), Invinsa or SECUROK	JM Roofing System Urethane Adhesive or JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 6" o.c.	Min. 50 mil JM PVC Fleece Backed adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c. or Min. JM TPO FB 115 adhered with JM Roofing System Urethane Adhesive (not RetroPlus) applied in ribbons spaced 12" o.c.	-67.5

TABLE 1: WIND UPLIFT RESISTANCE
Adhered Membranes over Fastened Insulation

System No.	Deck	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
1-O	Steel (Min. 22 ga. grade 33, Type B)	Optional Min. 1/2" ENRGY 3, ENRGY CGF. ENRGY 3 AGF, ENRGY 3 FR	Simultaneously fastened with top layer	Min. 2" ENRGY 3 CGF or ENRGY 3 FR	Fastened a rate of one fastener per 2.0 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate or JM UltraFast 3" Round Metal Plates	Min. 45 mil JM TPO fully adhered with JM TPO Membrane Adhesive (Solvent-Based), or JM TPO Membrane Adhesive (Low VOC), or JM TPO Membrane Adhesive (Water Based)	-67.5
1-P	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3, ENRGY 3 AGF, ENRGY CGF or ENRGY 3 FR	Simultaneously fastened with top layer	Min. 1/2" SECUROK K Gypsum Fiber Roof Board	Fastened a rate of one fastener per 1.0 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate	Min. 45 mil JM TPO adhered with JM TPO Water Based Membrane Adhesive Or Min. JM TPO FB 115 with JM TPO Water Based Membrane Adhesive	-82.5
1-Q	Steel (Min. 22 ga. grade 33, Type B)	Optional Min. 1/2" ENRGY 3, ENRGY CGF. ENRGY 3 AGF, ENRGY 3 FR	Simultaneously fastened with top layer	Min. 2" ENRGY 3 CGF or ENRGY 3 FR	Fastened a rate of one fastener per 1.33 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate or JM UltraFast 3" Round Metal Plates	Min. 45 mil JM TPO fully adhered with JM TPO Membrane Adhesive (Solvent-Based), or JM TPO Membrane Adhesive (Low VOC), or JM TPO Membrane Adhesive (Water Based)	-105

TABLE 1: WIND UPLIFT RESISTANCE
Adhered Membranes over Fastened Insulation

System No.	Deck	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
1-R	Steel (Grade 80)	Min. 1.5" ENRGY 3, ENRGY 3 AGF, ENRGY CGF or ENRGY 3 FR	Simultaneously fastened with top layer	Min. ½" SECUROC K Gypsum Fiber Roof Board	Fastened a rate of one fastener per 1.0 ft ² with JM UltraFast Fasteners or JM All Purpose Fasteners and JM UltraFast Square Metal Plate	Min. 45 mil JM TPO adhered with JM TPO Water Based Membrane Adhesive Or Min. JM TPO FB 115 with JM TPO Water Based Membrane Adhesive	-150

TABLE 2: WIND UPLIFT RESISTANCE
Mechanically Fastened Membranes over Insulation

System No.	Deck	Base Insulation	Top Insulation	Insulation Attachment	Membrane	Membrane Attachment	Max. Design Pressure (psf)
2-A	7/16" OSB	Min. 1/2" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF or ENRGY 3 FR Preliminarily Secured over optional thermal barrier	Min. 1/2" ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, ENRGY 3 FR, Invinsa Roof Board or SECUROCK Gypsum Fiber Roof Board	Min. 2" JM All Purpose Fastener and JM TPO RhinoPlates secured max 12" o.c. through sheathing into wood structural supports in rows 8 ft o.c.	Min. 60 mil JM TPO	Induction welded To JM TPO RhinoPlates	-37.5
2-B	19/32" PLYWOOD	Min. 1/4" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF or ENRGY 3 FR Preliminarily Secured over optional thermal barrier	OPTIONAL Min. 1/4" SECUROCK Gypsum Fiber Roof Board or Invinsa Roof Board	Preliminarily Secured	Min. 50 mil JM PVC	Attached 6" o.c. with JM Extra High Load Fasteners and JM Extra High Load Plates. Fastener rows max. 72" o.c.	-37.5
2-C	Steel (Min. 22 ga. grade 33, Type B)	Min. 1" ENRGY 3, ENRGY 3 AGF, ENRGY CGF or ENRGY 3 FR	OPTIONAL Min. 1/4" SECUROCK Gypsum Fiber Roof Board or Invinsa Roof Board	Preliminarily Secured	Min. 50 mil JM PVC with min. 6" side laps	Attached 6" o.c. with JM Extra High Load Fasteners and JM Extra High Load Plates. Fastener rows max. 114" o.c.	-45

