



NEMO|etc.

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ENGINEER

EVALUATE

TEST

CONSULT

P.E. EVALUATION REPORT (PEER)

Simon Roofing & Sheet Metal Corporation
d/b/a SR Products

1380 E. Highland Road
Macedonia, OH 44056
(330) 998-6500

PEER-SIM-004.A.R6

FL13454-R5 (NON-HVHZ)

Date of Issuance: 01/26/2010

Revision 6: 08/25/2023

SCOPE:

This P.E. Evaluation Report (henceforth 'PEER') is issued under **F.A.C. Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The product described herein has been evaluated for compliance with the **8th Edition (2023) Florida Building Code** [sections noted herein](#).

DESCRIPTION: Sion Single Ply Roof Systems (NON-HVHZ)

LABELING: Labeling shall be in accordance with the requirements of the Accredited Quality Assurance Agency noted herein.

CONTINUED COMPLIANCE: This PEER is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our PEERs by the named client constitutes agreement to notify NEMO ETC, LLC of any changes to the product(s), the Quality Assurance or the production facility location(s). NEMO ETC, LLC requires a complete review of its PEER relative to updated Code requirements with each Code Cycle.

ADVERTISEMENT: The Florida Product Approval Number (FL#) preceded by the words "NEMO P.E. Evaluated" may be displayed in advertising literature. If any portion of the PEER is displayed, then it shall be done in its entirety.

INSPECTION: Upon request, a copy of this entire PEER shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This PEER consists of pages 1 through 3, plus a 9-page Appendix

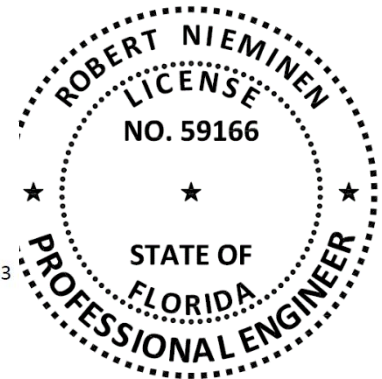
Prepared by:

Digitally signed by
Robert Nieminen
Date: 2023.08.25
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This item has been digitally signed and sealed by Robert Nieminen, P.E.

Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.

Robert Nieminen, Florida P.E. 59166, FBC ANE1983
NEMO ETC, LLC, Florida CA #32455



CERTIFICATION OF INDEPENDENCE:

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3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the PEERs are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
5. This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this PEER, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

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ROOFING SYSTEMS EVALUATION:
1. SCOPE:

Product Category: Roofing
Sub-Category: Single Ply Roof Systems
Product Approval Method: Method 1, Option D – Codified Material, Evaluation by Engineer
Compliance Statement: Sion Single Ply Roof Systems, as produced by SR Products have demonstrated compliance with the following sections of the **8th Edition (2023) Florida Building Code** through testing in accordance with the following Standards. Compliance is subject to the [Installation Requirements](#) and [Limitations of Use](#) set forth herein.

2. STANDARDS:

Section	Property	Standard	Year
1504.3.1	Wind resistance	FM 4474	2011
1504.6	Physical properties	ASTM G154	2016
1504.7	Impact resistance	FM 4470	2016
1507.12.2	Material standard	ASTM D4434	2015

3. REFERENCES:

Entity	Examination	Reference	Date
NEMO	NEMO Evaluation Report	NER-FMI-001	01/04/2023
NEMO	Traceability	FBC Cross-Listing	12/17/2020
UL LLC (QUA9625)	Traceability	UL ML File No. R19353	05/30/2012
UL LLC (QUA9625)	Quality Control	Service Confirmation (supplier)	01/10/2018
UL LLC (QUA9625)	Quality Control	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

This PEER covers **Sion Single Ply Roof Systems** installed in accordance with **SR Products** published installation instructions and the [Limitations of Use](#) herein.

TABLE 1: EVALUATED MEMBRANES

TYPE	PRODUCT		MATERIAL STANDARD			PLANT(S)
			REFERENCE	TYPE	GRADE	
Roof Cover	Sion FS	45, 50, 60, 120-mil	ASTM D4434	III	N/A	NJ
	Sion RM	45, 50, 60, 120-mil	ASTM D4434	III	N/A	NJ

5. LIMITATIONS:

- 5.1 This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this PEER, or previous versions thereof, is/was used for permitting or design guidance. PEERs are not to be construed as representing any attributes not specifically listed, nor are PEERs to be construed as an endorsement of the subject, or a recommendation for its use. There is no warranty by NEMO ETC, LLC or Robert Nieminen, P.E., express or implied, as to any finding or other matter in this PEER, or as to any product covered by the PEER.
- 5.2 This PEER is not for use in FBC High Velocity Hurricane Zone jurisdictions, as defined in FBC Chapter 2 (Broward and Miami-Dade Counties).
- 5.3 This PEER pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.
- 5.4 This PEER does not include evaluation of fire classification. Refer to **FBC 1505** for requirements and limitations regarding roof assembly fire classification. Refer to **FBC 2603** for requirements and limitations concerning the use of foam plastic insulation.
- 5.5 This PEER does not include evaluation of roof edge termination. Refer to **FBC 1504.5** for requirements and limitations regarding edge securement for low-slope roofs.

