NEMO | etc.
Certificate of Authorization #32455
353 Christian Street, Unit #13
Oxford, CT 06478
(203) 262-9245

ENGINEER **EVALUATE** **TEST** **CONSULT**

P.E. EVALUATION REPORT (PEER)

Mule-Hide Products Co., Inc.
1195 Prince Hall Dr
Beloit, WI 53511
(608) 365-3111

PEER-MHCRL-001.B.R10
FL10703-R11 (HVHZ)
Date of Issuance: 11/04/2009
Revision 10: 10/06/2023

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, High Velocity Hurricane Zone (HVHZ)** sections noted herein.

DESCRIPTION: Mule-Hide EPDM Single Ply Roof Systems (HVHZ)

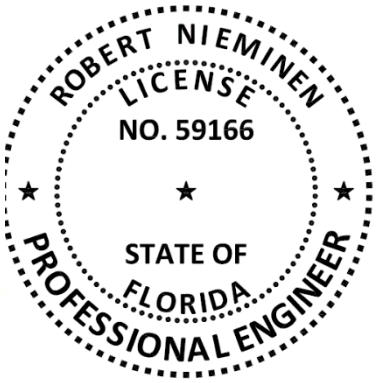
LABELING: Labeling shall be in accordance with the requirements of the Accredited Quality Assurance Agency noted herein.
CONTINUED COMPLIANCE: This PEER is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions 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 4, plus a 31-page Appendix.

Prepared by:

Digitally signed by Robert Nieminen
Date: 2023.10.09 '08:34:04 -04'00

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:
1. NEMO ETC, LLC does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. NEMO ETC, LLC is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
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.

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: **Mule-Hide EPDM Single Ply Roof Systems**, as produced by **Mule-Hide Products Co., Inc.**, have demonstrated compliance with the following sections of the **8th Edition (2023) Florida Building Code, High Velocity Hurricane Zone (HVHZ)** 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
TAS 110	Resistance to Foot Traffic	TAS 114, Section 8.9	2011 (from 2023 Code)
TAS 110	Wind resistance	TAS 114, Appendix C, D or J	2011 (from 2023 Code)
TAS 110	Susceptibility Hail Damage	TAS 114, Appendix F	2011 (from 2023 Code)
TAS 110	Susceptibility to Leakage	TAS 114, Appendix G	2011 (from 2023 Code)
TAS 110	Material standard	ASTM D4637	2015

3. REFERENCES:

Entity	Examination	Reference	Date
NEMO	PEER	PEER-CRL-001.B.R6	09/19/2023
FM Approvals (TST1867)	FM 4470 / TAS 114	3057831	02/22/2017
FM Approvals (TST1867)	FM 4470 / TAS 114	RR209155	04/03/2017
PRI (TST5878)	FM 4470 / TAS 114	CST-016-02-01	05/18/2011
UL LLC (TST9628)	Wind Uplift	03CA16620	12/05/2003
UL LLC (TST9628)	Wind Uplift	11CA16620	08/12/2013
UL, LLC (QUA9625)	Quality Control	ML R13850	09/27/2007
UL, LLC (QUA9625)	Quality Control	Service Confirmation	07/06/2022
UL, LLC (QUA9625)	Quality Control	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

This PEER covers **Mule-Hide EPDM Single Ply Roof Systems** installed in accordance with **Mule-Hide Products Co., Inc.** published installation instructions and the Limitations of Use herein.

TABLE 1: EVALUATED MEMBRANES

TYPE	PRODUCT		MATERIAL STANDARD			PLANT(S)
			REFERENCE	TYPE	GRADE	
ROOF COVER OR CAP PLY	Mule-Hide Standard Black EPDM	45, 60, 90	ASTM D4637	I	N/A	Carlisle, PA Greenville, IL
	Mule-Hide White-on-Black EPDM	60, 90	ASTM D4637	I	N/A	Carlisle, PA
	Mule-Hide Standard Reinforced EPDM	45, 60, 75	ASTM D4637	II	N/A	Carlisle, PA
	Mule-Hide Standard EPDM Fleece-Backed	45, 60, 90	ASTM D4637	III	N/A	Carlisle, PA
	Mule-Hide White-on-Black Fleece-Backed	45, 60, 90	ASTM D4637	III	N/A	Carlisle, PA

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 exclusively for use in High Velocity Hurricane Zone jurisdictions, as defined in FBC Chapter 2 (Broward and Miami-Dade Counties).