TABLE 2: WIND UPLIFT RESISTANCE
Mechanically Fastened Membranes over Insulation

System No.	Deck	Base Insulation	Top Insulation	Insulation Attachment	Membrane	Membrane Attachment	Max. Design Pressure (psf)
2-D	Steel (Min. 22 ga. grade 33, Type B)	Min. 1" ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF or ENRGY 3 FR	OPTIONAL Min. ¼" Invinsa Roof Board, or SECUROCK Gypsum Fiber Roof Board	JM High Load Fasteners and JM PVC RhinoPlates spaced 12" o.c in rows max. 72" o.c.	Min 50 mil JM PVC SD Plus	Induction welded To JM PVC RhinoPlates.	-37.5
2-E	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF	OPTIONAL 1/4" DensDeck, Invinsa, or SECUROCK	Preliminarily secured at a rate of at a rate of 1 fastener per 4 ft ²	Min. 45 mil JM TPO Max. 10 ft. wide sheet with min. 6" wide laps	Attached 6" o.c. with JM High Load Plates and JM High Load Fasteners	-45
2-F	Steel (Min. 22 ga. grade 33, Type B)	Min. 1" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF or ENRGY 3 FR	OPTIONAL Min ¼" Invinsa Roof Board or SECUROCK Gypsum Fiber Roof Board	Preliminarily Secured	Min 50 mil JM PVC SD Plus with min. 6" wide laps	Attached in lap 12" o.c. with JM High Load Fasteners and High Load Plates. Fastener rows max. 54" o.c.	-45
2-G	15/32" PLYWOOD	Min. 1/4" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF or ENRGY 3 FR Preliminarily Secured over optional thermal barrier	OPTIONAL Min ¼" Invinsa Roof Board or SECUROCK Gypsum Fiber Roof Board	Preliminarily Secured	Min. 50 mil JM PVC	Attached in-lap 12" o.c. with JM All Purpose Fasteners and JM High Load Plates. Fasteners rows max 72" o.c.	-45

TABLE 2: WIND UPLIFT RESISTANCE
Mechanically Fastened Membranes over Insulation

System No.	Deck	Base Insulation	Top Insulation	Insulation Attachment	Membrane	Membrane Attachment	Max. Design Pressure (psf)
2-H	15/32 Plywood	OPTIONAL Min. 1" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF or ENRGY 3 FR	Min. 1/2" ENRGY 3, ENRGY CGF. ENRGY 3 AGF, ENRGY 3 FR or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum-Fiber Roof Board	JM High Load Fasteners and JM TPO RhinoPlate (steel deck only) or JM All Purpose Fasteners and JM TPO RhinoPlate (concrete only). Fastened at a rate of 1 fastener per 4 ft ²	Min. 60 mil JM TPO with min. 2.5" wide laps	Induction welded To JM TPO RhinoPlates	-52.5
2-I	Steel (Min. 22 ga. grade 33, Type B)	Min. 1" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF or ENRGY 3 FR	OPTIONAL Min ¼" Invinsa Roof Board or SECUROCK Gypsum Fiber Roof Board	Preliminarily Secured	Min 60 mil JM PVC SD Plus	Induction welded To JM PVC RhinoPlates with JM High Load Fasteners spaced 12" o.c. in rows a max. 60" o.c.	-45
2-J	Steel (Min. 22 ga. grade 33, Type B)	Min. 1" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF or ENRGY 3 FR	OPTIONAL Min ¼" Invinsa Roof Board, or SECUROCK Gypsum Fiber Roof Board	Preliminarily Secured	Min. 50 mil JM PVC SD Plus with min. 6" wide laps	Attached in lap 6" o.c. with JM High Load Fasteners and High Load Plates. Fastener rows max. 114" o.c	-45
2-K	Steel (Min. 22 ga. grade 33, Type B)	Min. 1" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF or ENRGY 3 FR	OPTIONAL Min ¼" Invinsa Roof Board, or SECUROCK Gypsum Fiber Roof Board	JM High Load Fasteners and JM PVC RhinoPlate Fastened at a rate of 1 fastener per 4 ft ²	Min 60 mil JM PVC SD Plus	Induction welded To JM PVC RhinoPlates	-52.5

TABLE 2: WIND UPLIFT RESISTANCE
Mechanically Fastened Membranes over Insulation

System No.	Deck	Base Insulation	Top Insulation	Insulation Attachment	Membrane	Membrane Attachment	Max. Design Pressure (psf)
2-L	15/32" PLYWOOD	Min. 1/2" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF or ENRGY 3 FR	OPTIONAL Min ¼" Invinsa Roof Board or SECUROCK Gypsum Fiber Roof Board	Min. 2" JM All Purpose Fastener and JM PVC RhinoPlate secured 24" o.c. through sheathing into wood supports in rows max 24" o.c.	Min 50 mil JM PVC	Induction welded To JM PVC RhinoPlates	-52.5
2-M	Steel (Min. 22 ga. grade 33, Type B)	Min. 1" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF or ENRGY 3 FR	OPTIONAL Min ¼" Invinsa Roof Board or SECUROCK Gypsum Fiber Roof Board	Preliminarily Secured	Min 50 mil JM PVC SD Plus with min. 6" wide laps	Attached in lap 6" o.c. with JM High Load Fasteners and High Load Plates. Fastener rows max. 54" o.c.	-60
2-N	Steel (Min. 22 ga. grade 33, Type B))	Min. 1" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF or ENRGY 3 FR	OPTIONAL Min ¼" Invinsa Roof Board, or SECUROCK Gypsum Fiber Roof Board	Preliminarily Secured	Min 50 mil JM PVC SD Plus	Induction welded To JM PVC RhinoPlates with JM High Load fasteners spaced 6" o.c. in rows a max. 72" o.c.	-82.5
2-O	Steel (Min. 22 ga. grade 33, Type B))	Min. 1" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF or ENRGY 3 FR	OPTIONAL Min ¼" Invinsa Roof Board, or SECUROCK Gypsum Fiber Roof Board	Preliminarily Secured	Min 60 mil JM PVC SD Plus	Induction welded To JM PVC RhinoPlates with JM High Load Fasteners spaced 6" o.c. in rows a max. 60" o.c.	-90