- 5.6 Refer to **FBC 1511** for requirements and limitations regarding recover installations.
- 5.6.1 For mechanically attached components over existing roof decks, fasteners shall be tested in the existing deck for withdrawal resistance. A qualified design professional shall review the data for comparison to the minimum requirements for the system. Testing shall be in accordance with [ANSI/SPRI FX-1](#) or [Testing Application Standard TAS 105](#).
- 5.6.2 For bonded insulation or membrane over existing substrates in a re-roof (tear off) or recover installation, the existing deck or existing roof surface shall be examined for compatibility with the adhesive to be installed. If any surface conditions exist that bring system performance into question, field uplift testing in accordance with [ANSI/SPRI IA-1](#), [ASTM E907](#), [FM Loss Prevention Data Sheet 1-52](#) or [Testing Application Standard TAS 124](#) shall be conducted on mock-ups of the proposed new roof assembly.
- 5.6.3 For bonded insulation or membrane over existing substrates in a recover installation, the existing roof system shall be capable of resisting project design pressures on its own merit to the satisfaction of the Authority Having Jurisdiction, as documented through field uplift testing in accordance with [ASTM E907](#), [FM Loss Prevention Data Sheet 1-52](#) or [Testing Application Standard TAS 124](#).
- 5.7 Refer to Appendix 1 for system attachment requirements for wind load resistance.
- 5.7.1 “MDP” = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per **FBC 1504.9** has already been applied). Refer to **FBC 1609** for determination of design wind loads.
- 5.7.2 For mechanically attached components or partially-bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed at least the Zone 1 PRIME design pressure determined in accordance with **FBC Chapter 16**. Elevated pressure zones shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are [ANSI/SPRI WD1](#), [FM Loss Prevention Data Sheet 1-29](#), [Roofing Application Standard RAS 117](#) and [Roofing Application Standard RAS 137](#). Assemblies marked with an asterisk* carry the limitations set forth in **Section 2.2.10.1 of FM Loss Prevention Data Sheet 1-29 (February 2020)** for Zone 2/3 enhancements.
- 5.7.3 For assemblies with all components fully bonded in place, the maximum design pressure for the selected assembly shall meet or exceed critical design pressure determined in accordance with **FBC Chapter 16**. No rational analysis is permitted for these systems.
- 5.8 All components in the roof assembly shall have quality assurance audit in accordance with **F.A.C. Rule 61G20-3**. Refer to the Product Approval of the component manufacturer for components listed in Appendix 1 that are produced by a Product Manufacturer other than the report holder on [Page 1](#) of this PEER.

6. INSTALLATION:

Sion Single Ply Roof Systems shall be installed in accordance with **SR Products** published installation instructions, subject to the [Limitations of Use](#) noted herein.

7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction to properly evaluate the installation of this product.

8. MANUFACTURING PLANTS:

Contact the named QA entity for manufacturing facilities covered by **F.A.C. Rule 61G20-3** QA requirements. Refer to [Section 4](#) herein for products and production locations having met codified material standards.

9. QUALITY ASSURANCE ENTITY:

[UL, LLC – QUA9625](#): (360) 817-5512; bsai.inspections@ul.com

- THE 9-PAGES THAT FOLLOW FORM PART OF THIS PEER -

APPENDIX 1: ATTACHMENT REQUIREMENTS FOR WIND UPLIFT RESISTANCE

TABLE	DECK	APPLICATION	TYPE	DESCRIPTION	PAGE
1A	Steel or Structural concrete	New, Reroof (Tear-Off), Recover	C-1	Mechanically Attached Insulation, Bonded Roof Cover	3
1B	Steel	New, Reroof (Tear-Off) or Recover	C-2	Induction-Welded Roof Cover	3
1C	Steel or Structural concrete	New, Reroof (Tear-Off), Recover	D-1	Insulated, Mechanically Attached Roof Cover	4
2A	Structural concrete	New, Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover	5
2B	Structural concrete	New, Reroof (Tear-Off)	A-1	Bonded Temp Roof, Bonded Insulation, Bonded Roof Cover	5
2C	Structural concrete	New, Reroof (Tear-Off) or Recover	C-2	Induction-Welded Roof Cover	6
2D	Structural concrete	New, Reroof (Tear Off)	F	Non-Insulated, Bonded Roof Cover	6
3A	Lightweight concrete	New, Reroof (Tear Off)	F	Non-Insulated, Bonded Roof Cover	7
4A	Various	Recover	A-1	Bonded Insulation, Bonded Roof Cover	8

The following notes apply to the systems outlined herein:

- The roof system evaluation herein pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.
- Fasteners shall be of sufficient length for the following engagements:
 - Wood Deck: Minimum 0.75-inch plywood penetration or minimum 1-inch wood plank embedment.
 - Steel Deck: Minimum 0.75-inch steel penetration and engage the top flute of the steel deck.
 - Structural Concrete: Minimum 1-inch embedment. Fasteners installed with a pilot hole in accordance with the fastener manufacturer's published installation instructions.
- Unless otherwise noted, insulation may be any one layer or combination of FBC Approved (Local or Statewide) board(s) that meet FBC 1505 and, for foam plastic, FBC Chapter 26, when installed with the roof cover.
- Minimum 200 psi, minimum 2-inch thick FBC Approved lightweight insulating concrete may be substituted for rigid insulation board for System Types B-1, C-1, C-2, D-1 or D-2, whereby fasteners are installed through the lightweight insulating concrete to engage the structural deck. The structural deck shall be of equal or greater type, thickness and strength to the steel and structural concrete deck listings. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction. This is a wind uplift resistance allowance and does not purport to address non-wind-uplift-related issues, such as deck venting or moisture levels within the LWIC and the potential effect on overlying components.
- Preliminary insulation attachment for System Type D: Unless otherwise noted, refer to Section 2.2.10.1.3 of [FM Loss Prevention Data Sheet](#) 1-29.
- Unless otherwise noted, insulation adhesive application rates are as follows. The ribbons/beads shall expand as noted in the manufacturer's published instructions.
 - Hot asphalt: Full Coverage at 25-30 lbs/square. If applying to concrete deck; deck shall be primed with ASTM D41 primer.
 - H.B. Fuller "Millennium One Step Foamable Adhesive" (M-OSFA): Continuous ribbons, 12-inch o.c.
 - H.B. Fuller "Millennium PG-1 Pump Grade Adhesive: (M-PG1): Continuous ribbons, 12-inch o.c.
 - OMG "OlyBond 500 Adhesive Fastener" or "OlyBond 500 Green" (OB500): Continuous ribbons, 12-inch o.c. using OMG PaceCart, SpotShot or Canister delivery methods.
 - ICP Construction "Polyset Board-Max": Continuous ribbons, 12-inch o.c.
 - ICP Construction "Polyset Commercial Roofing Adhesive" (Polyset CRA): Continuous ribbons, 12-inch o.c.
 - *Note: When multiple layers(s) of insulation and/or coverboard are installed in ribbon-applied adhesive, board joints shall be staggered.*
 - *Note: The maximum edge distance from the adhesive ribbon to the edge of the insulation board shall be not less than one-half the specified ribbons spacing.*

- 7 Unless otherwise noted, all insulations are flat-stock or taper board of the minimum thickness noted. Tapered polyisocyanurate at the following thickness limitations may be substituted with the following Maximum Design Pressure (MDP) limitations. In no case shall these values be used to 'increase' the MDP listings in the tables; rather if MDP listing below meets or exceeds that listed for a particular system in the tables, then the thinner board listed below may be used as a drop-in for the equivalent thicker material listed in the table.
- H.B. Fuller "Millennium One Step Foamable Adhesive" (M-OSFA): MDP = -157.5 psf (Min. 1-inch thick)
 - H.B. Fuller "Millennium PG-1 Pump Grade Adhesive: (M-PG1): MDP = -157.5 psf (Min. 1-inch thick)
 - OMG "OlyBond 500 Adhesive Fastener" (OB500): MDP = -315.0 psf (Min. 0.5-inch thick Johns Manville "ENRGY 3")
 - OMG "OlyBond 500 Adhesive Fastener" (OB500): MDP = -487.5 psf (Min. 0.5-inch thick Atlas Roofing "ACFoam II")
 - ICP Adhesives & Sealants "Polyset CRA" or "Polyset Board-Max": MDP = -117.5 psf (Min. 1.0-inch thick)
- 8 For adhered roof insulation and board-size: Unless otherwise noted, refer to Section 2.2.10.6.2 of [FM Loss Prevention Data Sheet](#) 1-29.
- 9 For mechanically attached components or partially-bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed at least the Zone 1 PRIME design pressure determined in accordance with FBC Chapter 16. Elevated pressure zones shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are [ANSI/SPRI](#) WD1, [FM Loss Prevention Data Sheet](#) 1-29, [Roofing Application Standard](#) RAS 117 and [Roofing Application Standard](#) RAS 137. Assemblies marked with an asterisk* carry the limitations set forth in Section 2.2.10.1 of [FM Loss Prevention Data Sheet](#) 1-29 for Zone 2/3 enhancements.
- 10 For assemblies with all components fully bonded, the maximum design pressure for the selected assembly shall meet or exceed critical design pressure determined in accordance with FBC Chapter 16. No rational analysis is permitted for these systems.
- 11 For mechanically attached components over existing decks, fasteners shall be tested in the existing deck for withdrawal resistance. A qualified design professional shall review the data for comparison to the minimum requirements for the system. Testing and analysis shall be in accordance with [ANSI/SPRI](#) FX-1 or [Testing Application Standard](#) TAS 105.
- 12 For bonded insulation or membrane over existing substrates in a re-roof (tear off) or recover installation, the existing deck or existing roof surface shall be examined for compatibility with the adhesive to be installed. If any surface conditions exist that bring system performance into question, field uplift testing in accordance shall be conducted on mock-ups of the proposed new roof assembly. For bonded insulation or membrane over existing substrates in a recover installation, the existing roof system shall be capable of resisting project design pressures on its own merit to the satisfaction of the Authority Having Jurisdiction, as documented through field uplift testing. Field uplift testing shall be in accordance with [ASTM](#) E907, [FM Loss Prevention Data Sheet](#) 1-52 or [Testing Application Standard](#) TAS 124.
- 13 Refer to FBC 1511 for requirements and limitations regarding recover installations. For Structural Concrete Deck or Recover Applications using System Type C-1, C-2, D-1 or D-2, the insulation is optional. Alternatively, an FBC Approved insulation board or coverboard may be used as a separation layer. Board products shall be preliminarily attached prior to roof cover installation ([Note 5](#) herein). The separator component shall be documented as meeting FBC 1505 and, for foam plastic, FBC Chapter 26, when installed with the roof cover in Recover applications.
- 14 Lightweight insulating concrete (LWIC) shall be cast in accordance with FBC Section 1917 to the satisfaction of the Authority Having Jurisdiction. For systems where specific LWIC is referenced, refer to current LWIC Product Approval for specific deck construction and limitations. Unless otherwise noted, for systems where specific LWIC is not referenced, the minimum design mix shall be 300 psi. In all cases, the minimum top-coat thickness is 2-inches. For LWIC over structural concrete, reference is made to FBC Section 1917.4.1, Point 1. For "pre-existent" LWIC references, listings were established through testing over lightweight concrete cast using only foaming agent (ASTM C896), water and Portland cement (ASTM C150), with no proprietary additives, in accordance with procedures adopted by Miami-Dade BCCO (FBC CER1592). Use of these listings in new construction or re-roof (tear-off) applications is at the discretion of the Designer or Record and Authority Having Jurisdiction.
- 15 For bonded membrane applications, unless otherwise noted, refer to the following.

