PRI Evaluation Report

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Report Holder:

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SCOPE

Subject: EPDM Membranes

CSI MasterFormat®:

DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Sub-level 2: 07 50 00 – Membrane Roofing
Sub-level 3: 07 53 00 – Elastomeric Membrane Roofing
Sub-level 4: 07 53 23 – Ethylene-Propylene-Diene-Monomer (EPDM) Roofing

Manufacturing Location(s):

Factory ID	Location
Milan, OH	49 Lockwood Rd. Milan, OH 44846

Code References:

- 2018, 2015, 2012, and 2009 International Building Code® (IBC)
- 2018, 2015, 2012, and 2009 International Residential Code® (IRC)

Properties Evaluated:

- External Fire Exposure (ASTM E108, ANSI/UL790)
- Wind Resistance (FM 4474)
- Physical Properties (ASTM D4637, ASTM G155)
- Impact Resistance (FM 4470)

Evidence Submitted and Reviewed:

- Recognized test report(s) indicating compliance with ASTM D4637 and ASTM G155
- Recognized test report(s) for Fire Classifications in accordance with ASTM E108 and/or ANSI/UL790
- Recognized test report(s) for Wind Uplift Resistance test pressures in accordance with FM 4474
- Fire Classification Listings and/or Directories
- Quality Documentation
- Manufacturer's Drawings and Installation Instructions

PRODUCT DESCRIPTIONS and APPLICATIONS

Products:

JM EPDM NR 45 MIL
JM EPDM NR 45 MIL - FIT
JM EPDM NR 60 MIL
JM EPDM NR 60 MIL - FIT
JM EPDM NR 90 MIL
JM EPDM NR 90 MIL - FIT
JM EPDM R 45 MIL
JM EPDM R 60 MIL
JM EPDM R 60 MIL - FIT
JM EPDM R 75 MIL
JM EPDM R 75 MIL - FIT

Product Descriptions:

Johns Manville EPDM (Ethylene Propylene Diene Monomer) single-ply roof membranes covered in this report conform with the following properties when installed as instructed in this report. The products come in standard sizes and consist of reinforced and nonreinforced membranes.

JM EPDM NR 45 MIL: JM EPDM NR 45 MIL is an ASTM D4637, Type I compliant, nominal 45 mil. (1.14 mm) thick nonreinforced, cured EPDM single-ply membrane used in fully adhered or ballasted low-slope roof assemblies. Also available with factory-applied inseam tape, which is designated with FIT.

Product:	Factory IDs:	Dimensions:
JM EPDM NR 45 MIL	Milan, OH	10ft x 50ft 10ft x 100ft 20ft x 50ft 20ft x100ft 30ft x 100ft 40ft x 100ft
JM EPDM NR 45 MIL - FIT	Milan, OH	10ft x 100ft 20ft x100ft 30ft x 100ft

JM EPDM NR 60 MIL: JM EPDM NR 60 MIL is an ASTM D4637, Type I compliant, nominal 60 mil. (1.52 mm) thick nonreinforced, cured EPDM single-ply membrane used in fully adhered or ballasted low-slope roof assemblies. Also available with factory-applied inseam tape, which is designated with FIT.

Product:	Factory IDs:	Dimensions:
JM EPDM NR 60 MIL	Milan, OH	10ft x 50ft 10ft x 100ft 16ft 8in x 100ft 20ft x 50ft 20ft x100ft 30ft x 100ft 40ft x 100ft
JM EPDM NR 60 MIL - FIT	Milan, OH	10ft x 100ft 16ft 8in x 100ft 20ft x100ft 30ft x 100ft

JM EPDM NR 90 MIL: JM EPDM NR 90 MIL is an ASTM D4637, Type I compliant, nominal 90 mil. (2.29 mm) thick nonreinforced, cured EPDM single-ply membrane used in adhered or ballasted low-slope roof assemblies. Also available with factory-applied inseam tape, which is designated with FIT.

Product:	Factory IDs:	Dimensions:
JM EPDM NR 90 MIL	Milan, OH	10ft x 100ft
JM EPDM NR 90 MIL - FIT	Milan, OH	10ft x 100ft

JM EPDM R 45 MIL: JM EPDM R 45 MIL is an ASTM D4637, Type II compliant, nominal 45 mil. (1.14 mm) thick internally reinforced, cured EPDM single-ply roof membrane used in mechanically fastened, fully adhered, or ballasted low-slope roof assemblies. The membrane is internally reinforced with a denier polyester mat.

Product:	Factory IDs:	Dimensions:
JM EPDM R 45 MIL	Milan, OH	10ft x 100ft

JM EPDM R 60 MIL: JM EPDM R 60 MIL is an ASTM D4637, Type II compliant nominal 60 mil. (1.52 mm) thick internally reinforced, cured EPDM single-ply roof membrane used in mechanically fastened, fully adhered, or ballasted low-slope roof assemblies. The membrane is internally reinforced with a denier polyester mat. Also available with factory-applied inseam tape, which is designated with FIT.

Product:	Factory IDs:	Dimensions:
JM EPDM R 60 MIL	Milan, OH	10ft x 100ft
JM EPDM R 60 MIL - FIT	Milan, OH	10ft x 100ft

JM EPDM R 75 MIL: JM EPDM R 75 MIL is an ASTM D4637, Type II compliant nominal 75 mil. (1.91 mm) thick internally reinforced, cured EPDM single-ply roof membrane used in mechanically fastened, fully adhered, or ballasted low-slope roof assemblies. The membrane is internally reinforced with a denier polyester mat. Also available with factory-applied inseam tape, which is designated with FIT.

Product:	Factory IDs:	Dimensions:
JM EPDM R 75 MIL	Milan, OH	10ft x 100ft
JM EPDM R 75 MIL - FIT	Milan, OH	10ft x 100ft

Fire Classification:

Johns Manville EPDM assemblies covered under this report have been evaluated for fire classification in accordance with ASTM E108 and/or ANSI/UL 790 when installed on new construction as described in the *EPDM Membrane Systems* tabulated in Appendix B and the manufacturer's installation instructions. Tabulated assemblies qualify for use under the following code:

- 2018, 2015, 2012, and 2009 *IBC* Section 1505.1
- 2018, 2015, 2012, and 2009 *IRC* Section R902.1

When the Johns Manville EPDM assemblies are installed over existing roof coverings, the existing deck shall be inspected and found to be structurally sound to the satisfaction of the code official and the resulting fire classification is the lower of the new and existing roof fire classifications.

Wind Resistance:

Johns Manville EPDM assemblies covered under this report have been evaluated for wind resistance in accordance with FM 4474 when installed as described in the *EPDM Membrane Systems* tabulated in Appendix B and the manufacturer's installation instructions. Tabulated assemblies qualify for use under the following code:

- 2018, 2015, 2012, 2009 IBC Section 1504.3.1

Physical Properties:

Johns Manville EPDM membranes covered in this report have been tested for physical properties in accordance with ASTM D4637 Type I or Type II, and qualify for use under the following code:

- 2018, 2015, 2012, 2009 *IBC* Section 1507.12.2
- 2018, 2015, 2012, 2009 *IRC* Section R905.12.2

Johns Manville EPDM membranes covered in this report have been subjected to accelerated weathering tests in accordance with ASTM G155 and evaluated for physical integrity. Membranes qualify for use under the following code:

- 2018, 2015, 2012, 2009 IBC Section 1504.6

Impact Resistance:

Johns Manville EPDM membranes covered in this report have been tested for impact resistance in accordance with "Resistance to Foot Traffic Test" in Section 5.5 of FM 4470 and qualify for use under the following code:

- 2018, 2015, 2012, 2009 IBC Section 1504.7

INSTALLATION – GENERAL

Johns Manville EPDM single-ply roof membranes shall be installed in accordance with the applicable code, this report, and the manufacturer's published installation instructions, which must be available at all times on the jobsite during installation. Minimum roof slopes shall be $^1/_4$:12 (2% slope). The membranes shall be installed in accordance with the following code as applicable, except as noted in this report:

- 2018, 2015, 2012, 2009 *IBC* Section 1507.12
- 2018, 2012 2015, and 2009 *IRC* Section R905.12

Edge securement and metal edge systems shall be qualified for use under the following code:

- 2018, 2015, 2012, 2009 IBC Section 1504.5

Flashings, copings, crickets & saddles, and other shall be made watertight in accordance with manufacturer's published installation instructions and the following code:

- 2018, 2015, 2012, 2009 IBC Section 1503
- 2018, 2015, 2012, 2009 IRC Section R903

Deck:

The roof deck shall be code-complying, clean, dry, and free of debris or other protrusions prior to installing the roof assembly. The roof deck and structural supports shall be designed to withstand the applicable components and cladding wind loads in accordance with code.

Insulation:

See the *Assembly Components* tabulated in Appendix A and *EPDM Membrane Systems* tabulated in Appendix B for roof insulations that may be used with Johns Manville EPDM membranes. Insulations shall comply with the following code:

- 2018, 2015, 2012, 2009 IBC Section 1508
- 2018, 2015, 2012, 2009 IRC Section R906

Roofing insulation shall comply with the required testing standards listed in the following code:

- 2018, 2015, 2012, 2009 IBC Section 1508.2
- 2018, 2015, 2012, 2009 IRC Section R906.2

Foam plastic insulation shall comply with the following code:

- 2018, 2015, 2012, 2009 IBC Section 2603
- 2018, 2015, 2012, 2009 IRC Section R316

Fasteners:

See *Assembly Components* tabulated in Appendix A and *EPDM Membrane Systems* tabulated in Appendix B for fasteners that may be used with Johns Manville EPDM membranes. Fasteners shall penetrate through the steel deck top flange, wood sheathing a minimum $^3/_4$ inch, or into concrete decks a minimum of 1-$^1/_4$ inch. Fasteners embedded through wood sheathing into structural wood framing shall embed a minimum 1 inch into the framing.