TABLE 2: WIND UPLIFT RESISTANCE
Mechanically Fastened Membranes over Insulation

System No.	Deck	Base Insulation	Top Insulation	Insulation Attachment	Membrane	Membrane Attachment	Max. Design Pressure (psf)
2-P	Steel (Min. 22 ga. grade 33, Type B))	Min. 1" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF or ENRGY 3 FR	OPTIONAL Min ¼" Invinsa Roof Board, or SECUROCK Gypsum Fiber Roof Board	JM High Load Fasteners and JM PVC RhinoPlate Fastened at a rate of 1 fastener per 2.13 ft ²	Min 50 mil JM PVC	Induction welded To JM PVC RhinoPlates	-90
2-Q	Steel (Min. 22 ga. grade 33, Type B	OPTIONAL Min. 1/2" ENRGY 3, ENRGY CGF, ENRGY 3 AGF, ENRGY 3 FR	Min, 1/2" ENRGY 3, ENRGY CGF, ENRGY AGF, ENRGY 3 FR, or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum-Fiber Roof Board	Preliminarily secured at a rate of 1 fastener per 4 ft ²	Min. 50 mil JM PVC Max. 6 ft. wide sheet with min. 6" wide laps or Min. 50 mil JM PVC SD Plus Max. 5 ft. wide sheet with min. 6" wide laps	Attached 6" o.c. with JM High Load Plates and JM High Load Fasteners	-45.0

TABLE 2: WIND UPLIFT RESISTANCE
Mechanically Fastened Membranes over Insulation

System No.	Deck	Base Insulation	Top Insulation	Insulation Attachment	Membrane	Membrane Attachment	Max. Design Pressure (psf)
2-R	Min. 15/32" Plywood	OPTIONAL Min. 1/2" ENRGY 3, ENRGY CGF, ENRGY 3 AGF, ENRGY 3 FR	Min, 1/2" ENRGY 3, ENRGY CGF, ENRGY AGF, ENRGY 3 FR, or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum- Fiber Roof Board	Preliminarily secured at a rate of 1 fastener per 4 ft ²	Min. 50 mil JM PVC Max. 78" wide sheet with min. 6" wide laps or Min. 50 mil JM PVC SD Plus Max. 5-ft wide sheet with min. 6" wide laps	Attached 12" o.c. with All Purpose Fasteners and High Load Plates through deck into wood supports	-45
2-S	Steel (Min. 22 ga. grade 33, Type B	Min. 1.5" ENRGY 3, ENRGY CGF, ENRGY 3 AGF, ENRGY 3 FR	Min. 1/4" SECUROCK or Invinsa Roof Board	Preliminarily secured	Min. 50 mil JM PVC Max. 78" wide sheet with min. 6" wide laps	Attached 6" o.c. with JM High Load Plate and JM High Load Fasteners. Fastener rows max of 72" o.c.	-45
2-T	Steel (Min. 22 ga. grade 33, Type B)	Min. 1" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF or ENRGY 3 FR	Min, 1/2" ENRGY 3, ENRGY CGF, ENRGY AGF, ENRGY 3 FR, or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum- Fiber Roof Board	Preliminarily secured at a rate of 1 fastener per 4 ft ²	Min 45 mil JM TPO Max. 8-ft wide sheet with min. 6" wide laps	Attached 12" o.c. with JM High Load Plus Plate and High Load Fasteners	-45

TABLE 2: WIND UPLIFT RESISTANCE
Mechanically Fastened Membranes over Insulation

System No.	Deck	Base Insulation	Top Insulation	Insulation Attachment	Membrane	Membrane Attachment	Max. Design Pressure (psf)
2-U	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3 ENRGY 3 AGF, ENRGY 3 CGF or ENRGY 3 FR	OPTIONAL 1/4" DensDeck, Invinsa, or SECUROCK	JM High Load Fasteners and JM PVC RhinoPlate Fastened at a rate of 1 fastener per 4 ft ²	Min. JM TPO 60 mil. with min. 2.5" wide laps	Induction welded To JM TPO RhinoPlates	-45
-2-V	Min. 15/32" Plywood	OPTIONAL Min. 1" ENRGY 3, ENRGY CGF, ENRGY 3 AGF, ENRGY 3 FR	Min, 1/2" ENRGY 3, ENRGY CGF, ENRGY AGF, ENRGY 3 FR, or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum-Fiber Roof Board	JM TPO RhinoPlates and All-Purpose Fasteners secured 24" o.c. through deck into wood supports in rows max. 24" o.c.	Min. 60 mil JM TPO with min 2.5" wide laps	Induction welded To JM TPO RhinoPlates	-52.5
2-W	Min. 15/32" Plywood	1/2" ENRGY 3 OPTIONAL Min. 1" ENRGY 3, ENRGY CGF ENRGY 3 AGF or ENRGY 3 FR	Min, 1/2" ENRGY 3, ENRGY CGF, ENRGY AGF, ENRGY 3 FR, or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum-Fiber Roof Board	JM TPO RhinoPlates and All-Purpose Fasteners secured 24" o.c. through deck into wood supports in rows max. 24" o.c.	Min. 50 mil JM PVC with min. 2.5" wide laps	Induction welded to JM PVC RhinoPlates	-52.5
2-X	Steel (Min. 22 ga. grade 33, Type B)	Two (2) Layers of 1/2" ENRGY 3 or OPTIONAL Min. 1/2" ENRGY 3, ENRGY CGF. ENRGY 3 AGF, ENRGY 3 FR	Min, 1/2" ENRGY 3, ENRGY CGF, ENRGY AGF, ENRGY 3 FR, or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum-Fiber Roof Board	Preliminarily secured at a rate of 1 fastener per 4 ft ²	Min. 45 mil JM TPO Max. 10 ft. wide sheet with min. 6" wide laps	Attached 6" o.c. with JM Extra High Load Fasteners and JM Extra High Load Plates	-52.5