MEMBRANE / ADHESIVE COMBINATIONS			
MEMBRANE	ADHESIVE	APPLICATION	RATE
Sion FS	Sion FS Bonding Adhesive LV or TACC LA-432M	Substrate and roof cover underside	combined rate of 120 ft ² /gal
Sion RM	Sion RM Substrate Adhesive	Substrate only	60 ft ² /gal
Sion RM	hot asphalt	Substrate only	25 lbs/sq

- 15A For single-ply membranes in System Type D-1 steel deck applications, the roof membrane shall be run with its length perpendicular to the steel deck flutes.
- 15B For System Type C-2 (induction weld), care shall be taken to ensure that the plates do not line-up with membrane seams. This condition may preclude proper induction welding of the membrane to the plates.
- 16 "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to FBC 1609 for determination of design wind loads. ([Notes 9 and 10](#))

TABLE 1A: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Insulation Layer (Note 13)	Top Insulation Layer			Roof Cover (Note 15)		MDP (psf)
			Type	Fasteners (Note 11)	Attach	Type	Attach	
FLEECE BACK ROOF COVERS:								
SC-1	Min. 22 ga., type B, Grade 33 steel	One or more layers, any combination, min. 1.5-inch thick loose laid	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	OMG 3 in. Galvalume Steel Plates with OMG XHD fasteners	1 per 1.6 ft²	Sion RM	Sion RM Substrate Adhesive	-90.0

TABLE 1B: STEEL DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-2: INDUCTION-WELDED MEMBRANE