Adhesives:

See *Assembly Components* tabulated in Appendix A and *EPDM Membrane Systems* tabulated in Appendix B for adhesives that may be used with Johns Manville EPDM membranes. Default application rates are as listed in Appendix A, unless otherwise stated and overridden by specific assembly listing in Appendix B. See manufacturers published product data sheets for storage conditions and environmental application conditions including application temperatures and dew point considerations.

Reroofing:

JM EPDM membranes may be installed in reroofing systems where approved and installed per local code requirements, this report, and the manufacturer's published installation instructions in accordance with the following code:

- 2018, 2015 IBC Section 1511
- 2012, 2009 IBC Section 1510
- 2018, 2015 IRC Section R908
- 2012, 2009 IRC Section R907

When installing a roof system over an existing roof, the existing roof shall not be soaked, deteriorated to the point where it is no longer adequate as a base for additional roofing, or have a previously applied roof cover in two or more applications. Roof fasteners penetrating into the existing structural substrate shall be qualified to the satisfaction of the code official. Where the roof system is proposed to anchor to the existing roof system, the wind resistance of existing roof shall be qualified to the satisfaction of the code official prior to installation.

CONDITIONS OF USE & IDENTIFICATION

The Johns Manville EPDM single-ply membranes described in this report comply with, or are suitable alternatives to, the codes listed in this report, subject to the following conditions:

- The products as well as the installation methods shall be in compliance with the applicable code, this report, and the installation instruction provided by the manufacturer. If the manufacturer's installation instructions differ from what is listed in this report, this report governs.
- This report does not supersede the local jurisdiction regulations and the final approval of the building products, materials, or systems in this report is the responsibility of the authorities having jurisdiction.
- This report is only valid if the product(s) and/or the referenced documentation/codes related to the products do not change. If there is a change in product(s), the referenced documentation, or codes related to the products, PRI Construction Materials Technologies, LLC shall be informed and further action may be necessary to revalidate this report.
- This report, in its entirety, shall be available at job sites upon request by the user or for inspection by the Building Official. A copy of this report in full shall be provided by the manufacturer or its distributors.
- This report pertains to above-deck roof components. Roof decks and supporting structural elements and members shall be in accordance with code requirements to the satisfaction of the Authority Having Jurisdiction.
- This report does not consider or qualify ballasted low-slope roof systems. Refer to code for requirements and limitations.
- This report does not include evaluation of edge securement for low-slope roofs. Refer to code for requirements and limitations.
- This report does not include surfacing and ballast materials. Refer to code for requirements and limitations. This report does not include other roof overburdens (e.g. paver systems, photovoltaics, vegetative systems). Refer to roof overburden manufacturer, installer, or specifier for relevant information and substantiation.
- This report does not include evaluation of individual roof insulation materials. Refer to code for requirements and limitations.
- The products are identified by marks bearing the report holder's name, the manufacture location, the product name, and the Seal of PRI Validation Program for Building Materials. The Seal shall indicate, at a minimum, the following:
  a. ASTM D4637
- The products are manufactured at the locations listed in this report and are manufactured under a quality control program with surveillance and/or inspections by PRI Construction Materials Technologies, LLC.
- This report is a supplement to product certification. The products listed herein shall be certified separately under the PRI Validation Program for Building Products. This report alone is not a product certification and requires separate product certification under the PRI Validation Program for Building Products to be valid.
- The current status of this report as well as a directory of certified products, including supplemental PRI Evaluation Reports, can be found at pri-group.com.

Appendix A: Assembly Components, with Shorthand Designations, and Standard Application Instructions

Insulations:

Insulations	Shorthand	Description
JM ENRGY 3	ENRGY 3	Johns Manville ENRGY 3 – faced rigid cellular polyisocyanurate thermal insulation board intended to meet ASTM C1289, Type II, Class 1 (glass fiber reinforced cellulosic felt facers), Grade 2 (min. 20 psi)
JM ENRGY 3 CGF	ENRGY 3 CGF	Johns Manville ENRGY 3 CGF – faced rigid cellular polyisocyanurate thermal insulation board intended to meet ASTM C1289, Type II, Class 2 (coated glass fiber mat facers), Grade 2 (min. 20 psi)
JM ENRGY 3 AGF	ENRGY 3 AGF	Johns Manville ENRGY 3 CGF – faced rigid cellular polyisocyanurate thermal insulation board intended to meet ASTM C1289, Type II, Class 3 (uncoated glass fiber mat facers), Grade 2 (min. 20 psi)
JM ENRGY 3 FR	ENRGY 3 FR	Johns Manville ENRGY 3 CGF – faced rigid cellular polyisocyanurate thermal insulation board intended to meet ASTM C1289, Type II, Class 2 (coated glass fiber mat facers), Grade 2 (min. 20 psi), with two-layer facer on bottom surface
JM ENRGY 3 C1	ENRGY 3 C1	Johns Manville ENRGY 3 – faced rigid cellular polyisocyanurate thermal insulation board intended to meet ASTM C1289, Type II, Class 1 (glass fiber reinforced cellulosic felt facers), Grade 2 (min. 20 psi)
JM ENRGY 3 C1 CGF	ENRGY 3 C1 CGF	Johns Manville ENRGY 3 CGF – faced rigid cellular polyisocyanurate thermal insulation board intended to meet ASTM C1289, Type II, Class 2 (coated glass fiber mat facers), Grade 2 (min. 20 psi)
JM Invinsa	Invinsa	Johns Manville Invinsa – faced rigid cellular polyisocyanurate thermal insulation board intended to meet ASTM C1289, Type II, Class 4 (coated glass fiber mat facers), Grade 3 (min. 140 psi)
JM Invinsa FR	Invinsa FR	Johns Manville minimum 150 psi polyisocyanurate foam core insulation with an inorganic coated glass facer on the top surface and double inorganic coated glass facer on the bottom surface.
JM Invinsa Foam	Invinsa Foam	Johns Manville polyisocyanurate foam core composite board consisting of Johns Manville Invinsa Roof Board on the top surface and Johns Manville ENRGY 3 CGF on the bottom surface.
JM SeparatoR	SeparatoR	Johns Manville SeparatoR – faced rigid cellular polyisocyanurate thermal insulation board intended to meet ASTM C1289, Type II, Class 1 (glass fiber reinforced cellulosic felt facers), Grade 2 (min. 20 psi), but manufactured at ½"
JM SeparatoR CGF	SeparatoR CGF	Johns Manville SeparatoR CGF – faced rigid cellular polyisocyanurate thermal insulation board intended to meet ASTM C1289, Type II, Class 2 (coated glass fiber mat facers), Grade 3 (min. 25 psi), but manufactured at ½"
JM SeparatoR FR	SeparatoR FR	Johns Manville SeparatoR CGF – faced rigid cellular polyisocyanurate thermal insulation board intended to meet ASTM C1289, Type II, Class 2 (coated glass fiber mat facers), Grade 3 (min. 25 psi), but manufactured at ½" and with two-layer facer on bottom surface
JM ProtectoR HD	ProtectoR HD	Johns Manville ProtectoR HD – faced rigid cellular polyisocyanurate thermal insulation board intended to meet ASTM C1289, Type II, Class 4 (coated glass fiber mat facers), Grade 1 (min. 80 psi)
JM ProtectoR HD FR	ProtectoR HD FR	Johns Manville ProtectoR HD – faced rigid cellular polyisocyanurate thermal insulation board intended to meet ASTM C1289, Type II, Class 4 (coated glass fiber mat facers), Grade 1 (min. 80 psi), with two-layer facer on bottom surface
JM RetroPlus Roof Board	RetroPlus Roof Board	Johns Manville RetroPlus Roof Board – perlite thermal insulation board intended to meet ASTM C728, Type 3
Blue Ridge Fiberboard STRUCTODEK	STRUCTODEK	Blue Ridge Fiberboard STRUCTODEK – cellulosic fiber insulating board intended to meet ASTM C208, Type II, Grades 1 and 2
Georgia-Pacific DensDeck Prime	DensDeck Prime	Georgia-Pacific DensDeck Prime – glass mat gypsum substrate intended to meet ASTM C1177
National Gypsum DEXcell Cement Roof Board	DEXcell Cement	National Gypsum DEXcell Cement Roof Board – non-asbestor fiber-mat reinforced cementitious backer intended to meet ASTM C1325
National Gypsum DEXcell Glass-Mat Roof Board	DEXcell Glass	National Gypsum DEXcell Glass-Mat Roof Board – glass mat gypsum substrate intended to meet ASTM C1177
National Gypsum DEXcell FA Glass-Mat Roof Board	DEXcell FA	National Gypsum DEXcell FA Glass-Mat Roof Board – glass mat gypsum substrate intended to meet ASTM C1177
USG SECUROCK Ultralight Glass-Mat Roof Board	SECUROCK Glass	USG SECUROCK Ultralight Glass-Mat Roof Board – glass mat gypsum substrate intended to meet ASTM C1177
USG SECUROCK Gypsum-Fiber Roof Board	SECUROCK GypF	USG SECUROCK Gypsum-Fiber Roof Board – fiber-reinforced gypsum panel intended to meet ASTM C1278

Fasteners:

Fasteners	Shorthand	Description
Purlin Fasteners	PF #12	#12 coated-steel fastener with a ¼" Hex head and ¾" drill point. For use with structural steel purlins 12-18ga.
UltraFast Fasteners	UF #12	#12 Case-Hardened Steel fastener with a #3 Philips head or ¼" Hex head. Fastener coated with a CR-10 corrosion resistant polymer coating. For use with wood or steel decks.
All Purpose Fasteners	AP #14	#14 Case-Hardened Steel fastener with a #3 Philips head. Fastener coated with a CR-10 corrosion resistant polymer coating. For use with wood, concrete, or steel decks.
High Load Fasteners	HL #15	#15 Carbon Steel fastener with a #3 Philips head. Fastener coated with a CR-10 corrosion resistant polymer coating. For use with wood or steel decks.
Concrete Drive Fasteners	CDF	Flat head, corrosion-resistant, carbon steel, non-threaded fasteners. For use with concrete decks only.
SFS Defast DF-#12-PH3	DF DF-#12-PH3	#12 Carbon Steel fastener with a #3 Philips head. Fastener coated with cathodic epoxy e-coat. For use with wood, concrete, or steel decks.
SFS Defast DF-#14-PH3	DF DF-#14-PH3	#14 Carbon Steel fastener with a #3 Philips head. Fastener coated with cathodic epoxy e-coat. For use with wood, concrete, or steel decks.
SFS Defast DF-#15-PH3	DF DF-#15-PH3	#15 Carbon Steel fastener with a #3 Philips head. Fastener coated with cathodic epoxy e-coat. For use with wood, concrete, or steel decks.
TruFast #12 DP	TF #12 DP	#12 Carbon Steel fastener with a #3 Philips head. Fastener coated with Tru-Kote epoxy e-coat. For use with steel or wood decks.
TruFast #14 HD	TF #14 HD	#14 Carbon Steel fastener with a #3 Philips head. Fastener coated with Tru-Kote epoxy e-coat. For use with steel or wood decks.
TruFast #15 EHD	TF #15 EHD	#15 Carbon Steel fastener with a #3 Philips head. Fastener coated with Tru-Kote epoxy e-coat. For use with steel or wood decks.

Fastener Stress Plates:

Fastener Stress Plates	Shorthand	Description
APB Plates	APBP	2" round Galvalume coated steel metal plates.
High Load Plates	HLP	2-3/8" round 20 ga. Galvalume coated steel metal plates.
UltraFast Metal Plates (Round)	UFMP (Round)	3" round 26 ga. Galvalume coated steel metal plates.
UltraFast Metal Plates (Square)	UFMP (Square)	3" square 26 ga. Galvalume coated steel metal plates.
UltraFast Plastic Plates	UFPP	3" round polypropylene plates with locking feature.
UltraFast AccuTrac Flat Bottom	UF AT FB	3" square Galvalume coated steel metal plates.
SFS Defast PLT-R-3	DF PLT-R-3	3" round 26 ga. Galvalume coated steel metal plates.
SFS Defast PLT-H-2-7/8	DF PLT-H-2-7/8	2-7/8" hex 26 ga. Galvalume coated steel metal plates.
TruFast 3" Metal Insulation Plate	TF MIP	3" round, 0.017" thick AZ-50 Galvalume coated steel metal plates.

Tapes, Primers, and Batten Strips:

Tapes and Batten Strips	Shorthand	Description
EPDM 10 inch Reinforced Perimeter Strip	EPDM 10in RPS	10" wide, 45mil thick, polyester scrim reinforced, cured EPDM strip with a factory-laminated, 3" self-adhering seam tape along each edge. Membrane shall be primed prior to contacting EPDM 10in RPS.
EPDM Peel and Stick Sealing Strip	Sealing Strip	6", 9", or 12" wide, 45mil thick, cured EPDM strip with a factory-laminated, self-adhering seam tape. Membrane shall be primed prior to contacting Sealing Strip.
EPDM Seam Tape Plus	Seam Tape Plus	3" or 6" wide, 30mil thick, self-adhering, extruded EPDM splice tape. Membrane shall be primed prior to contacting Seam Tape Plus.
EPDM Tape Primer Plus	EPDM Primer	One-part, solvent-based membrane primer; coverage rate at 500ft^2/gal (0.20gal/100ft^2) for .
EPDM Tape Primer Plus (Low VOC)	EPDM Primer (Low VOC)	One-part, low VOC, solvent-based membrane primer; coverage rate at 150-225ft^2/gal (0.44-0.67gal/100ft^2).
Polymer Batten Strip	Batten Strip	1" wide, 50mil thick, plastic strip, prepunched 6" on center.

Membrane Adhesives:

Membrane Adhesives	Shorthand	Description	Application
JM LVOC Membrane Adhesive (TPO & EPDM)	JM LVOC MA	One-part, low VOC synthetic polymer-based adhesive. Available in 5 gal. pails. For use with bare backed TPO or EPDM over approved insulation boards, wood, concrete, and light-weight concrete substrates.	Roller applied to both substrate and membrane surfaces; coverage rate at 50-90 ft^2/gal (1.1-2.0 gal/100ft^2).
JM EPDM Membrane Adhesive (Low VOC)	JM MA (LVOC)	One-part, low VOC synthetic polymer-based adhesive. Available in 5 gal. pails. For use with bare backed EPDM over approved insulation boards, wood, concrete, and light-weight concrete substrates.	Roller applied to both substrate and membrane surfaces; coverage rate at 50-90 ft^2/gal (1.1-2.0 gal/100ft^2).
JM EPDM Membrane Adhesive (Solvent Based)	JM MA (SB)	One-part synthetic polymer-based adhesive. Available in 5 gal. pails. For use with bare backed EPDM over approved insulation boards, wood, concrete, and light-weight concrete substrates.	Roller applied to both substrate and membrane surfaces; coverage rate at 50-90 ft^2/gal (1.1-2.0 gal/100ft^2).
JM EPDM Water Based Membrane Adhesive	JM EPDM WBMA	One-part, water-based adhesive. Available in 5 gal. pails. For use with EPDM over approved insulation boards, wood, or concrete substrates.	Roller applied to substrate surface only (full coverage rate) or to both substrate (half coverage rate) and membrane surfaces (half coverage rate); coverage rate at 140-220 ft^2/gal (0.5-0.7 gal/100ft^2).
JM EPDM Membrane Adhesive (Water Based)	JM MA (WB)	One-part, water-based adhesive. Available in 5 gal. pails. For use with EPDM over approved insulation boards, wood, or concrete substrates.	Roller applied to substrate surface only (full coverage rate) or to both substrate (half coverage rate) and membrane surfaces (half coverage rate); coverage rate at 140-220 ft^2/gal (0.5-0.7 gal/100ft^2).
JM All Seasons Sprayable Bonding Adhesive	JM ASBA	One-part, aerosol adhesive. Available in 45 lb. canisters. For use with TPO or EPDM over approved insulation boards, gypsum, concrete, plywood, or cement board substrates.	Spray applied to both substrate and membrane surfaces; coverage rate at 1000 ft^2/canister (0.42gal/100 ft^2).
JM Membrane Bonding Adhesive (TPO & EPDM)	JM MBA	One-part, synthetic polymer-based adhesive. Available in 5 gal. pails. For use with bare backed TPO or EPDM over insulation boards, metal, wood, and other substrates.	Roller applied to both substrate and membrane surfaces; coverage rate at 50-90 ft^2/gal (1.1-2.0 gal/100ft^2).

Insulation Adhesives:

Insulation Adhesives	Shorthand	Description	Standard Application[1,2]
JM Two Part UIA	JM Two Part UIA	A two-part, cold-applied urethane adhesive. Available in four cartridges per case or two 5 gal. parts per box. For use with approved insulation boards, gypsum, concrete, treated plywood, cementitious wood fiber, approved base sheets, and approved existing smooth-surfaced asphalt.	Applied in 3/4” to 1” wide beads spaced min. 12” o.c.
JM One-Step Foamable Adhesive	JM OSFA	A two-part, cold-applied polyurethane adhesive. Available in four cartridges per case. For use with approved insulation boards, gypsum, concrete, lightweight insulation concrete, min. 5/8” thick treated plywood, cementitious wood fiber, approved base sheets, and approved existing smooth-surfaced asphalt.	Applied in 1/2” to 3/4” wide beads spaced min. 12” o.c.
JM Roofing System Urethane Adhesive	JM RSUA	A two-part, cold-applied polyurethane adhesive. Available in four cartridges per case, 5 gal. boxes, 15 gal. drums, or 50 gal. drums. For use with approved insulation boards, gypsum, concrete, lightweight insulation concrete, min. 5/8” thick treated plywood, cementitious wood fiber, approved or approved smooth or granulated BUR, APP, or SBS.	Applied in 1/2” to 3/4” wide beads spaced min. 12” o.c.

Note(s): 1- Bead width is at the time of application. Beads shall expand as noted in manufacturer’s published instructions.
2- Maximum distance from edge adhesive bead to edge of insulation boards shall not exceed one-half bead-to-bead spacing.