5.3 The evaluation herein pertains to above-deck roof components; deck-attachment details pertain to 'as-tested' conditions under Testing Application Standard **TAS 114, Appendix J**. Roof decks shall be in accordance with **FBC HVHZ** requirements to the satisfaction of the Authority Having Jurisdiction.

5.4 This PEER does not include evaluation of fire classification. Refer to **FBC HVHZ 1516** 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 Roofing Application Standard **RAS 111** for requirements and limitations regarding edge securement for low-slope roofs.

5.6 Refer to **FBC HVHZ 1521** 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 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 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 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 Testing Application Standard **TAS 114** has already been applied). Refer to **FBC HVHZ 1620** and Roofing Application Standard **RAS 128** for determination of design wind loads.

5.7.2 For mechanically attached components, 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 HVHZ 1620** or Roofing Application Standard **RAS 128**. Elevated pressure zones shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Analysis shall be in accordance with Roofing Application Standard **RAS 117** or **RAS 137**. ***This extrapolation is not permitted for systems marked with an asterisk****.

5.7.3 For assemblies marked with an asterisk*, the maximum design pressure (MDP) limitation shall be applicable to all roof pressure zones. Rational analysis is not permitted.

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:

Mule-Hide EPDM Single Ply Roof Systems shall be installed in accordance with **Mule-Hide Products Co., Inc.** published installation instructions, subject to the Limitations of Use noted below.

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 31-PAGES THAT FOLLOW FORM PART OF THIS PEER -

APPENDIX 1: ATTACHMENT REQUIREMENTS FOR WIND UPLIFT RESISTANCE

The following notes apply to the systems outlined herein:

1 The roof system evaluation herein pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC HVHZ requirements to the satisfaction of the Authority Having Jurisdiction. Deck-attachment details pertain to 'as-tested' conditions under **Testing Application Standard** TAS 114, Appendix J.

- As-tested roof cover performance in accordance with FM 4474 and TAS 114, Appendix J indicates min. 22 ga., Type B, Grade 40 steel deck at max. 6 ft span attached with 5/8-inch diameter puddle welds spaced 6" o.c., with deck side laps secured max. 24" o.c. w/ ¼"-14x1" long self-tapping hex-head screws, may be used for roof assemblies over steel deck up to a maximum design pressure of -60.0 psf. This does not preclude Note 1 above.

2 Unless otherwise noted, fasteners and stress plates shall be as follows. Fasteners shall be of sufficient length for the following engagements:

FASTENER/PLATE OPTIONS		
DECK TYPE	**PARTS**	**MINIMUM ENGAGEMENT**
Wood	Mule-Hide Drill Point Fastener or Mule-Hide HDP Fastener with Mule-Hide 3 in. Insulation Plate, OMG #12 or #14 Roofgrip with Flat Bottom Plate, OMG #12 Standard or #14 HD with OMG Standard metal plate, Dekfast #12 or #14 with Hex Plate, Trufast #12 DP or Trufast #14 HD with Trufast 3" Metal Insulation Plate Plates.	Minimum ¾-inch plywood penetration or minimum 1-inch wood plank embedment
Steel	Mule-Hide Drill Point Fastener or Mule-Hide HDP Fastener with Mule-Hide 3 in. Insulation Plate, OMG #12 or #14 Roofgrip with Flat Bottom Plate, OMG #12 Standard or #14 HD with OMG Standard metal plate, Dekfast #12 or #14 with Hex Plate, Trufast #12 DP or Trufast #14 HD with Trufast 3" Metal Insulation Plate Plates.	Minimum ¾-inch steel penetration and engage the top flute of the steel deck
Structural Concrete	Mule-Hide HDP Fastener or Mule-Hide Fluted Concrete Nail with Mule-Hide 3 in. Insulation Plate, OMG #14 Roofgrip with Flat Bottom Plate, OMG #14 HD or CD-10 with OMG Standard metal plate, Dekfast #14 with Hex Plate, Trufast #14 HD or Trufast Fluted Concrete Nail with Trufast 3" Metal Insulation Plate Plates	Minimum 1-inch embedment. Fastener installed with a pilot hole in accordance with the fastener manufacturer's published installation instructions