System No.	Deck (Note 1)	Insulation Layer (Note 13)	Attachment		Roof Cover (Note 15)	MDP (psf)
			Fasteners (Note 11)	Density		
OMG RHINO BOND :						
SC-2	Min. 22 ga., type B, Grade 33 steel	One or more layers, any combination	OMG Super XHD Screws and PVC Rhinobond Plates	1 per 6.0 ft ² 2 x 3-ft grid	Sion FS induction-welded with Rhinobond Plate bonding tool.	-45.0*
SC-3	Min. 22 ga., type B, Grade 33 steel	One or more layers, any combination	OMG Super XHD Screws and PVC Rhinobond Plates	1 per 4.0 ft ² 2 x 2-ft grid	Sion FS induction-welded with Rhinobond Plate bonding tool.	-75.0
SFS INTEC <i>ISOWELD</i> :						
SC-4	Min. 22 ga., type B, Grade 40 steel	One or more layers, any combination, min. 1.5-inch	Dekfast DF-#15-PH3 with SFS <i>isoweld</i> ® F1-P-6.8-PVC Plates	Max. 12-inch o.c. in rows max. 60-inch o.c.	Sion FS induction-welded with SFS <i>isoweld</i> ® 3000 tool.	-45.0
SC-5	Min. 22 ga., type B, Grade 80 steel	One or more layers, any combination, min. 1.5-inch	Dekfast DF-#12-PH3 or DF-#15-PH3 with SFS <i>isoweld</i> ® F1-P-6.8-PVC Plates	Max. 12-inch o.c. in rows max. 60-inch o.c.	Sion FS induction-welded with SFS <i>isoweld</i> ® 3000 tool.	-45.0
SC-6	Min. 22 ga., type B, Grade 40 steel	One or more layers, any combination, min. 1.5-inch	Dekfast DF-#15-PH3 with SFS <i>isoweld</i> ® F1-P-6.8-PVC Plates	1 per 6.0 ft ² 2 x 3-ft grid, staggered	Sion FS induction-welded with SFS <i>isoweld</i> ® 3000 tool.	-52.5
SC-7	Min. 22 ga., type B, Grade 80 steel	One or more layers, any combination, min. 1.5-inch	Dekfast DF-#12-PH3 or DF-#15-PH3 with SFS <i>isoweld</i> ® F1-P-6.8-PVC Plates	1 per 6.0 ft ² 2 x 3-ft grid, staggered	Sion FS induction-welded with SFS <i>isoweld</i> ® 3000 tool.	-52.5
SC-8	Min. 22 ga., type B, Grade 40 steel	One or more layers, any combination, min. 1.5-inch	Dekfast DF-#15-PH3 with SFS <i>isoweld</i> ® F1-P-6.8-PVC Plates	1 per 3.0 ft ² 1.5 x 2-ft grid, staggered	Sion FS induction-welded with SFS <i>isoweld</i> ® 3000 tool.	-82.5
SC-9	Min. 22 ga., type B, Grade 80 steel	One or more layers, any combination, min. 1.5-inch	Dekfast DF-#12-PH3 or DF-#15-PH3 with SFS <i>isoweld</i> ® F1-P-6.8-PVC Plates	1 per 3.0 ft ² 1.5 x 2-ft grid, staggered	Sion FS induction-welded with SFS <i>isoweld</i> ® 3000 tool.	-82.5
SC-10	Min. 22 ga., type B, Grade 40 steel	One or more layers, any combination, min. 1.5-inch	Dekfast DF-#15-PH3 with SFS <i>isoweld</i> ® F1-P-6.8-PVC Plates	Max. 6-inch o.c. in rows max. 60-inch o.c.	Sion FS induction-welded with SFS <i>isoweld</i> ® 3000 tool.	-90.0
SC-11	Min. 22 ga., type B, Grade 80 steel	One or more layers, any combination, min. 1.5-inch	Dekfast DF-#12-PH3 or DF-#15-PH3 with SFS <i>isoweld</i> ® F1-P-6.8-PVC Plates	Max. 6-inch o.c. in rows max. 60-inch o.c.	Sion FS induction-welded with SFS <i>isoweld</i> ® 3000 tool.	-90.0

TABLE 1C: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D-1: INSULATED, MECHANICALLY ATTACHED ROOF COVER

System No.	Deck (Note 1)	Insulation Layer (Note 13)		Roof Cover (Note 15)						MDP (psf)
		Type	Attach (Note 5)	Membrane	Fasteners (Note 11)	Fastener Spacing	Lap Width	Row Spacing	Seam Weld	
SC-12	Min. 22 ga., type B, Grade 80 steel	One or more layers, any combination	Preliminarily attached	Sion FS	OMG XHD fasteners and OMG 2-3/8 XHD barbed stress plates	6-inch o.c.	5.5-inch	114.5-inch o.c.	2-inch	-37.5
SC-13	Min. 22 ga., type B, Grade 80 steel	One or more layers, any combination	Preliminarily attached	Sion FS	OMG Super XHD fasteners and OMG 2¾ Super XHD barbed stress plates	12-inch o.c.	6-inch	114-inch o.c.	2-inch	-37.5
SC-14	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Preliminarily attached	Sion FS	OMG #14 Heavy Duty screws and OMG 2 in. Barbed Plates	6-inch o.c.	4-inch	55-inch o.c.	2-inch	-45.0
SC-15	Min. 22 ga., type B, Grade 80 steel	One or more layers, any combination	Preliminarily attached	Sion FS	OMG XHD fasteners and OMG 2-3/8 XHD barbed stress plates	6-inch o.c.	5.5-inch	75.5-inch o.c.	2-inch	-45.0
SC-16	Min. 22 ga., type B, Grade 80 steel	One or more layers, any combination	Preliminarily attached	Sion FS	OMG Super XHD fasteners and OMG 2¾ Super XHD barbed stress plates	12-inch o.c.	6-inch	75-inch o.c.	2-inch	-45.0
SC-17	Min. 22 ga., type B, Grade 80 steel	One or more layers, any combination	Preliminarily attached	Sion FS, min. 50-mil	OMG XHD fasteners and OMG 2-3/8 XHD barbed stress plates; or Dekfast DF-#15-PH3 with Dekfast PLT-O-2-3/4-12B.	6-inch o.c.	5-inch	115-inch o.c.	1.5-inch	-45.0