Vapor Barrier Components and Combinations for Concrete Decks – A Systems:

Product	Shorthand	Description
JM Vapor Barrier SA	JM VB SA	Polyethylene-reinforced, self-adhering SBS vapor barrier
JM Vapor Barrier SAR	JM VB SAR	Fiber Glass-reinforced, polyethylene-surfaced, self-adhering SBS vapor barrier
JM SA Primer Low VOC	JM SA Primer LVOC	One-part, penetrating priming solution
JM DynaLastic 180 S		Polyester-reinforced SBS base or ply sheet
JM DynaLastic 250 S		Polyester-reinforced SBS base or ply sheet
JM DynaFast 180 S		Polyester-reinforced SBS base or ply sheet
JM DynaBase PR		Polyester-reinforced SBS base or ply sheet
JM DynaSet 1K		One-part, moisture-cure, elastomeric cold adhesive for JM SBS membranes

Designation	Surface Treatment		Vapor Barrier		Compatibility	Uplift Test
	Primer	Application	Product	Application	Insulation Adhesive	
VB1	-	-	DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR	DynaSet 1K; Ribbon-applied at 2gal/100ft^2 at 6” o.c.; laps sealed.	JM Two-Part UIA, JM OSFA	-465
VB2	JM SA Primer Low VOC	For porous surfaces, roller applied at 0.5-1.0gal/100ft^2.	JM Vapor Barrier SAR	Self-adhered	JM Two-Part UIA	-165
VB3	JM SA Primer	For porous surfaces, roller applied at 0.5-1.0gal/100ft^2.	JM Vapor Barrier SA	Self-adhered	JM Two-Part UIA	-285
VB4	JM SA Primer Low VOC	For porous surfaces, roller applied at 0.5-1.0gal/100ft^2.	JM Vapor Barrier SA	Self-adhered	JM Two-Part UIA	-195
VB5	JM SA Primer Low VOC	For porous surfaces, roller applied at 0.5-1.0gal/100ft^2.	JM Vapor Barrier SAR	Self-adhered	JM OSFA, JM RSUA	-270

Appendix B: EPDM Membrane Systems

Notes accompanying tabulated *EPDM Membrane Systems*:

1. Structural substrate deck shall be as follows, unless otherwise stated in the specific assembly tabulated row:
    - Concrete decks are minimum 2,500 psi structural concrete
    - Steel decks are minimum 22 ga. Grade 33, Type B (Wide Rib) secured to supports spaced maximum 6 ft. o.c., unless otherwise stated.
    - Wood decks are minimum 7/16" APA rated OSB or 15/32" APA rated Plywood secured to supports spaced maximum 24in o.c., unless otherwise stated.
2. For mechanically fastened components into existing structural substrate decks, fasteners to be used shall be tested in the existing deck for withdrawal resistance. A qualified design professional shall analyze the data for comparison to the minimum requirements for the jobsite. Testing and analysis shall be to the satisfaction of the code official.
3. For adhered components to existing structural substrate decks in a re-roof (tear-off) or recover applications, the existing deck or existing roof surface shall be examined for the following:
    - Capability to resist jobsite Design Pressure(s) on its own merit and to the satisfaction of the code official, and
    - Compatibility with the adhesive to be used.
4. Additional layers of insulation, tapered insulation, may be used under mechanically fastened insulation or mechanically fastened membranes. All insulation thicknesses are minimum thicknesses.
5. Adhered insulation boards shall be maximum 4ft x 4ft.
6. Preliminarily Secured indicates that insulation shall be affixed in place with minimum 5 fasteners per 4ft x 8ft board or 4 fasteners per 4ft x 4ft board.
7. Membrane lap seams shall be minimum 3in, unless otherwise stated. Lap seams shall be sealed at the jobsite according to manufacturer's installation instructions. Laps shall be installed perpendicular to steel deck ribs for row fastened systems.
    - For standard membrane, Seam Tape Plus shall be sealed to membrane area that has been primed with EPDM Primer or EPDM Primer (Low VOC).
    - For FIT designated membrane, FIT shall be sealed to membrane area that has been primed with EPDM Primer or EPDM Primer (Low VOC).
8. FIT designated membrane shall be considered equivalent to standard membrane and can used wherever standard membrane is named.
9. Uplift Test pressures stated herein are the result of testing and reflect the ultimate passing pressure. Safety Factor(s) have not been included. Refer to local code(s), local Authority Having Jurisdiction, and design professional for jobsite Design Pressure(s) and applicable Safety Factor(s). Qualification of Uplift Test pressure for jobsite Design Pressure(s) shall be to the satisfaction of the code official.
10. For assemblies with mechanically fastened components or partially adhered insulation layers, the listed assembly shall meet or exceed at least the Zone 1 wind uplift load requirement to the satisfaction of the code official. For elevated pressure zones, rational analysis performed by a qualified design professional is permitted. Commonly used methods include ANSI/SPRI WD1, FM Loss Prevention Data Sheet 1-29, Florida Building Code Roofing Application Standard RAS 117, and Florida Building Code Roofing Application Standard RAS 137.
11. For assemblies with all components fully adhered in place, no rational analysis is permitted.
12. Fire Classifications included in this report reflect "listed" assemblies by an "approved" agency at the time of the PRI Evaluation Report Issue Date and in accordance with code:
    - 2018, 2015, 2012, and 2009 *IBC* Section 1505
    - 2018, 2015, 2012, and 2009 *IRC* Section R902

Concrete Decks[1,2,3] – A Systems – Adhered Anchor or Base Insulation, Adhered Top Insulation, Adhered Roof Cover

System	Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
		Insulation	Adhesive	Insulation	Adhesive	Membrane	Adhesive		
CA1	(Optional) VB1	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	0.25" Invinsa	adhered with JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM MA (WB)	60 psf	Not Classified
CA2	(Optional) VB1	min. 1" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM OSFA	0.5" ProtectoR HD	adhered with JM RSUA	min. 45 mil JM EPDM NR	JM EPDM WBMA	120 psf	Class A max. 1/2:12
CA3	(Optional) VB1	min. 1" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM OSFA	0.5" ProtectoR HD	adhered with JM RSUA	min. 45 mil JM EPDM R	JM EPDM WBMA	120 psf	Class A max. 1:12
CA4	VB2	min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	-	-	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA, JM EPDM WBMA (both surfaces), or JM ASBA	165 psf	Class A max. 1/2:12
CA5	VB2	min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	-	-	min. 45 mil JM EPDM NR	JM MA (LVOC)	165 psf	Class A max. 1/2:12
CA6	VB2	min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	-	-	min. 45 mil JM EPDM R	JM MA (LVOC)	165 psf	Class A max. 1/4:12
CA7	(Optional) VB1	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	-	-	min. 45 mil JM EPDM NR or JM EPDM R	JM MA (WB)	195 psf	Not Classified
CA8	VB4	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	0.5" ProtectoR HD, or SeparatoR CGF	adhered with JM Two Part UIA	min. 45 mil JM EPDM NR	JM ASBA, or JM EPDM WBMA	195 psf	Class A max. 1/2:12
CA9	VB4	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	0.5" ProtectoR HD, or SeparatoR CGF	adhered with JM Two Part UIA	min. 45 mil JM EPDM R	JM ASBA, or JM EPDM WBMA	195 psf	Class A max. 1:12
CA10	VB4	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	min. 1" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA, JM EPDM WBMA (both surfaces), or JM ASBA	195 psf	Class A max. 1/2:12
CA11	VB4	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	0.25" SECUROCK Gypsum-Fiber	adhered with JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA, JM EPDM WBMA, JM LVOC MA, JM MA (WB), JM MA (SB), or JM MA (LVOC)	195 psf	Not Classified

System	Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
		Insulation	Adhesive	Insulation	Adhesive	Membrane	Adhesive		
CA12	VB4	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	0.25" DEXcell FA	adhered with JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM ASBA	195 psf	Not Classified
CA13	VB4	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	0.25" DensDeck Prime	adhered with JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA, or JM EPDM WBMA	195 psf	Class A unlimited
CA14	(Optional) VB1	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	-	-	min. 45 mil JM EPDM NR	JM MA (LVOC)	255 psf	Class A max. 1/2:12
CA15	(Optional) VB1	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	-	-	min. 45 mil JM EPDM R	JM MA (LVOC)	255 psf	Class A max. 1/4:12
CA16	(Optional) VB1	min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	0.25" DensDeck Prime	adhered with JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	255 psf	Class A unlimited
CA17	-	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF Vapor Barrier over insulation: VB5	adhered with JM OSFA	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, ENRGY 3 C1 CGF	adhered with JM OSFA	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA, JM EPDM WBMA (both surfaces), or JM ASBA	270 psf	Class A max. 1/2:12
CA18	VB3	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	0.5" ProtectoR HD, or SeparatoR CGF	adhered with JM Two Part UIA	min. 45 mil JM EPDM NR	JM ASBA, or JM EPDM WBMA	285 psf	Class A max. 1/2:12
CA19	VB3	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	0.5" ProtectoR HD, or SeparatoR CGF	adhered with JM Two Part UIA	min. 45 mil JM EPDM R	JM ASBA, or JM EPDM WBMA	285 psf	Class A max. 1:12
CA20	VB3	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	min. 1" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA, JM EPDM WBMA (both surfaces), or JM ASBA	285 psf	Class A max. 1/2:12
CA21	VB3	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	0.25" SECUROCK Gypsum-Fiber	adhered with JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA, JM EPDM WBMA, JM LVOC MA, JM MA (WB), JM MA (SB), or JM MA (LVOC)	285 psf	Not Classified
CA22	VB3	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	0.25" DEXcell FA	adhered with JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM ASBA	285 psf	Not Classified