TABLE 2: WIND UPLIFT RESISTANCE
Mechanically Fastened Membranes over Insulation

System No.	Deck	Base Insulation	Top Insulation	Insulation Attachment	Membrane	Membrane Attachment	Max. Design Pressure (psf)
2-Y	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF	OPTIONAL 1/4" DensDeck, Invinsa, or SECUROCK	Preliminarily secured at a rate of 1 fastener per 4 ft ²	Min. 50 mil JM PVC Max. 78" wide sheet with min. 5" wide laps	Attached 6" o.c. with JM High Load Plates and JM High Load Fasteners	-60
2-Z	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF	OPTIONAL 1/4" DensDeck, Invinsa, or SECUROCK	Preliminarily secured at a rate of 1 fastener per 4 ft ²	Min. 45 mil JM TPO Max. 8 ft wide sheet with min. 6" wide laps	Attached 6" o.c. with JM High Load Plates and JM High Load Fasteners	-60
2-AA	Steel (Min. 22 ga. grade 33, Type B)	OPTIONAL Min. 1/2" ENRGY 3, ENRGY CGF, ENRGY 3 AGF, ENRGY 3 FR	Min. 1/2" ENRGY 3, ENRGY CGF, ENRGY AGF, ENRGY 3 FR, or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum-Fiber Roof Board	Preliminarily secured at a rate of 1 fastener per 4 ft ²	Min 45 mil JM TPO max. 10 ft. wide sheet with min. 6" wide laps	Attached 6" o.c. with JM High Load Plates and JM High Load Fasteners	-60
2-BB	Min. 19/32" Plywood	OPTIONAL Min. 1" ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF or ENRGY 3 FR	Min. 1/2" ENRGY 3, ENRGY CGF, ENRGY AGF, ENRGY 3 FR, or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum-Fiber Roof Board	Preliminarily secured at a rate of 1 fastener per 4 ft ²	Min. 45 mil JM TPO Max. 54" wide sheet with min. 6" wide laps	Attached 6" o.c. with JM High Load Plates and JM High Load Fasteners	-60

TABLE 2: WIND UPLIFT RESISTANCE
Mechanically Fastened Membranes over Insulation

System No.	Deck	Base Insulation	Top Insulation	Insulation Attachment	Membrane	Membrane Attachment	Max. Design Pressure (psf)
2-CC	Min. 15/32" Plywood	1/2" ENRGY 3 OPTIONAL Min. 1" ENRGY 3, ENRGY CGF ENRGY 3 AGF or ENRGY 3 FR	Min, 1/2" ENRGY 3, ENRGY CGF, ENRGY AGF, ENRGY 3 FR, or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum- Fiber Roof Board	JM TPO RhinoPlates and All-Purpose Fasteners secured 9" o.c through deck into wood supports in rows 48" o.c.	Min. 60 mil JM TPO with min. 2.5" wide laps	Induction welded To JM TPO RhinoPlates	-60
2-DD	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF or ENRGY 3 FR	OPTIONAL Min. ¼" Invinsa Roof Board or SECUROCK	Preliminarily secured	Min. 50 mil JM PVC SD Plus with min. 6" wide side laps.	Attached 6" o.c. with JM High Load Plates and JM High Load Fasteners. Fastener rows max. 54" o.c.	-60
2-EE	Steel (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3 ENRGY 3 AGF, ENRGY 3 CGF or ENRGY 3 FR	OPTIONAL 1/4" DensDeck, Invinsa, or SECUROCK	JM High Load Fasteners and JM PVC RhinoPlate Fastened at a rate of 1 fastener per 4 ft ²	Min. JM TPO 60 mil. with min. 2.5" wide laps	Induction welded To JM TPO RhinoPlates	-67.5
2-FF	Steel (Min. 22 ga. grade 33, Type B)	OPTIONAL Min. 1" ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF or ENRGY 3 FR	Min, 1/2" ENRGY 3, ENRGY CGF, ENRGY AGF, ENRGY 3 FR, or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum- Fiber Roof Board	JM High Load Fasteners and JM TPO RhinoPlate Fastened at a rate of 1 fastener per 2.67 ft ²	Min. 60 mil JM TPO with min. 2.5" wide laps	Induction welded To JM TPO RhinoPlates	-75

TABLE 2: WIND UPLIFT RESISTANCE
Mechanically Fastened Membranes over Insulation

System No.	Deck	Base Insulation	Top Insulation	Insulation Attachment	Membrane	Membrane Attachment	Max. Design Pressure (psf)
2-GG	Steel (Min. 22 ga. grade 33, Type B)	OPTIONAL Min. 1" ENRGY 3, ENRGY 3 CGF ENRGY 3 AGF or ENRGY 3 FR	Min, 1/2" ENRGY 3, ENRGY CGF, ENRGY AGF, ENRGY 3 FR, or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum- Fiber Roof Board	Preliminarily secured at a rate of 1 fastener per 4 ft ²	Min. 45 mil JM TPO Max. 8 ft. wide sheet with min. 6" wide laps	Attached 6" o.c. with JM High Load Plates and JM High Load Fasteners	-75
2-HH	Steel (Min. 22 ga. grade 33, Type B)	OPTIONAL Min. 2" ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF or ENRGY 3 FR	OPTIONAL 1/4" DensDeck, Invinsa, or SECUROCK	Preliminarily secured at a rate of 1 fastener per 4 ft ²	Min. 45 mil JM TPO Max. 5 ft. wide sheet with min. 6" wide laps	Attached 6" o.c. with JM High Load Plates and JM High Load Fasteners	-82.5
2-II	Steel Deck (Min. 22 ga. grade 33, Type B)	Min. 1.5" ENRGY 3, ENRGY 3 CGF ENRGY 3 AGF or ENRGY 3 FR	Optional Min. 1/4" Invinsa Roof Board, or SECUROCK	JM High Load Fasteners and JM TPO RhinoPlate in a 24" by 16" grid pattern (1 fastener per 2.67ft ²)	Min. 60 mil JM TPO	Induction welded To JM TPO RhinoPlates	-82.5
2-JJ	Grade 80 Steel Deck	Min. 1.5" ENRGY 3, ENRGY 3 CGF ENRGY 3 AGF or ENRGY 3 FR	Optional Min. 1/4" Invinsa Roof Board, or SECUROCK	JM High Load Fasteners and JM TPO RhinoPlate in a 24" by 16" grid pattern (1 fastener per 2.67ft ²)	Min. 60 mil JM TPO	Induction welded To JM TPO RhinoPlates	-90