3 Unless otherwise noted, insulation may be any one layer or combination of FBC Approved (Local or Statewide) board(s) that meet FBC HVHZ 1516 and, for foam plastic, FBC Chapter 26, when installed with the roof cover.

4 Minimum 200 psi, minimum 2-inch thick FBC HVHZ Approved lightweight insulating concrete may be substituted for, or installed below, 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. If mechanical attachment to the structural deck through lightweight insulating concrete is proposed, field withdrawal resistance testing shall be performed to confirm equivalent or determine enhanced fastening patterns and density. All testing and fastening design shall be in compliance with **Testing Application Standard** TAS 105 and **Roofing Application Standard** RAS 117 and/or RAS 137. Calculations shall be prepared, signed and sealed by a qualified design professional.

5 Preliminary insulation attachment: Unless otherwise noted, use FBC HVHZ Approved roofing fasteners and plates; minimum four per 4 x 8 ft board or minimum two per 4 x 4 ft board. For systems where no vapor barrier is installed, Mule-Hide Drill Point may be used in place of Mule-Hide HDP Fastener for preliminary attachment purposes over wood and steel deck.

6 Unless otherwise noted, insulation adhesive application rates are as follows.

- Ribbon or bead width is at the time of application; the ribbons/beads shall expand as noted in the manufacturer's published instructions.
- When multiple layers(s) of insulation and/or coverboard are installed in ribbon-applied adhesive, board joints shall be staggered.
- 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.
- "FULL" or "SPLATTER" applications may be used wherever "RIBBON" is referenced for insulation securement.

INSULATION ADHESIVE REFERENCES			
ADHESIVE	METHOD	REFERENCE	MINIMUM RATE
Helix Max Low-Rise Adhesive	full-coverage	Helix Max LRA (FULL)	Full-coverage at 1 gal./square.
Helix Max Low-Rise Adhesive	splatter-applied	Helix Max LRA (SPLATTER)	Splatter-applied at 0.5 gal/square (wet) = 4.7 lb/square (dry)
Helix Max Low-Rise Adhesive	ribbon-applied	Helix Max LRA (RIBBON)	Continuous 1-inch wide ribbons, 12-inch o.c.
Helix Max Low-Rise Adhesive – Dual Tank	full-coverage	Helix Max LRA-DT (FULL)	Continuous 0.5-inch wide, wet-beads, 4-inch o.c.. or spray-applied at 1 gal./square.
Helix Max Low-Rise Adhesive – Dual Tank	splatter-applied	Helix Max LRA-DT (SPLATTER)	Splatter-applied at 0.4 gal/square (wet) = 3.7 lb/square (dry)
Helix Max Low-Rise Adhesive – Dual Tank	ribbon-applied	Helix Max LRA-DT (RIBBON)	Continuous 0.5-inch wide, wet-beads, 12-inch o.c.
OlyBond 500	ribbon-applied	OB500	Continuous 0.75-inch wide ribbons, 12-inch o.c. (PaceCart, SpotShot or Canister)

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.