System	Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
		Insulation	Adhesive	Insulation	Adhesive	Membrane	Adhesive		
CA23	VB3	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	0.25" DensDeck Prime	adhered with JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM EPDM WBMA	285 psf	Class A unlimited
CA24	(Optional) VB1	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM OSFA	min. 1" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM OSFA	min. 45 mil JM EPDM NR or JM EPDM R	JM ASBA	285 psf	Class A max. 1/2:12
CA25	(Optional) VB1	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	-	-	min. 45 mil JM EPDM NR or JM EPDM R	JM EPDM WBMA	330 psf	Class A max. 1/2:12
CA26	(Optional) VB1	min. 1" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM OSFA	0.5" SeparatoR CGF	adhered with JM RSUA	min. 45 mil JM EPDM NR	JM EPDM WBMA	345 psf	Class A max. 1/2:12
CA27	(Optional) VB1	min. 1" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM OSFA	0.5" SeparatoR CGF	adhered with JM RSUA	min. 45 mil JM EPDM R	JM EPDM WBMA	345 psf	Class A max. 1:12
CA28	(Optional) VB1	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	0.25" Invinsa	adhered with JM OSFA	min. 45 mil JM EPDM NR or JM EPDM R	JM MA (LVOC)	345 psf	Class A max. 1/2:12
CA29	(Optional) VB1	-	-	0.25" SECUROCK Gypsum-Fiber	adhered with JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM EPDM WBMA	360 psf	Not Classified
CA30	(Optional) VB1	min. 1" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM OSFA	0.25" DensDeck Prime	adhered with JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM EPDM WBMA	360 psf	Class A unlimited
CA31	(Optional) VB1	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	0.25" Invinsa	adhered with JM OSFA	min. 45 mil JM EPDM NR or JM EPDM R	JM MA (WB)	375 psf	Not Classified
CA32	(Optional) VB1	-	-	0.25" Invinsa	adhered with JM OSFA	min. 45 mil JM EPDM NR	JM EPDM WBMA	375 psf	Class A max. 1/2:12
CA33	(Optional) VB1	-	-	0.25" Invinsa	adhered with JM OSFA	min. 45 mil JM EPDM R	JM EPDM WBMA	375 psf	Class A max. 1:12
CA34	(Optional) VB1	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM OSFA	0.25" DEXcell FA	adhered with JM OSFA	min. 45 mil JM EPDM NR or JM EPDM R	JM ASBA	390 psf	Not Classified
CA35	(Optional) VB1	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM OSFA	0.5" ProtectoR HD, or SeparatoR CGF	adhered with JM RSUA	min. 45 mil JM EPDM NR	JM ASBA	420 psf	Class A max. 1/2:12 Class B max. 2:12

System	Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
		Insulation	Adhesive	Insulation	Adhesive	Membrane	Adhesive		
CA36	(Optional) VB1	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM OSFA	0.5" ProtectoR HD, or SeparatoR CGF	adhered with JM RSUA	min. 45 mil JM EPDM R	JM ASBA	420 psf	Class A max. 1:12 Class B max. 2:12
CA37	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	-	-	min. 45 mil JM EPDM NR or JM EPDM R	JM EPDM WBMA (both surfaces)	480 psf	Class A max. $^1/_2$:12
CA38	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM Two Part UIA	-	-	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	630 psf	Class A max. $^1/_2$:12
CA39	-	-	-	0.25" Invinsa	adhered with JM OSFA	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	930 psf	Class A max. $^1/_2$:12
CA40	-	-	-	0.25" Invinsa	adhered with JM OSFA	min. 45 mil JM EPDM NR	JM LVOC MA, JM MBA	930 psf	Class A max. $^1/_2$:12
CA41	-	-	-	0.25" Invinsa	adhered with JM OSFA	min. 45 mil JM EPDM R	JM LVOC MA, JM MBA	930 psf	Class A max. 1:12
CA42	-	-	-	0.25" Invinsa	adhered with JM OSFA	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA	930 psf	Not Classified
CA43	-	-	-	0.25" SECUROCK Gypsum-Fiber	adhered with JM OSFA	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA, JM EPDM WBMA, JM LVOC MA, JM MA (WB), JM MA (SB), or JM MA (LVOC)	990 psf	Not Classified

Concrete Decks[1,2,3] – B Systems – Mechanically Attached Anchor or Base Insulation, Adhered Top Insulation, Adhered Roof Cover

System	Anchor Layer		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Adhesive	Membrane	Adhesive		
CB1	0.5" DensDeck Prime	fastened with AP #14, or CDF thru UFMP (Square) at 1:4.0 ft²	JM VB SAR substrate primed JM SA Primer LVOC	-	-	1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	JM OSFA	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	90 psf	Not Classified
CB2				1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:2.67 ft²	0.25" DensDeck Prime	JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	90 psf	Class A unlimited
CB3	0.5" DEXcell FA	Fastened with UF #12, or CDF thru UFMP (Square) at 1:4.0 ft²	JM VB SAR substrate primed JM SA Primer LVOC	-	-	1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	JM Two Part UIA (at 6" o.c.)	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	90 psf	Not Classified
CB4	0.5" DEXcell FA	fastened with DF DF-#14-PH3, thru DF PLT-R-3, or DF PLT-H-2-7/8 at 1:4.0 ft²	JM VB SAR substrate primed JM SA Primer LVOC	-	-	1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	JM Two Part UIA (at 6" o.c.)	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	90 psf	Not Classified
CB5	-	-	-	2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.6 ft²	0.5" ProtectoR HD	JM RSUA (at 6" o.c.)	min. 45 mil JM EPDM NR	JM LVOC MA	165 psf	Class A max. 1/2:12

System	Anchor Layer		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Adhesive	Membrane	Adhesive		
CB6	-	-	-	2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.6 ft^2	0.5" ProtectoR HD	JM RSUA (at 6" o.c.)	min. 45 mil JM EPDM R	JM LVOC MA	165 psf	Class A max. 1:12
CB7	-	-	-	2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.0 ft^2	1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF or 0.5" ProtectoR HD	JM RSUA, or JM Two Part UIA (at 4" o.c.)	min. 45 mil JM EPDM NR	JM EPDM WBMA	165 psf	Class A max. $^1/_2$:12
CB8	-	-	-	2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.0 ft^2	1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	JM RSUA, or JM Two Part UIA (at 4" o.c.)	min. 45 mil JM EPDM R	JM EPDM WBMA	165 psf	Class A max. $^1/_2$:12
CB9	-	-	-	2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.0 ft^2	0.5" ProtectoR HD	JM RSUA, or JM Two Part UIA (at 4" o.c.)	min. 45 mil JM EPDM R	JM EPDM WBMA	165 psf	Class A max. 1:12

System	Anchor Layer		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Adhesive	Membrane	Adhesive		
CB10	-	-	-	2” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.0 ft²	1.5” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF or 0.5” ProtectoR HD	JM OSFA, JM RSUA, or JM Two Part UIA (at 4” o.c.)	min. 45 mil JM EPDM NR	JM ASBA	165 psf	Class A max. 1/2:12 Class B max. 2:12
CB11	-	-	-	2” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.0 ft²	0.5” ProtectoR HD	JM OSFA, JM RSUA, or JM Two Part UIA (at 4” o.c.)	min. 45 mil JM EPDM R	JM ASBA	165 psf	Class A max. 1:12 Class B max. 2:12
CB12	-	-	-	2” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.0 ft²	1.5” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	JM OSFA, JM RSUA, or JM Two Part UIA (at 4” o.c.)	min. 45 mil JM EPDM R	JM ASBA	165 psf	Class A max. 1/2:12 Class B max. 1:12
CB13	-	-	-	2” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.0 ft²	0.5” ProtectoR HD	JM RSUA (at 4” o.c.)	min. 45 mil JM EPDM NR	JM LVOC MA	240 psf	Class A max. 1/2:12

System	Anchor Layer		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Adhesive	Membrane	Adhesive		
CB14	-	-	-	2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.0 ft^2	0.5" ProtectoR HD	JM RSUA (at 4" o.c.)	min. 45 mil JM EPDM R	JM LVOC MA	240 psf	Class A max. 1:12
CB15	-	-	-	2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.0 ft^2	1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF or 0.5" ProtectoR HD	JM OSFA, JM RSUA, or JM Two Part UIA (at 4" o.c.)	min. 45 mil JM EPDM NR	JM ASBA	255 psf	Class A max. $^1/_2$:12 Class B max. 2:12
CB16	-	-	-	2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.0 ft^2	0.5" ProtectoR HD	JM OSFA, JM RSUA, or JM Two Part UIA (at 4" o.c.)	min. 45 mil JM EPDM R	JM ASBA	255 psf	Class A max. 1:12 Class B max. 2:12
CB17	-	-	-	2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.0 ft^2	1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	JM OSFA, JM RSUA, or JM Two Part UIA (at 4" o.c.)	min. 45 mil JM EPDM R	JM ASBA	255 psf	Class A max. $^1/_2$:12 Class B max. 1:12

Concrete Decks[1,2,3] – C Systems – Mechanically Attached Top Insulation, Adhered Roof Cover

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
CC1	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD	Fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:4.0 ft²	min. 60 mil JM EPDM NR	JM LVOC MA	75 psf	Class A max. 1/2:12
CC2	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD	Fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:4.0 ft²	min. 60 mil JM EPDM R	JM LVOC MA	75 psf	Class A max. 1:12
CC3	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.25" Invinsa, or Invinsa FR	Fastened with AP #14, TF #14 HD, or CDF thru UFMP (Square) at 1:4.0 ft²	min. 60 mil JM EPDM NR	JM LVOC MA	75 psf	Class A max. 1/2:12
CC4	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.25" Invinsa, or Invinsa FR	Fastened with AP #14, TF #14 HD, or CDF thru UFMP (Square) at 1:4.0 ft²	min. 60 mil JM EPDM R	JM LVOC MA	75 psf	Class A max. 1:12