TABLE 2A: STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1A: BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Primer	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
			Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base Ply	Cap Ply	Application	
FLEECE BACK ROOF COVERS:										
C-1	Min. 2,500 psi structural concrete	ASTM D41	ENRGY 3	hot asphalt	(Optional) Additional insulation layers	hot asphalt	None	Sion RM	Sion RM Substrate Adhesive	-45.0
C-2	Min. 2,500 psi structural concrete	None	Min. 2-inch STYROFOAM DECKMATE	OB500	Min. 0.5-inch DensDeck	OB500	None	Sion RM	Sion RM Substrate Adhesive	-150.0
C-3	Min. 2,500 psi structural concrete	ASTM D41	One or more min. 1.5-inch AC Foam II	hot asphalt	Min. 0.25-inch SECURROCK Gypsum-Fiber Roof Board	hot asphalt	Two (2) plies HK Glass Ply in hot asphalt	Sion RM	hot asphalt	-225.0

TABLE 2B: STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1B: BONDED TEMP ROOF, BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Primer	Vapor Barrier / Temporary Roof	Base Insulation Layer(s)		Top Insulation Layer		Roof Cover (Note 15)		MDP (psf)
				Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base Ply	Cap Ply	
BARE BACK ROOF COVERS:										
C-4	Min. 2,500 psi structural concrete	Soprema Elastocol Primer	Soprema Soprapav'r, self-adhering	Min. 1.5-inch ACFoam II	M-OSFA, M-PG1 or OB500	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	M-OSFA, M-PG1 or OB500	None	Sion FS / Sion FS Bonding Adhesive LV or TACC LA-432M	-67.5
C-5	Min. 2,500 psi structural concrete	Soprema Elastocol Primer	Soprema Soprapav'r, self-adhering	Min. 2-inch STYROFOAM DECKMATE Plus FA	M-OSFA, M-PG1 or OB500	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	M-OSFA, M-PG1 or OB500	None	Sion FS / Sion FS Bonding Adhesive LV or TACC LA-432M	-75.0
FLEECE BACK ROOF COVERS:										
C-6	Min. 2,500 psi structural concrete	Soprema Elastocol Primer	Soprema Soprapav'r, self-adhering	Min. 1.5-inch ACFoam II	M-OSFA, M-PG1 or OB500	Min. 0.25-inch DensDeck Prime	M-OSFA, M-PG1 or OB500	None	Sion RM / Sion RM Substrate Adhesive	-67.5
C-7	Min. 2,500 psi structural concrete	Soprema Elastocol Primer	Soprema Soprapav'r, self-adhering	Min. 1.5-inch ACFoam II	M-OSFA, M-PG1 or OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	M-OSFA, M-PG1 or OB500	None	Sion RM / Sion RM Substrate Adhesive	-67.5
C-8	Min. 2,500 psi structural concrete	Soprema Elastocol Primer	Soprema Soprapav'r, self-adhering	Min. 2-inch STYROFOAM DECKMATE Plus FA	M-OSFA, M-PG1 or OB500	Min. 0.25-inch DensDeck Prime	M-OSFA, M-PG1 or OB500	None	Sion RM / Sion RM Substrate Adhesive	-75.0
C-9	Min. 2,500 psi structural concrete	Soprema Elastocol Primer	Soprema Soprapav'r, self-adhering	Min. 2-inch STYROFOAM DECKMATE Plus FA	M-OSFA, M-PG1 or OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	M-OSFA, M-PG1 or OB500	None	Sion RM / Sion RM Substrate Adhesive	-75.0
C-10	Min. 2,500 psi structural concrete	ASTM D41	One Ply HK Glass Ply in hot asphalt	Min. 1.5-inch H-Shield	hot asphalt	None	N/A	Two plies HK Glass Ply / hot asphalt	Sion RM / hot asphalt	-195.0

TABLE 2B: STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1B: BONDED TEMP ROOF, BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Primer	Vapor Barrier / Temporary Roof	Base Insulation Layer(s)		Top Insulation Layer		Roof Cover (Note 15)		MDP (psf)
				Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base Ply	Cap Ply	
C-11	Min. 2,500 psi structural concrete	ASTM D41	HK Glass Ply in hot asphalt	One or more min. 1.5-inch ACFoam II	hot asphalt	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	hot asphalt	Two (2) plies HK Glass Ply, in hot asphalt	Sion RM / hot asphalt	-225.0

TABLE 2C: STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-2: INDUCTION-WELDED MEMBRANE