MDP LIMITATIONS FOR TAPERED POLYISOCYANURATE INSULATIONS				
ADHESIVE	INSULATION		MIN. TAPERED THICKNESS (IN)	MDP (PSF)
	LISTED PRODUCT	FBC OR NOA		
Helix Max LRA	Any polyisocyanurate listed with adhesive herein	Various	0.5	-157.5
OlyBond 500	Any polyisocyanurate listed with adhesive herein	Various	0.5	-187.5

8 Bonded polyisocyanurate insulation boards shall be maximum 4 x 4 ft.

9 For mechanically attached components, 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 HVHZ 1620 or **Roofing Application Standard** RAS 128. Elevated pressure zones shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria in accordance with **Roofing Application Standard** RAS 117 or RAS 137. *This extrapolation is not permitted for systems marked with an asterisk*

10 For assemblies marked with an asterisk*, 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 in accordance with **Testing Application Standard** TAS 105. A qualified design professional shall review the data for comparison to the minimum requirements for the system. Should the fastener resistance be less than that required, a revised fastener spacing – prepared, signed and sealed by a qualified design professional in accordance with **Roofing Application Standard** RAS 117 or RAS 137 – may be submitted to the Building Official for review and acceptance.

12 Refer to FBC HVHZ 1521 for requirements and limitations regarding recover installations. 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 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 in accordance with **Testing Application Standard** TAS 124.

13 For Structural Concrete Deck or Recover Applications using System Type C-1 the base insulation layer is optional and for System Type C-2, D-1 or D-2, the insulation is optional. Alternatively, an FBC HVHZ 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)**. The separator component shall be documented as meeting FBC HVHZ 1516 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 FBC HVHZ 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 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. For bonded membrane applications, unless otherwise noted, refer to the following.

MEMBRANE / ADHESIVE COMBINATIONS			
MEMBRANE	**ADHESIVE**	**METHOD**	**RATE**
Non-Fleece Roof Covers	Mule-Hide Bonding Adhesive	Contact (both sides)	60 ft²/gal (1.67 gal/square)
Non-Fleece Roof Covers	Aqua Base 120 Bonding Adhesive	Contact (both sides)	50 to 60 ft²/gal (1.67 to 2.0 gal/square)
Non-Fleece Roof Covers	Mule-Hide Low VOC Bonding Adhesive	Contact (both sides)	60 ft²/gal (1.67 gal/square)
Non-Fleece Roof Covers	AeroWeb	Contact (both sides)	222 ft²/gal (0.45 gal/square)
Non-Fleece Roof Covers	Mule-Hide Acrylic Water Base Bonding Adhesive	Wet-lay (substrate)	100 ft²/gal (1 gal/square)
Non-Fleece Roof Cover	Mule-Hide FR Adhesive	Wet-lay (substrate)	100 to 120 ft² / gal (0.83 to 1 gal/square)
FleeceBACK Roof Covers	Aqua Base 120 Bonding Adhesive	Wet lay (substrate)	100 to 120 ft² / gal (0.83 to 1 gal/square)
FleeceBACK Roof Covers	Helix Max LRA	Wet lay (substrate)	RIBBON spaced as noted herein or FULL Coverage = 1 gal/square or continuous ribbons, maximum 4-inch o.c. or splatter-applied at 0.5 gal/square (wet) = 4.7 lb/square (dry)
FleeceBACK Roof Covers	Helix Max LRA-DT	Wet lay (substrate)	RIBBON spaced as noted herein or FULL Coverage = 1 gal/square or continuous ribbons, maximum 4-inch o.c. or splatter-applied at 0.4 gal/square (wet) = 3.7 lb/square (dry)

16 Vapor barrier options for use over structural concrete deck followed by bonded insulation carry the following MDP limitations. The lesser of the MDP listings below vs. those in Table 3A applies.

VAPOR BARRIER OPTIONS; STRUCTURAL CONCRETE DECK; FOLLOWED BY ADHESIVE-APPLIED INSULATION PER Table 3A:					
OPTION #	**PRIMER**	**VAPOR BARRIER**		**INSULATION ADHESIVE** (NOTES 6, 7, 8)	**MDP (PSF)**
		TYPE	**APPLICATION**		
C-VB-1.	702 Primer, 702 LV Primer, CAV-GRIP Primer or AeroWeb	F5 Air and Vapor Barrier	Self-adhering	Helix Max LRA (RIBBONS)	-157.5