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
CC5	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" SeparatoR FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round), or UFMP (Square), at 1:4.0 ft²	min. 60 mil JM EPDM NR	JM LVOC MA	75 psf	Class A max. 1/2:12
CC6	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" SeparatoR FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round), or UFMP (Square), at 1:4.0 ft²	min. 60 mil JM EPDM R	JM LVOC MA	75 psf	Class A max. 1:12
CC7	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" SECUROCK Gypsum-Fiber	Fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.0 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM MA (WB)	75 psf	Not Classified
CC8	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:2.67 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	75 psf	Class A max. 1/2:12

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
CC9	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:2.67 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	90 psf	Class A max. 1/2:12
CC10	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 1" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:2.1 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	90 psf	Class A max. 1/2:12
CC11	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" SECUROCK Gypsum-Fiber	Fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.0 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM MA (SB)	90 psf	Not Classified
CC12	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with AP #14, or CDF thru UFMP (Square) at 1:2.9 ft²	min. 45 mil JM EPDM NR	JM LVOC MA	90 psf	Class A max. 1/2:12
CC13	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with AP #14, or CDF thru UFMP (Square) at 1:2.9 ft²	min. 45 mil JM EPDM R	JM LVOC MA	90 psf	Class A max. 1:12

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
CC14	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with AP #14, or CDF thru UFMP (Square) at 1:4.0 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM ASBA	90 psf	Class A max. 1/2:12
CC15	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with AP #14, or CDF thru UFMP (Square) at 1:1.78 ft²	min. 45 mil JM EPDM NR	JM LVOC MA	105 psf	Class A max. 1/2:12
CC16	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with AP #14, or CDF thru UFMP (Square) at 1:1.78 ft²	min. 45 mil JM EPDM R	JM LVOC MA	105 psf	Class A max. 1:12
CC17	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 2" ENRGY 3 CGF	Fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.6 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM EPDM WBMA	120 psf	Class A max. 1/2:12
CC18	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with AP #14, or CDF thru UFMP (Square) at 1:1.33 ft²	min. 45 mil JM EPDM NR	JM LVOC MA	135 psf	Class A max. 1/2:12

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
CC19	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with AP #14, or CDF thru UFMP (Square) at 1:1.33 ft²	min. 45 mil JM EPDM R	JM LVOC MA	135 psf	Class A max. 1:12
CC20	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.6 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	150 psf	Class A max. 1/2:12
CC21	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round) at 1:1.0 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	165 psf	Class A max. 1/2:12
CC22	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with AP #14, or CDF thru UFMP (Square) at 1:1.0 ft²	min. 45 mil JM EPDM NR	JM LVOC MA	165 psf	Class A max. 1/2:12
CC23	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with AP #14, or CDF thru UFMP (Square) at 1:1.0 ft²	min. 45 mil JM EPDM R	JM LVOC MA	165 psf	Class A max. 1:12

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
CC24	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with AP #14, or CDF thru UFMP (Square) at 1:1.0 ft²	min. 45 mil JM EPDM NR	JM LVOC MA	210 psf	Class A max. 1/2:12
CC25	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with AP #14, or CDF thru UFMP (Square) at 1:1.0 ft²	min. 45 mil JM EPDM R	JM LVOC MA	210 psf	Class A max. 1:12
CC26	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 2" ENRGY 3 CGF	Fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round), at 1:1.0 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM EPDM WBMA	210 psf	Class A max. 1/2:12
CC27	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with AP #14, TF #14 HD, or CDF thru UFMP (Round), at 1:1.0 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	240 psf	Class A max. 1/2:12

Steel Decks[1,2,3] – A Systems – Adhered Anchor or Base Insulation, Adhered Top Insulation, Adhered Roof Cover

System	Anchor Layer		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Adhesive	Insulation	Adhesive	Membrane	Adhesive		
SA1	-	-	(Optional) JM VB SAR	min. 1.5” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	adhered with JM RSUA	-	-	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA, JM LVOC MA, JM EPDM WBMA or JM ASBA	90 psf	Class A max. 1/2:12

Steel Decks[1,2,3] – B Systems – Mechanically Attached Anchor or Base Insulation, Adhered Top Insulation, Adhered Roof Cover

System	Anchor Layer		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Adhesive	Membrane	Adhesive		
SB1	0.5" DensDeck Prime	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square), or TF MIP at 1:4.0 ft^2	JM VB SAR substrate primed JM SA Primer LVOC	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	JM OSFA	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	90 psf	Not Classified
SB2	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:2.67 ft^2	0.25" DensDeck Prime	JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	90 psf	Class A unlimited
SB3	0.5" DEXcell FA	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square), or TF MIP at 1:4.0 ft^2	JM VB SAR substrate primed JM SA Primer LVOC	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	JM Two Part UIA (at 6" o.c.)	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	90 psf	Not Classified
SB4	0.5" DEXcell FA	fastened with DF DF-#12-PH3, DF DF-#14-PH3, or DF DF-#15-PH3 thru DF PLT-R-3, or DF PLT-H-2-7/8 at 1:4.0 ft^2	JM VB SAR substrate primed JM SA Primer LVOC	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	JM Two Part UIA (at 6" o.c.)	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	90 psf	Not Classified

System	Anchor Layer		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Adhesive	Membrane	Adhesive		
SB5	-	-	-	min. 2” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.6 ft^2	0.5” ProtectoR HD	JM RSUA (at 6” o.c.)	min. 45 mil JM EPDM NR	JM LVOC MA	165 psf	Class A max. $^1/_2$:12
SB6	-	-	-	min. 2” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.6 ft^2	0.5” ProtectoR HD	JM RSUA (at 6” o.c.)	min. 45 mil JM EPDM R	JM LVOC MA	165 psf	Class A max. 1:12
SB7	-	-	-	min. 2” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft^2	min. 1.5” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF or 0.5” ProtectoR HD	JM RSUA, or JM Two Part UIA (at 4” o.c.)	min. 45 mil JM EPDM NR	JM EPDM WBMA	165 psf	Class A max. $^1/_2$:12
SB8	-	-	-	min. 2” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft^2	min. 1.5” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	JM RSUA, or JM Two Part UIA (at 4” o.c.)	min. 45 mil JM EPDM R	JM EPDM WBMA	165 psf	Class A max. $^1/_2$:12

System	Anchor Layer		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Adhesive	Membrane	Adhesive		
SB9	-	-	-	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft²	0.5" ProtectoR HD	JM RSUA, or JM Two Part UIA (at 4" o.c.)	min. 45 mil JM EPDM R	JM EPDM WBMA	165 psf	Class A max. 1:12
SB10	-	-	-	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft²	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF or 0.5" ProtectoR HD	JM OSFA, JM RSUA, or JM Two Part UIA (at 4" o.c.)	min. 45 mil JM EPDM NR	JM ASBA	165 psf	Class A max. 1/2:12 Class B max. 2:12
SB11	-	-	-	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft²	0.5" ProtectoR HD	JM OSFA, JM RSUA, or JM Two Part UIA (at 4" o.c.)	min. 45 mil JM EPDM R	JM ASBA	165 psf	Class A max. 1:12 Class B max. 2:12
SB12	-	-	-	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft²	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	JM OSFA, JM RSUA, or JM Two Part UIA (at 4" o.c.)	min. 45 mil JM EPDM R	JM ASBA	165 psf	Class A max. 1/2:12 Class B max. 1:12

System	Anchor Layer		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Adhesive	Membrane	Adhesive		
SB13	-	-	-	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft²	0.5" ProtectoR HD	JM RSUA (at 4" o.c.)	min. 45 mil JM EPDM NR	JM LVOC MA	240 psf	Class A max. 1/2:12
SB14	-	-	-	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft²	0.5" ProtectoR HD	JM RSUA (at 4" o.c.)	min. 45 mil JM EPDM R	JM LVOC MA	240 psf	Class A max. 1:12
SB15 (80ksi)	-	-	-	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft²	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF or 0.5" ProtectoR HD	JM OSFA, JM RSUA, or JM Two Part UIA (at 4" o.c.)	min. 45 mil JM EPDM NR	JM ASBA	255 psf	Class A max. 1/2:12 Class B max. 2:12
SB16 (80ksi)	-	-	-	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft²	0.5" ProtectoR HD	JM OSFA, JM RSUA, or JM Two Part UIA (at 4" o.c.)	min. 45 mil JM EPDM R	JM ASBA	255 psf	Class A max. 1:12 Class B max. 2:12

System	Anchor Layer		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Adhesive	Membrane	Adhesive		
SB17 (80ksi)	-	-	-	min. 2” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft^2	min. 1.5” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	JM OSFA, JM RSUA, or JM Two Part UIA (at 4” o.c.)	min. 45 mil JM EPDM R	JM ASBA	255 psf	Class A max. $^1/_2$:12 Class B max. 1:12

Steel Decks[1,2,3] – C Systems – Mechanically Attached Top Insulation, Adhered Roof Cover

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
SC1	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 0.5" STRUCTODEK	Fastened with UF #12 thru UFPP at 1:2.0 ft^2	min. 45 mil JM EPDM NR or JM EPDM R	JM MA (WB)	60 psf	Not Classified
SC2	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 0.5" STRUCTODEK	Fastened with UF #12 thru UFPP at 1:2.0 ft^2	min. 45 mil JM EPDM NR or JM EPDM R	JM MA (LVOC)	60 psf	Not Classified
SC3	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:4.0 ft^2	min. 60 mil JM EPDM NR	JM LVOC MA	75 psf	Class A max. $^1/_2$:12
SC4	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:4.0 ft^2	min. 60 mil JM EPDM R	JM LVOC MA	75 psf	Class A max. 1:12