TABLE 2: WIND UPLIFT RESISTANCE
Mechanically Fastened Membranes over Insulation

System No.	Deck	Base Insulation	Top Insulation	Insulation Attachment	Membrane	Membrane Attachment	Max. Design Pressure (psf)
2-KK	Steel (Grade 80)	OPTIONAL Min. 1" ENRGY 3, ENRGY CGF, ENRGY 3 AGF or ENRGY 3 FR	Min. 1/2" ENRGY 3, ENRGY CGF. ENRGY 3 AGF, ENRGY 3 FR or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum-Fiber Roof Board	JM High Load Fasteners and JM TPO RhinoPlate Fastened at a rate of one fastener per 2.13 ft ²	Min. 60 mil JM PVC with min. 2.5" wide laps	Induction welded To JM PVC RhinoPlates	-90
2-LL	Steel (Min. 22 ga. grade 33, Type B)	OPTIONAL Min. 1/2" ENRGY 3, ENRGY CGF. ENRGY 3 AGF, ENRGY 3 FR	Invinsa Min. 1/2" ENRGY 3, ENRGY CGF. ENRGY 3 AGF, ENRGY 3 FR or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum-Fiber Roof Board	Preliminarily secured at a rate of 1 fastener per 4 ft ²	Min. 45 mil JM TPO Max. 5 ft. wide sheet with min. 6" wide laps	Attached 6" o.c. with JM High Load Plates and JM High Load Fasteners	-97.5
2-MM	Min. 15/32" Plywood	OPTIONAL Min. 1" ENRGY 3, ENRGY CGF ENRGY 3 AGF or ENRGY 3 FR	Min, 1/2" ENRGY 3, ENRGY CGF, ENRGY AGF, ENRGY 3 FR, or Min. 1/4" Invinsa, Invinsa FR, or JM SECUROCK Gypsum-Fiber Roof Board	JM TPO RhinoPlates and All-Purpose Fasteners secured 6" o.c. through deck into wood supports in rows max. 48" o.c.	Min. 60 mil JM TPO with min. 2.5" wide laps	Induction welded To JM TPO RhinoPlates	-112.5

**TABLE 3: WIND UPLIFT RESISTANCE
Adhered Systems**

System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-A	BUR or Modified Bitumen Roofing with mineral surfacing	None	None	None	None	Min. JM TPO FB 115 adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c. or Min. 50 mil JM PVC Fleece Back adhered with Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-45
3-B	Structural Concrete	Min. 1.5" ENRGY ₃ Over one ply JM Vapor Barrier SA self-adhered to deck primed with JM SA Primer Low VOC	JM Roofing System Urethane Adhesive or JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	None	None	Min. 50 mil JM PVC Fleece Backed adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c. or Min. JM TPO FB 115 adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-67.5
3-C	Structural Concrete	Min. 1.5" ENRGY ₃ Over Optional one ply JM Vapor Barrier SA self-adhered to deck primed with JM SA Primer Low VOC	JM Roofing System Urethane Adhesive or JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	Optional Min. 1/2" RetroPlus, Invinsa or SECUROCK	JM Roofing System Urethane Adhesive or JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	Min. 50 mil JM PVC Fleece Backed adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-67.5

TABLE 3: WIND UPLIFT RESISTANCE
Adhered Systems

System No.	Deck	¹ Base Insulation	Base Insulation Attachment	¹ Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-D	Concrete Min. 2,500 PSI	Min. 1.5" ENRGY 3, ENRGY CGF ENRGY 3 AGF or ENRGY 3 FR Over DynaBase HW or JM Vapor Barrier SA self-adhered to deck primed with JM SA Primer Low VOC	JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	Min. ½" SECUROCK	JM One Step Foamable Adhesive applied in ribbons spaced 12" o.c. or JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c or JM two-part Urethane Insulation Adhesive spaced 12" o.c followed by OPTIONAL DynaBase HW	Min. 50 mil JM PVC Fleece Backed adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-67.5
3-E	Concrete Min. 2,500 PSI	Min. 1.5" ENRGY 3	JM Roofing System Urethane Adhesive or JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	Min. 1/2" RetroPlus, Invinsa or SECUROCK	JM Roofing System Urethane Adhesive or JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	Min. 50 mil JM PVC Fleece Backed adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c. or Min. JM TPO FB 115 adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12"	-67.5

TABLE 3: WIND UPLIFT RESISTANCE							
Adhered Systems							
System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-F	Poured Gypsum	Min. 1.5" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	None	None	Min. 45 mil JM TPO fully adhered with JM TPO Water Based Membrane Adhesive or JM TPO Membrane Adhesive (Low VOC), or JM TPO LVOC Membrane Adhesive or Min. JM TPO FB 115 fully adhered in JM TPO Membrane Adhesive (Water-Based or with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-75
3-G	Poured Gypsum	Poured Gypsum	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	Min. ¼" Invinsa Roof Board	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	Min. 45 mil JM TPO fully adhered with JM TPO Solvent Based Membrane Adhesive Or Min. JM TPO FB 115 fully adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c. or fully adhered with JM TPO Water Based Membrane Adhesive	-75