System No.	Deck (Note 1)	Insulation Layer (Note 13)	Attachment		Roof Cover (Note 15)	MDP (psf)
			Fasteners (Note 11)	Density		
C-12	Min. 2,500 psi structural concrete	One or more layers, any combination, min. 1.5-inch	Dekfast DF-#14-PH3 or DF-#15-PH3 with SFS <i>isoweld</i> ® F1-P-6.8-PVC Plates	Max. 12-inch o.c. in rows max. 60-inch o.c.	Sion FS induction-welded with SFS <i>isoweld</i> ® 3000 tool.	-45.0
C-13	Min. 2,500 psi structural concrete	One or more layers, any combination, min. 1.5-inch	Dekfast DF-#14-PH3 or DF-#15-PH3 with SFS <i>isoweld</i> ® F1-P-6.8-PVC Plates	1 per 6 ft ² 2 x 3-ft grid, staggered	Sion FS induction-welded with SFS <i>isoweld</i> ® 3000 tool.	-52.5
C-14	Min. 2,500 psi structural concrete	One or more layers, any combination, min. 1.5-inch	Dekfast DF-#14-PH3 or DF-#15-PH3 with SFS <i>isoweld</i> ® F1-P-6.8-PVC Plates	1 per 3 ft ² 1.5 x 2-ft grid, staggered	Sion FS induction-welded with SFS <i>isoweld</i> ® 3000 tool.	-82.5
C-15	Min. 2,500 psi structural concrete	One or more layers, any combination, min. 1.5-inch	Dekfast DF-#14-PH3 or DF-#15-PH3 with SFS <i>isoweld</i> ® F1-P-6.8-PVC Plates	Max. 6-inch o.c. in rows max. 60-inch o.c.	Sion FS induction-welded with SFS <i>isoweld</i> ® 3000 tool.	-90.0

TABLE 2D: STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER

System No.	Deck (Note 1)	Primer	Roof Cover (Note 15)		MDP (psf)
			Type	Attach	
C-16	Min. 2,500 psi structural concrete	ASTM D41 primer	Sion RM	hot asphalt	-307.5

TABLE 3A: LIGHTWEIGHT CONCRETE DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE F: LWC-TO-DECK, BONDED ROOF COVER

System No.	Deck (Note 1)	Lightweight Concrete (Note 14)	Roof Cover (Note 15)		MDP (psf)
			Type	Attach	
CELCORE (FL2037):					
LWC-1	Min. 22 ga, type BV, Grade 33 steel	Min. 200 psi, min. 2" thick Celcore Cellular Concrete. For membrane application in hot asphalt, deck surface shall be primed with ASTM D41 primer.	Sion RM	hot asphalt or Sion RM Substrate Adhesive	-60.0
LWC-2	Min. 22 ga, type BV, Grade 33 steel	Min. 200 psi, min. 2" thick Celcore Cellular Concrete. For membrane application in hot asphalt, deck surface shall be primed with ASTM D41 primer.	Sion RM	hot asphalt or Sion RM Substrate Adhesive	-75.0
LWC-3	Min. 22 ga, type BV, Grade 33 steel	Min. 200 psi, min. 2" thick Celcore Cellular Concrete. For membrane application in hot asphalt, deck surface shall be primed with ASTM D41 primer.	Sion RM	hot asphalt or Sion RM Substrate Adhesive	-82.5
LWC-4	Min. 22 ga, type BV, Grade 33 steel	Min. 200 psi, min. 2" thick Celcore Cellular Concrete. For membrane application in hot asphalt, deck surface shall be primed with ASTM D41 primer.	Sion RM	hot asphalt or Sion RM Substrate Adhesive	-90.0
LWC-5	Min. 2,500 psi structural concrete.	Min. 200 psi, min. 2" thick Celcore Cellular Concrete.	Sion RM	Sion RM Substrate Adhesive	-105.0
LWC-6	Min. 2,500 psi structural concrete.	Min. 200 psi, min. 2" thick Celcore Cellular Concrete. Surface shall be primed with ASTM D41 primer.	Sion RM	hot asphalt	-135.0
ELASIZELL (FL4994):					
LWC-7	Min. 22 ga, type BV, Grade 33 steel	Min. 300 psi, min. 2" thick Range III Elastizell Cellular Lightweight Concrete.	Sion RM	Sion RM Substrate Adhesive	-97.5
LWC-8	Min. 2,500 psi structural concrete.	Min. 300 psi, min. 2" thick Range III Elastizell Cellular Lightweight Concrete.	Sion RM	Sion RM Substrate Adhesive	-465.0

TABLE 4A: RECOVER APPLICATIONS
SYSTEM TYPE A-1A: BONDED INSULATION, BONDED ROOF COVER

^A The reported MDP documents the allowable maximum design pressure of the new insulation and roof cover when installed atop the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