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
SC5	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.25" Invinsa, or Invinsa FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:4.0 ft²	min. 60 mil JM EPDM NR	JM LVOC MA	75 psf	Class A max. 1/2:12
SC6	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.25" Invinsa, or Invinsa FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:4.0 ft²	min. 60 mil JM EPDM R	JM LVOC MA	75 psf	Class A max. 1:12
SC7	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" SeparatoR FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:4.0 ft²	min. 60 mil JM EPDM NR	JM LVOC MA	75 psf	Class A max. 1/2:12
SC8	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" SeparatoR FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:4.0 ft²	min. 60 mil JM EPDM R	JM LVOC MA	75 psf	Class A max. 1:12

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
SC9	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" SECUROCK Gypsum-Fiber	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft^2	min. 45 mil JM EPDM NR or JM EPDM R	JM MA (WB)	75 psf	Not Classified
SC10	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:2.67 ft^2	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	75 psf	Class A max. $^1/_2$:12
SC11	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:2.67 ft^2	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	90 psf	Class A max. $^1/_2$:12
SC12	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 1" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:2.1 ft^2	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	90 psf	Class A max. $^1/_2$:12

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
SC13	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" SECUROCK Gypsum-Fiber	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM MA (SB)	90 psf	Not Classified
SC14	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with UF #12 thru UFPP at 1:2.0 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM EPDM WBMA (100 ft²/gal)	90 psf	Class A max. 1/2:12
SC15	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:2.9 ft²	min. 45 mil JM EPDM NR	JM LVOC MA	90 psf	Class A max. 1/2:12
SC16	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:2.9 ft²	min. 45 mil JM EPDM R	JM LVOC MA	90 psf	Class A max. 1:12

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
SC17	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:4.0 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM ASBA	90 psf	Class A max. 1/2:12
SC18	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with UF #12 thru UFPP at 1:2.0 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM MA (WB)	90 psf	Not Classified
SC19	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:1.78 ft²	min. 45 mil JM EPDM NR	JM LVOC MA	105 psf	Class A max. 1/2:12
SC20	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:1.78 ft²	min. 45 mil JM EPDM R	JM LVOC MA	105 psf	Class A max. 1:12

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
SC21	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 2" ENRGY 3 CGF	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.6 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM EPDM WBMA	120 psf	Class A max. 1/2:12
SC22	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:1.33 ft²	min. 45 mil JM EPDM NR	JM LVOC MA	135 psf	Class A max. 1/2:12
SC23	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:1.33 ft²	min. 45 mil JM EPDM R	JM LVOC MA	135 psf	Class A max. 1:12
SC24	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.6 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	150 psf	Class A max. 1/2:12

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
SC25	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	165 psf	Class A max. 1/2:12
SC26	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:1.0 ft²	min. 45 mil JM EPDM NR	JM LVOC MA	165 psf	Class A max. 1/2:12
SC27	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:1.0 ft²	min. 45 mil JM EPDM R	JM LVOC MA	165 psf	Class A max. 1:12
SC28	-	-	-	(Optional) min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with UF #12, HL #15, DF DF-#12-PH3, DF DF-#14-PH3, DF DF-#15-PH3, TF #12 DP, or TF #15 EHD thru DF PLT-R-3 at 1:1.33 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	180 psf	Class A max. 1/2:12

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
SC29 (80ksi)	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:1.0 ft²	min. 45 mil JM EPDM NR	JM LVOC MA	210 psf	Class A max. 1/2:12
SC30 (80ksi)	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" ProtectoR HD, or SeparatoR FR	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Square) at 1:1.0 ft²	min. 45 mil JM EPDM R	JM LVOC MA	210 psf	Class A max. 1:12
SC31 (80ksi)	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 2" ENRGY 3 CGF	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM EPDM WBMA	210 psf	Class A max. 1/2:12
SC32 (80ksi)	-	-	-	(Optional) min. 0.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Fastened with UF #12, HL #15, TF #12 DP, or TF #15 EHD thru UFMP (Round) at 1:1.0 ft²	min. 45 mil JM EPDM NR or JM EPDM R	JM LVOC MA	240 psf	Class A max. 1/2:12

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
SC33 (80ksi)	-	-	-	min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5" SECUROCK Gypsum-Fiber	Fastened with UF #12 thru UF AT FB, or TF MIP at 1:1.0 ft^2	min. 45 mil JM EPDM NR or JM EPDM R	JM MA (WB), or JM EPDM WBMA	300 psf	Not Classified

Steel Decks[1,2,3] – D Systems – Mechanically Attached Roof Cover

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5,6]		Top Insulation Layer[4,5,6]		Roof Cover[7,8]		Uplift[9,10,11]	Fire[12]
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Attachment	Test	Classification
SD1	-	-	-	(Optional) min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Preliminarily Secured or secured with top layer	(Optional) Invinsa, ProtectoR HD, SeparatoR, DecksDeck Prime, DEXcell Glass, or SECUROCK Glass	Preliminarily Secured	min. 45 mil JM EPDM NR	Membrane adhered to EPDM 10in RPS spaced 72in o.c. Each EPDM 10in RPS is attached with Batten Strip and HL #15 at 12in o.c.	60 psf	Not Classified
SD2	-	-	-	(Optional) min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Preliminarily Secured or secured with top layer	(Optional) Invinsa, ProtectoR HD, SeparatoR, DecksDeck Prime, DEXcell Glass, or SECUROCK Glass	Preliminarily Secured	min. 60 mil JM EPDM NR	Attached in-field with Batten Strip and HL #15 at 12in o.c.; Batten Strips spaced 114in o.c. and covered with Sealing Strip	75 psf	Not Classified
SD3	-	-	-	(Optional) min. 2" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Preliminarily Secured or secured with top layer	(Optional) Invinsa, ProtectoR HD, SeparatoR, DecksDeck Prime, DEXcell Glass, or SECUROCK Glass	Preliminarily Secured	min. 45 mil JM EPDM NR	Attached in-field with Batten Strip and UF #12 at 6in o.c.; Batten Strips spaced 72in o.c. and covered with Sealing Strip	90 psf	Not Classified
SD4	-	-	-	(Optional) min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Preliminarily Secured or secured with top layer	(Optional) Invinsa, ProtectoR HD, SeparatoR, DecksDeck Prime, DEXcell Glass, or SECUROCK Glass	Preliminarily Secured	min. 45 mil JM EPDM R	Attached in-lap with APBP and HL #15 at 6" o.c.; 6in wide laps spaced 114-inch o.c. and seamed with Seam Tape Plus	90 psf	Class A max. $^{1}/_{2}$:12

System	Thermal Barrier		Vapor Barrier	Base Insulation Layer[4,5,6]		Top Insulation Layer[4,5,6]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Attachment		
SD5	-	-	-	(Optional) min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Preliminarily Secured or secured with top layer	(Optional) Invinsa, ProtectoR HD, SeparatoR, DecksDeck Prime, DEXcell Glass, or SECUROCK Glass	Preliminarily Secured	min. 45 mil JM EPDM R	Attached in-lap with Batten Strip and HL #15 at 6in o.c.; 6in wide laps spaced 114in o.c. and seamed with Seam Tape Plus	105 psf	Class A max. $^{1}/_{2}$:12
SD6	-	-	-	(Optional) min. 1.5" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Preliminarily Secured or secured with top layer	(Optional) Invinsa, ProtectoR HD, SeparatoR, DecksDeck Prime, DEXcell Glass, or SECUROCK Glass	Preliminarily Secured	min. 45 mil JM EPDM R FIT	Attached in-lap with Batten Strip and HL #15 at 6in o.c.; 6in wide laps spaced 116in o.c. and seamed via FIT	120 psf	Class A max. $^{1}/_{2}$:12

Wood Decks[1,2,3] – A Systems – Adhered Anchor or Base Insulation, Adhered Top Insulation, Adhered Roof Cover

System	Anchor Layer		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Adhesive	Insulation	Adhesive	Membrane	Adhesive		
WA1 15/32 Ply	-	-	-	-	-	0.5” ProtectoR HD	JM RSUA, or JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA, JM LVOC MA, JM EPDM WBMA or JM ASBA	90 psf	Class A max. $^{1}/_{2}$:12

Wood Decks[1,2,3] – C Systems – Mechanically Attached Top Insulation, Adhered Roof Cover

System	Anchor Layer		Vapor Barrier	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
	Thermal Barrier	Attachment		Insulation	Attachment	Insulation	Attachment	Membrane	Adhesive		
WC1 7/16 OSB	-	-	-	(Optional) min. 1.5” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5” ProtectoR HD	Fastened with AP #14, thru UFMP (Square) at 1:2.67 ft^2	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA, JM LVOC MA, JM EPDM WBMA or JM ASBA	60 psf	Class A max. $^1/_2$:12
WC2 15/32 Ply	-	-	-	(Optional) min. 1.5” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5” ProtectoR HD	Fastened with UF #12, HL #15, DF DF-#12-PH3, DF DF-#14-PH3, DF DF-#15-PH3, TF #12 DP, or TF #15 EHD thru DF PLT-R-3 at 1:2.90 ft^2	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA, JM LVOC MA, JM EPDM WBMA or JM ASBA	60 psf	Class A max. $^1/_2$:12
WC3 15/32 Ply	-	-	-	(Optional) min. 1.5” ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	loose laid	0.5” ProtectoR HD	Fastened with AP #14, thru UFMP (Square) at 1:2.13 ft^2	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA, JM LVOC MA, JM EPDM WBMA or JM ASBA	90 psf	Class A max. $^1/_2$:12