**TABLE 3: WIND UPLIFT RESISTANCE
Adhered Systems**

System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-H	Poured Gypsum	Min. 1.5" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	Min. ¼" SECUROCK	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c. Or JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	Min. 45 mil JM TPO fully adhered with JM TPO Water Based Membrane Adhesive or JM TPO Membrane Adhesive (Low VOC), or JM TPO LVOC Membrane Adhesive Or Min. JM TPO FB 115 fully adhered in JM TPO Membrane Adhesive (Water-Based or with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-75
3-I	Poured Gypsum	Min. 1" ENRGY 3	JM One Step Foamable Adhesive applied in ribbons spaced 12" o.c.	None	None	Min. 45 mil JM TPO fully adhered with JM TPO Water Based Membrane Adhesive or JM TPO Membrane Adhesive (Low VOC), or JM TPO LVOC Membrane Adhesive Or Min. JM TPO FB 115 fully adhered in JM TPO Membrane Adhesive (Water-Based) or with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-77.5

**TABLE 3: WIND UPLIFT RESISTANCE
Adhered Systems**

System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-J	Poured Gypsum	Min. 1" ENRGY 3	JM One Step Foamable Adhesive applied in ribbons spaced 12" o.c.	Min. ¼" Invinsa Roof Board	JM One Step Foamable Adhesive applied in ribbons spaced 12" o.c.	Min. 45 mil JM TPO fully adhered with JM TPO Solvent Based Membrane Adhesive Or Min. JM TPO FB 115 fully adhered in JM TPO Membrane Adhesive (Water-Based or with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-77.5
3-K	Poured Gypsum	Optional Min. 1" ENRGY 3	JM One Step Foamable Adhesive applied in ribbons spaced 12" o.c.	Min. ¼" SECUROCK	JM One Step Foamable Adhesive applied in ribbons spaced 12" o.c. or JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	Min. 45 mil JM TPO fully adhered with JM TPO Water Based Membrane Adhesive or JM TPO Membrane Adhesive (Low VOC), or JM TPO LVOC Membrane Adhesive or Min. JM TPO FB 115 fully adhered in JM TPO Membrane Adhesive (Water-Based) or with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-77.5

TABLE 3: WIND UPLIFT RESISTANCE
Adhered Systems

System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-L	Min. 250 psi Elastizell with Zell-Crete Fibers installed over DynaBase HW over ASTM D 41 primed concrete	None	None	None	None	Min. 50 mil JM PVC Fleece Back fully adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 6" o.c.	-75
3-M	Min. 340 psi Celcore MF with HS Rheology Admixture over Celcore S-1 treated steel deck	Min. 1.5" ENRGY 3 or ENRGY 3 CGF	JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	Min. 1/4" SECUROCK	JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	Min. 45 mil JM TPO fully adhered with JM TPO Water Based Membrane Adhesive or JM TPO Membrane Adhesive (Low VOC), or JM TPO LVOC Membrane Adhesive or Min. JM TPO FB 115 fully adhered in JM TPO Membrane Adhesive (Water-Based or or Min. 50 mil JM PVC fully adhered with JM PVC Membrane Adhesive (Low VOC) or JM PVC Membrane Adhesive (Water Based)	-77.5

TABLE 3: WIND UPLIFT RESISTANCE							
Adhered Systems							
System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-N	Min. 340 psi Celcore MF with HS Rheology Admixture over Celcore S-1 treated concrete deck	Min. 1.5" ENRGY 3	JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	None	None	Min. 50 mil JM PVC fully adhered with JM PVC Membrane Adhesive (Low VOC) or Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 4" o.c.	-77.5
3-O	Steel 22 ga. Type B, Vented, G90	Min. 1.5" ENRGY 3	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	None	None	Min. 45 mil JM TPO fully adhered with JM TPO Water Based Membrane Adhesive or JM TPO Membrane Adhesive (Low VOC), or JM TPO LVOC Membrane Adhesive or JM TPO Solvent Based Membrane Adhesive or Min. JM TPO FB 115 fully adhered in JM TPO Membrane Adhesive (Water-Based) or Min. 50 mil JM PVC fully adhered with JM PVC Membrane Adhesive (Low VOC) or Min. 50 mil JM PVC Fleece Back adhered with JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	-80

TABLE 3: WIND UPLIFT RESISTANCE							
Adhered Systems							
System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-P	Steel W/ (Min. 300 psi Cellular Lightweight Concrete)	Min. 1.5" ENRGY 3 or ENRGY 3 AGF	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	Min. 1/4" SECUROCK	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	Min. 45 mil JM TPO fully adhered with JM TPO Water Based Membrane Adhesive or JM TPO Membrane Adhesive (Low VOC), or JM TPO LVOC Membrane Adhesive or Min. JM TPO FB 115 fully adhered in JM TPO Membrane Adhesive (Water-Based) or Min. 50 mil JM PVC fully adhered with JM PVC Membrane Adhesive (Low VOC) or JM PVC Membrane Adhesive (Water Based)	-80
3-Q	CONCRETE/w (ASTM Primed) Min. 250 psi Elastizell with Zell-Crete Fibers installed over DynaBase HW over ASTM D 41 primed	None	None	None	None	Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-85