System No.	Substrate (Note 1 & Note 12)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf) ^A
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base Ply	Cap Ply	Application	
BARE BACK ROOF COVER:									
R-1	Existing smooth-surface built-up roof (BUR), gravel-surface built-up roof (BUR) with loose gravel removed or granule-surface SBS modified bitumen	One or more layers, min. 1.5-in AC Foam II	M-OSFA, M-PG1, OB500, Polyset CRA or Polyset Board-Max	(Optional) Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	M-OSFA, M-PG1, OB500, Polyset CRA or Polyset Board-Max	None	Sion FS	Sion FS Bonding Adhesive LV or TACC LA-432M	-45.0
R-2	Existing smooth-surface built-up roof (BUR), gravel-surface built-up roof (BUR) with loose gravel removed or granule-surface SBS modified bitumen	One or more layers, min. 1.5-in AC Foam II	M-PG1, OB500, Polyset CRA or Polyset Board-Max	(Optional) Additional layers of base insulation	M-PG1, OB500, Polyset CRA or Polyset Board-Max	None	Sion FS	Sion FS Bonding Adhesive LV or TACC LA-432M	-157.5
R-3	Existing smooth-surface built-up roof (BUR), gravel-surface built-up roof (BUR) with loose gravel removed or granule-surface SBS modified bitumen	One or more layers, min. 1.5-in AC Foam II	M-OSFA	(Optional) Additional layers of base insulation	M-OSFA	None	Sion FS	Sion FS Bonding Adhesive LV or TACC LA-432M	-195.0
R-4	Existing smooth-surface built-up roof (BUR), gravel-surface built-up roof (BUR) with loose gravel removed or granule-surface SBS modified bitumen	One or more layers, min. 1.5-in Insulfoam I	M-OSFA, M-PG1, OB500, Polyset CRA or Polyset Board-Max	Min. 0.25 in. DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	M-OSFA, M-PG1, OB500, Polyset CRA or Polyset Board-Max	None	Sion FS	Sion FS Bonding Adhesive LV or TACC LA-432M	-237.5
R-5	Existing smooth-surface built-up roof (BUR), gravel-surface built-up roof (BUR) with loose gravel removed or granule-surface SBS modified bitumen	One or more layers, min. 1.5-in AC Foam II	M-PG1	Min. 0.25 in. DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	M-OSFA, M-PG1, OB500, Polyset CRA or Polyset Board-Max	None	Sion FS	Sion FS Bonding Adhesive LV or TACC LA-432M	-237.5
FLEECE BACK ROOF COVERS:									
R-6	Existing smooth-surface built-up roof (BUR), gravel-surface built-up roof (BUR) with loose gravel removed or granule-surface SBS modified bitumen	One or more layers, min. 1.5-in AC Foam II	M-OSFA, M-PG1, OB500, Polyset CRA or Polyset Board-Max	(Optional) Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	M-OSFA, M-PG1, OB500, Polyset CRA or Polyset Board-Max	None	Sion RM	Sion RM Substrate Adhesive	-45.0
R-7	Existing smooth-surface built-up roof (BUR), gravel-surface built-up roof (BUR) with loose gravel removed or granule-surface SBS modified bitumen	One or more layers, min. 1.5-in AC Foam II	M-PG1, OB500, Polyset CRA or Polyset Board-Max	(Optional) Additional layers of base insulation	M-PG1, OB500, Polyset CRA or Polyset Board-Max	None	Sion RM	Sion RM Substrate Adhesive	-157.5
R-8	Existing smooth-surface built-up roof (BUR), gravel-surface built-up roof (BUR) with loose gravel removed or granule-surface SBS modified bitumen	One or more layers, min. 1.5-in AC Foam II	M-OSFA	(Optional) Additional layers of base insulation	M-OSFA	None	Sion RM	Sion RM Substrate Adhesive	-195.0
R-9	Existing smooth-surface asphalt built-up roof (BUR)	One or more min. 1.5-inch AC Foam II	hot asphalt	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	hot asphalt	Two (2) plies HK Glass Ply in hot asphalt	Sion RM	hot asphalt	-225.0

TABLE 4A: RECOVER APPLICATIONS
SYSTEM TYPE A-1A: BONDED INSULATION, BONDED ROOF COVER

^A The reported MDP documents the allowable maximum design pressure of the new insulation and roof cover when installed atop the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

System No.	Substrate (Note 1 & Note 12)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf) ^A
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base Ply	Cap Ply	Application	
R-10	Existing smooth-surface built-up roof (BUR), gravel-surface built-up roof (BUR) with loose gravel removed or granule-surface SBS modified bitumen	One or more layers, min. 1.5-in Insulfoam I	M-OSFA, M-PG1, OB500, Polyset CRA or Polyset Board-Max	Min. 0.25 in. DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	M-OSFA, M-PG1, OB500, Polyset CRA or Polyset Board-Max	None	Sion RM	Sion RM Substrate Adhesive	-237.5
R-11	Existing smooth-surface built-up roof (BUR), gravel-surface built-up roof (BUR) with loose gravel removed or granule-surface SBS modified bitumen	One or more layers, min. 1.5-in ACFoam II	M-PG1	Min. 0.25 in. DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	M-OSFA, M-PG1, OB500, Polyset CRA or Polyset Board-Max	None	Sion RM	Sion RM Substrate Adhesive	-237.5