VAPOR BARRIER OPTIONS; STRUCTURAL CONCRETE DECK; FOLLOWED BY ADHESIVE-APPLIED INSULATION PER Table 3A:					
OPTION #	PRIMER	VAPOR BARRIER		INSULATION ADHESIVE (NOTES 6, 7, 8)	MDP (PSF)
		TYPE	APPLICATION		
C-VB-2.	702 Primer, 702 LV Primer, CAV-GRIP Primer or AeroWeb	F5 Air and Vapor Barrier	Self-adhering	Helix Max LRA-DT (RIBBONS)	-172.5
C-VB-3.	702 Primer, 702 LV Primer, CAV-GRIP Primer or AeroWeb	F5 Air and Vapor Barrier	Self-adhering	Helix Max LRA or Helix Max LRA-DT (RIBBONS, 6-inch o.c. or SPLATTER)	-270.0
C-VB-4.	CAV-GRIP Primer or AeroWeb	F5 Air and Vapor Barrier	Self-adhering	Helix Max LRA (FULL COVERAGE, 1 gal/square), Helix Max LRA (SPLATTER) or Helix Max LRA-DT (SPLATTER)	-427.5
C-VB-5.	ASTM D41	Carlisle SureMB 90 Base, SureMB 90 Poly Base or SureMB 120 Poly Base	Hot-asphalt	Hot asphalt at 25 lbs/square	-172.5
C-VB-6.	ASTM D41	Carlisle SureMB 90TG or 120TG Base	Torch-applied	Hot asphalt at 25 lbs/square	-180.0
C-VB-7.	None	Carlisle SureMB 90 Base, SureMB 90 Poly Base or SureMB 120 Poly Base	C-CAA, 1-inch ribbons, 12-inch o.c.	Helix Max LRA (RIBBON) or Helix Max LRA-DT (RIBBON)	-180.0
C-VB-8.	None	Carlisle SureMB 90 Base, SureMB 90 Poly Base or SureMB 120 Poly Base	C-CAA, 1-inch ribbons, 6-inch o.c.	Helix Max LRA (RIBBON, 6-inch o.c. or SPLATTER) or Helix Max LRA-DT (RIBBON, 6-inch o.c. or SPLATTER)	-255.0
C-VB-9.	ASTM D41	Carlisle SureMB 90TG or 120TG Base	Torch-applied	Helix Max LRA or Helix Max LRA-DT (RIBBON)	-307.5
C-VB-10.	ASTM D41	Carlisle SureMB 90TG or 120TG Base	Torch-applied	Helix Max LRA or Helix Max LRA-DT ((RIBBON, 6-inch o.c. or SPLATTER)	-495.0

17 For membrane attachment using batten-strips, end laps shall be spliced with sufficient dimension to allow for minimum 2-fasteners at each batten-strip lap.

18 Side laps shall be sealed in accordance with Mule-Hide requirements:
- Primed with Mule-Hide Tape Primer and adhered with Mule-Hide In-Seam Tape.
- Cleaned with Mule-Hide Splice Cleaner and adhered with Mule-Hide Black or White Splice Adhesive.

19 "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to FBC (HVHZ) 1620 and Roofing Application Standard RAS 128 for determination of design wind loads. **(Note 9 and Note 10)**