TABLE 3: WIND UPLIFT RESISTANCE
Adhered Systems

System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-R	Poured Gypsum	None	none	None	None	Min. JM TPO FB 115 fully adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-85
3-S	Poured Gypsum	Min. ¼" Invinsa Roof Board	JM One Step Foamable Adhesive applied in ribbons spaced 12" o.c.	None	None	Min. 45 mil JM TPO fully adhered with JM TPO Solvent Based Membrane Adhesive Or Min. JM TPO FB 115 fully adhered in JM TPO Water Based Membrane Adhesive or with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-92.5
3-T	Concrete Min. 2,500 PSI	Min. 1.5" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	OPTIONAL Min. 1/4" DensDeck or Invinsa	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	Min. 45 mil JM TPO fully adhered with JM TPO Membrane Adhesive (Solvent-Based) or JM TPO Membrane Adhesive (Water-Based)	-105
3-U	Concrete Min. 2,500 PSI	Min. 1.5" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	OPTIONAL Invinsa	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	Min. 50 mil JM PVC Fleece Backed fully adhered in JM PVC Membrane Adhesive (Water Based)	-105

TABLE 3: WIND UPLIFT RESISTANCE
Adhered Systems

System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-V	Min. 383.5 psi Celcore MF with HS Rheology Admixture over optional JM Vapor Barrier SA or DynaBase HW over ASTM D 41 primed concrete	None	None	None	None	Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 6" o.c.	-92.5
3-W	Min. 370 psi Concrete over concrete deck	None	None	None	None	Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-97.5
3-X	Steel/w Min. 250 psi Elastizell with Zell-Crete Fibers	None	None	None	None	Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-97.5
3-Y	Steel/w Min. 250 psi Elastizell with Zell-Crete Fibers	None	None	None	None	Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 6" o.c.	-97.5

**TABLE 3: WIND UPLIFT RESISTANCE
Adhered Systems**

System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-Z	Concrete(ASTM D41 Primed)/w Min. 383.5 psi Celcore MF with HS Rheology Admixture over optional JM Vapor Barrier SA or DynaBase HW	None	None	None	None	Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-102.5
3-AA	Concrete (ASTM D41 Primed)/w Min. 383.5 psi Celcore MF with HS Rheology Admixture over optional JM Vapor Barrier SA or DynaBase HW	None	None	None	None	Min. JM TPO FB 115 adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 6" o.c.	-112.5
3-BB	Concrete /w Min. 250 psi Elastizell with Zell-Crete Fibers	None	None	None	None	Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-117.5

TABLE 3: WIND UPLIFT RESISTANCE Adhered Systems							
System No.	Deck	¹ Base Insulation	Base Insulation Attachment	¹ Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-CC	Concrete Min. 2,500 PSI	Min. 1.5" ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF or ENRGY 3 FR	JM Roofing System Urethane Adhesive, JM Two Part Urethane Insulation Adhesive or JM One Step Foamable Adhesive applied in ribbons spaced 12" o.c.			None	None
3-DD	Steel w/Min. (310 psi Elastizell with Zell-Crete Fibers) or Concrete	Min. 1.5" ENRGY 3	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	None	None	Min. 45 mil JM TPO fully adhered with JM TPO Water Based Membrane Adhesive or JM TPO Membrane Adhesive (Low VOC), or JM TPO LVOC Membrane Adhesive or JM TPO Solvent Based Membrane Adhesive or Min. JM TPO FB 115 fully adhered in JM TPO Membrane Adhesive (Water-Based) or Min. 50 mil JM PVC fully adhered with JM PVC Membrane Adhesive (Low VOC)	-130

TABLE 3: WIND UPLIFT RESISTANCE
Adhered Systems

System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-EE	Min. 310 psi Elastizell with Zell-Crete Fibers over steel deck	Min. 1.5" ENRGY 3 or ENRGY 3 AGF	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12"	Min. ½" SECUROCK	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12"	Min. 45 mil JM TPO fully adhered with JM TPO Membrane Adhesive (Water Based) or JM TPO Membrane Adhesive (Low VOC) or JM TPO Membrane Adhesive (LVOC) or Min. JM TPO FB 115 adhered with JM TPO Membrane Adhesive (Water Based) or Min. 50 mil JM PVC fully adhered with JM PVC Membrane Adhesive (Low VOC)	-130
3-FF	Min. 262 psi over concrete deck	Min. 1/4" SECUROCK	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12"	None	None	Min. 50 mil JM PVC fully adhered with JM PVC Membrane Adhesive (Water Based)	-210
3-GG	Min. 262 psi over concrete deck	Min. 1/4" SECUROCK	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12"	None	None	Base Ply: DynaBase HW torch adhered And JM PVC Fleece Back Membrane adhered with Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c.	-210

TABLE 3: WIND UPLIFT RESISTANCE
Adhered Systems

System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-HH	Min. 383.5 psi Celcore MF with HS Rheology Admixture over DynaBase HW over ASTM D 41 primed concrete	None	none	None	None	Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 6" o.c	-262.5
3-II	Min. 250 psi Elastizell with Zell-Crete Fibers (no EPS board) over concrete deck	None	None	None	None	Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 6" o.c	-290
3-JJ	Min. 370 psi Concrete (no EPS board) over concrete deck	None	None	None	None	Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c	-375
3-KK	Min. 250 psi Elastizell with Zell-Crete Fibers (no EPS board) over concrete deck	None	None	None	None	Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 4" o.c	-390

TABLE 3: WIND UPLIFT RESISTANCE							
Adhered Systems							
System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-LL	Min. 383.5 psi Celcore MF with HS Rheology Admixture (no EPS board) over ASTM D 41 primed concrete	None	None	None	None	Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c	-417.5
3-MM	Min. 370 psi Concrete (no EPS board) over concrete deck	None	None	None	None	Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 6" o.c	-480
3-NN	Min. 383.5 psi Celcore MF with HS Rheology Admixture (no EPS board) over primed concrete	None	None	None	None	Min. 50 mil JM PVC Fleece Back adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 6" o.c	-502.5
3-OO	Poured Gypsum	None	None	None	None	Min. JM TPO FB 115 adhered with JM Roofing System Urethane Adhesive applied in ribbons spaced 6" o.c	-155