Recover Decks[1,2,3] – A Systems – Adhered Anchor or Base Insulation, Adhered Top Insulation, Adhered Roof Cover

System	Existing Roof/Substrate	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
		Insulation	Adhesive	Insulation	Adhesive	Membrane	Adhesive		
RA1	Granule surfaced Modified Bitumen Roofing or Built-Up Roofing over Steel, Wood, Cementitious Wood Fiber, or Gypsum Decks	(Optional) ENRGY 3	JM OSFA, JM RSUA, or JM Two Part UIA	ENRGY 3 CGF or SeparatoR CGF	JM OSFA, JM RSUA, or JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA, JM LVOC MA, JM EPDM WBMA or JM ASBA	90 psf	Class A max. $^1/_2$:12
RA2	Granule surfaced Modified Bitumen Roofing or Built-Up Roofing over Gypsum Decks	(Optional) ENRGY 3	JM OSFA, JM RSUA, or JM Two Part UIA	ProtectoR HD, DEXcell FA, DensDeck Prime, or SECUROCK GypF	JM OSFA, JM RSUA, or JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA, JM LVOC MA, JM EPDM WBMA or JM ASBA	90 psf	Class A max. $^1/_2$:12
RA3	Granule surfaced Modified Bitumen Roofing or Built-Up Roofing over Concrete or Steel Decks	(Optional) ENRGY 3	JM OSFA, JM RSUA, or JM Two Part UIA	ProtectoR HD	JM OSFA, JM RSUA, or JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM EPDM WBMA	120 psf	Class A max. $^1/_2$:12
RA4	Granule surfaced Modified Bitumen Roofing or Built-Up Roofing over Steel, Wood, or Cementitious Wood Fiber Decks	(Optional) ENRGY 3	JM OSFA, JM RSUA, or JM Two Part UIA	DEXcell FA, DensDeck Prime, or SECUROCK GypF	JM OSFA, JM RSUA, or JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA, JM LVOC MA, JM EPDM WBMA or JM ASBA	210 psf	Class A max. $^1/_2$:12
RA5	Granule surfaced Modified Bitumen Roofing or Built-Up Roofing over Concrete Decks	(Optional) ENRGY 3	JM OSFA, JM RSUA, or JM Two Part UIA	DEXcell FA	JM OSFA, JM RSUA, or JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM EPDM WBMA	330 psf	Class A max. $^1/_2$:12
RA6	Granule surfaced Modified Bitumen Roofing or Built-Up Roofing over Concrete Decks	(Optional) ENRGY 3	JM OSFA, JM RSUA, or JM Two Part UIA	ENRGY 3 CGF or SeparatoR CGF	JM OSFA, JM RSUA, or JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM EPDM WBMA	345 psf	Class A max. $^1/_2$:12
RA7	Granule surfaced Modified Bitumen Roofing or Built-Up Roofing over Concrete Decks	(Optional) ENRGY 3	JM OSFA, JM RSUA, or JM Two Part UIA	DensDeck Prime or SECUROCK GypF	JM OSFA, JM RSUA, or JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA, JM LVOC MA, JM EPDM WBMA or JM ASBA	360 psf	Class A max. $^1/_2$:12
RA8	Granule surfaced Modified Bitumen Roofing or Built-Up Roofing over Concrete Decks	(Optional) ENRGY 3	JM OSFA, JM RSUA, or JM Two Part UIA	DEXcell FA	JM OSFA, JM RSUA, or JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM ASBA	435 psf	Class A max. $^1/_2$:12
RA9	Granule surfaced Modified Bitumen Roofing or Built-Up Roofing over Concrete Decks	(Optional) ENRGY 3	JM OSFA, JM RSUA, or JM Two Part UIA	ENRGY 3 CGF, ProtectoR HD, or SeparatoR CGF	JM OSFA, JM RSUA, or JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM ASBA	420 psf	Class A max. $^1/_2$:12
RA10	Granule surfaced Modified Bitumen Roofing or Built-Up Roofing over Concrete Decks	(Optional) ENRGY 3	JM OSFA, JM RSUA, or JM Two Part UIA	DEXcell FA	JM OSFA, JM RSUA, or JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA or JM LVOC MA	435 psf	Class A max. $^1/_2$:12
RA11	Granule surfaced Modified Bitumen Roofing or Built-Up Roofing over Concrete Decks	(Optional) ENRGY 3	JM OSFA, JM RSUA, or JM Two Part UIA	ProtectoR HD	JM OSFA, JM RSUA, or JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA or JM LVOC MA	450 psf	Class A max. $^1/_2$:12

System	Existing Roof/Substrate	Base Insulation Layer[4,5]		Top Insulation Layer[4,5]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
		Insulation	Adhesive	Insulation	Adhesive	Membrane	Adhesive		
RA12	Granule surfaced Modified Bitumen Roofing or Built-Up Roofing over Concrete Decks	(Optional) ENRGY 3	JM OSFA, JM RSUA, or JM Two Part UIA	ENRGY 3 CGF or SeparatoR CGF	JM OSFA, JM RSUA, or JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA or JM LVOC MA	495 psf	Class A max. $^{1}/_{2}$:12
RA13	Granule surfaced Modified Bitumen Roofing or Built-Up Roofing over Concrete Decks	-	-	ENRGY 3 CGF or SeparatoR CGF	JM OSFA, JM RSUA, or JM Two Part UIA	min. 45 mil JM EPDM NR or JM EPDM R	JM MBA or JM LVOC MA	630 psf	Class A max. $^{1}/_{2}$:12

Recover Decks[1,2,3] – D Systems – Mechanically Attached Roof Cover

System	Existing Roof/Substrate	Base Insulation Layer[4,5]		Top Insulation Layer[4,5,6]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
		Insulation	Attachment	Insulation	Attachment	Membrane	Attachment		
RD1	Metal Roof Panels over min. 16ga steel purlins	min. 1.0" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Preliminarily Secured or secured with top layer	Add'l Base Layer or Invinsa, ProtectoR HD, SeparatoR, DecksDeck Prime, DEXcell Glass, or SECUROCK Glass	Preliminarily Secured	min. 45 mil JM EPDM R	Attached in-lap (to purlins) with Batten Strip and PF #12 at 12in o.c.; 6in wide laps spaced 114in o.c. and seamed with Seam Tape Plus	60 psf	Class A max. $^{1}/_{2}$:12
RD2	Metal Roof Panels over min. 16ga steel purlins	min. 1.0" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Preliminarily Secured or secured with top layer	Add'l Base Layer or Invinsa, ProtectoR HD, SeparatoR, DecksDeck Prime, DEXcell Glass, or SECUROCK Glass	Preliminarily Secured	min. 60 mil JM EPDM NR	Attached in-field (to purlins) with Batten Strip and PF #12 at 6in o.c.; Batten Strips spaced 72in o.c. and covered with Sealing Strip	75 psf	Class A max. $^{1}/_{2}$:12

System	Existing Roof/Substrate	Base Insulation Layer[4,5]		Top Insulation Layer[4,5,6]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
		Insulation	Attachment	Insulation	Attachment	Membrane	Attachment		
RD3	Metal Roof Panels over min. 16ga steel purlins	min. 1.0" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Preliminarily Secured or secured with top layer	Add'l Base Layer or Invinsa, ProtectoR HD, SeparatoR, DecksDeck Prime, DEXcell Glass, or SECUROCK Glass	Preliminarily Secured	min. 45 mil JM EPDM R	Attached in-lap (to purlins) with Batten Strip and PF #12 at 12in o.c.; 6in wide laps spaced 114in o.c. and seamed with Seam Tape Plus and Attached in-field (between laps) with Membrane adhered to EPDM 10in RPS spaced 114in o.c. Each EPDM 10in RPS is attached (to purlins) with Batten Strip and PF #12 at 12in o.c.	90 psf	Class A max. $^{1}/_{2}$:12
RD4	Metal Roof Panels over min. 16ga steel purlins	min. 1.0" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Preliminarily Secured or secured with top layer	Add'l Base Layer or Invinsa, ProtectoR HD, SeparatoR, DecksDeck Prime, DEXcell Glass, or SECUROCK Glass	Preliminarily Secured	min. 45 mil JM EPDM R	Attached in-lap (to purlins) with Batten Strip or HLP and PF #12 at 6in o.c.; 6in wide laps spaced 114in o.c. and seamed with Seam Tape Plus	90 psf	Class A max. $^{1}/_{2}$:12

System	Existing Roof/Substrate	Base Insulation Layer[4,5]		Top Insulation Layer[4,5,6]		Roof Cover[7,8]		Uplift[9,10,11] Test	Fire[12] Classification
		Insulation	Attachment	Insulation	Attachment	Membrane	Attachment		
RD5	Metal Roof Panels over min. 16ga steel purlins	min. 1.0" ENRGY 3, ENRGY 3 CGF, ENRGY 3 AGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	Preliminarily Secured or secured with top layer	Add'l Base Layer or Invinsa, ProtectoR HD, SeparatoR, DecksDeck Prime, DEXcell Glass, or SECUROCK Glass	Preliminarily Secured	min. 45 mil JM EPDM R	Attached in-field with Membrane adhered to EPDM 10in RPS spaced 114in o.c. Each EPDM 10in RPS is attached (to purlins) with HLP and PF #12 at 6in o.c.	105 psf	Class A max. 1/2:12