TABLE 3: WIND UPLIFT RESISTANCE
Adhered Systems

System No.	Deck	¹ Base Insulation	Base Insulation Attachment	¹ Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-PP	Concrete Min. 2,500 PSI	Min. 1.5" ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF or ENRGY 3 FR	JM Roofing System Urethane Adhesive, JM Two Part Urethane Insulation Adhesive or JM One Step Foamable Adhesive applied in ribbons spaced 12" o.c.	None	None	Min. 45 mil JM TPO Low VOC Membrane Adhesive or JM TPO LVOC Membrane Adhesive applied at a rate of 0.55 gal/ft ²	-172.5
3-QQ	Concrete Min. 2,500 PSI	Min. 1.5" ENRGY 3, ENRGY 3 CGF or ENRGY 3 FR	Two Part JM Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	None	None	Min. 45 mil JM TPO fully adhered with JM PVC Membrane Adhesive (Water Based)	-195
3-RR	Concrete Min. 2,500 PSI	Min. 1.5" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF	JM Urethane Insulation Adhesive or JM Two Part Urethane Adhesive applied in ribbons spaced 12" o.c.	None	None	Min. 50 mil JM PVC Fleece Backed fully adhered with JM PVC Membrane Adhesive (Water Based)	-217.5

TABLE 3: WIND UPLIFT RESISTANCE
Adhered Systems

System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-SS	Concrete Min. 2,500 PSI	Min. 1.5" ENRGY 3, ENRGY 3 AGF, or ENRGY 3 CGF	JM Urethane Insulation Adhesive or JM Two Part Urethane Adhesive applied in ribbons spaced 12" o.c.	None	None	Min. 45 mil JM TPO fully adhered with JM TPO Membrane Adhesive (Solvent-Based) or JM TPO Membrane Adhesive (Low VOC)	-217.5
3-TT	Concrete Min. 2,500 PSI	Min. ¼" SECUROCK over DynaBase HW vapor barrier	JM Roofing System Urethane Adhesive, applied in ribbons spaced 12" o.c.	DynaBase HW	Torch Adhered	Min. JM PVC FB 115 adhered with Roofing System Urethane Adhesive applied in ribbons spaced 12" o.c	-217.5
3-UU	Concrete Min. 2,500 PSI	Min. ¼" INVINSA Roof Board	JM Two Part Urethane Insulation Adhesive applied in ribbons spaced 12" o.c.	None	None	Min. JM TPO FB 115 fully adhered with JM TPO Membrane Adhesive (Water Based)	-277.5
3-VV	Min. 213.5 psi Elastizell with Zell-Crete Fibers (no EPS Board) over concrete deck	None	None	None	None	Min. JM TPO FB 115 adhered with Roofing System Urethane Adhesive applied in ribbons spaced 6" o.c. or Min. 50 mil JM PVC Fleece Back adhered with Roofing System Urethane Adhesive applied in ribbons spaced 6" o.c.	-290

TABLE 3: WIND UPLIFT RESISTANCE							
Adhered Systems							
System No.	Deck	¹ Base Insulation	Base Insulation Attachment	¹ Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-WW	Concrete Min. 2,500 PSI	Min. ¼" SECUROCK Over one ply JM DynaBase HW Torch Adhered	JM Roofing System Urethane Adhesive, applied in ribbons spaced 12" o.c.	None	None	Min. 45 mil JM TPO fully adhered with JM TPO Membrane Adhesive (Water Based) or JM TPO Membrane Adhesive (Low VOC) or JM TPO Membrane Adhesive (LVOC) Or Min. JM TPO FB 115 adhered with JM TPO Membrane Adhesive (Water Based)	-292.5
3-XX	Concrete Min. 2,500 PSI	Min. 1.5" ENRGY 3 CGF over DynaBase HW torch adhered over deck primed with JM SA Primer Low VOC or ASTM D 41 primer	JM Roofing System Urethane Adhesive, applied in ribbons spaced 12" o.c.	Min. ¼" SECUROCK	JM Roofing System Urethane Adhesive, applied in ribbons spaced 12" o.c.	Min. 45 mil JM TPO fully adhered with JM TPO Membrane Adhesive (Water Based) or JM TPO Membrane Adhesive (Low VOC) or JM TPO Membrane Adhesive (LVOC) Or Min. JM TPO FB 115 adhered with JM TPO Membrane Adhesive (Water Based) or Min. 50 mil JM PVC fully adhered with JM PVC Membrane Adhesive (Low VOC)	-292.5

TABLE 3: WIND UPLIFT RESISTANCE							
Adhered Systems							
System No.	Deck	¹Base Insulation	Base Insulation Attachment	¹Top Insulation	Top Insulation Attachment	Membrane	Max. Design Pressure (psf)
3-YY	Concrete Min. 2,500 PSI	Min. ¼" SECUROCK	JM Two-Part Urethane Insulation Adhesive, applied in ribbons spaced 12" o.c	None	None	Min. 45 mil JM TPO fully adhered with JM TPO Low VOC Membrane Adhesive or JM TPO LVOC Membrane Adhesive;	-360
3-ZZ	Concrete Min. 2,500 PSI	Min. ¼" SECUROCK	JM Two-Part Urethane Insulation Adhesive, applied in ribbons spaced 12" o.c	None	None	Min. 45 mil JM TPO fully adhered with JM PVC Membrane Adhesive (Water Based)	-465