20 The following products are interchangeable within the scope of this PEER:

ACCEPTABLE ALTERNATES				
SUB-CATEGORY	BY	LISTED PRODUCT HEREIN	ALTERNATE	FBC OR NOA
MEMBRANE	Mule-Hide	Sure-Seal FleeceBACK	Includes 100, 115 and 145	FL10703
		Sure-Seal AFX	Includes AFX 90 and AFX 105	
		Mule-Hide White-on-Black Fleece-Backed	Includes 100, 115 and 145	
ROOFING INSULATION	Mule-Hide	Poly ISO 1	Carlisle "InsulBase" or "InsulBase NH" or Hunter Panels "H-Shield" or "H-Shield NH"	NOA 19-0521.04
		Poly ISO 1-DWD	Carlisle "SecurShield" or "SecurShield NH" or Hunter Panels "H-Shield CG" or "H-Shield CG NH"	
		Poly ISO 1-HD	Carlisle "SecurShield HD" or "SecurShield HD NH" or Hunter Panels "H-Shield HD" or "H-Shield HD NH"	
		Poly ISO 1-HD Plus	Poly ISO 1-HD90 or Carlisle "SecurShield HD Plus" or "SecurShield HD Plus NH" or Hunter Panels "H-Shield HD90" or "H-Shield HD90 NH"	
		Poly ISO 1-HD-Composite	Carlisle "SecurShield HD Composite" or Hunter Panels "H-Shield HD Composite"	
		Poly ISO 1-NB	Carlisle "StormBase" or Hunter Panels "H-Shield NB"	
	Georgia-Pacific Gypsum, LLC	"DensDeck Prime"	"DensDeck StormX Prime Roof Board"	NOA 22-1223.04

TABLE 1A: WOOD 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 3, Note 13)	Top Insulation Layer			Roof Cover (Note 15)	MDP (psf)
			Type	Fasteners (Note 2, Note 11)	Attach		
MEMBRANE APPLIED IN MULE-HIDE BONDING ADHESIVE OR AEROWEB:							
W-1	Min. 19/32" plywood or wood plank	(Optional) One or more layers, any combination, loose laid	Min. 0.5-inch thick HP Recovery Board, Fiber Base HD1, GP High Density Roof Fiberboard, min. 0.25-inch thick DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board, min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1, H-Shield CG, PSI-25, Multi-Max FA-3	Note 2	1 per 2.0 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-45.0*
W-2	Min. 19/32" plywood or wood plank	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ACFoam Composite/FB, H-Shield-WF Plus	Note 2	1 per 3.0 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-45.0*
W-3	Min. 19/32" plywood or wood plank	(Optional) One or more layers, any combination, loose laid	Min. 2.0-inch Poly ISO 2, ACFoam III, Poly ISO 1, H-Shield CG, PSI-25, Multi-Max FA-3	Note 2	1 per 4.0 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-45.0*
W-4	Min. 23/32-inch plywood	(Optional) One or more layers, any combination, loose laid	Min 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 3.2 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-45.0*
MEMBRANE APPLIED IN LOW VOC BONDING ADHESIVE:							
W-5	Min. 23/32-inch plywood	(Optional) One or more layers, any combination, loose laid	Min 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 3.2 ft²	Mule-Hide Standard Black EPDM, Mule-Hide White-on-Black EPDM, Mule-Hide Standard Reinforced EPDM or Mule-Hide FR Reinforced EPDM / Mule-Hide Low VOC Bonding Adhesive	-45.0*
MEMBRANE APPLIED IN MULE-HIDE ACRYLIC WATER BASE BONDING ADHESIVE:							
W-6	Min. 19/32" plywood or wood plank; max. 24" spans	(Optional for Recover) One or more layers, any combination, min. 1.5-inch thick, loose laid	Min. 0.5-inch Dens Deck Prime, SECUROCK Gypsum-Fiber Roof Board or Min. 19/32-inch APA rated plywood	Mule-Hide Drill Point, Mule-Hide HDP or Mule-Hide EHD Fastener with Mule-Hide 3 in. Insulation Plate	1 per 2.0 ft²	Mule-Hide Standard Black EPDM or Standard Reinforced EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive	-45.0*

TABLE 1A: WOOD 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 3, Note 13)	Top Insulation Layer			Roof Cover (Note 15)	MDP (psf)
			Type	Fasteners (Note 2, Note 11)	Attach		
MEMBRANE APPLIED IN HELIX MAX LRA, HELIX LRA-DT:							
W-7	Min. 23/32-inch plywood	(Optional) One or more layers, any combination, loose laid	Min 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 3.2 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-45.0*

TABLE 1B: WOOD DECKS – NEW CONSTRUCTION SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER				
System No.	Deck (Note 1)	Roof Cover (Note 15)		MDP (psf)
		Membrane	Application	
MEMBRANE APPLIED IN MULE-HIDE ACRYLIC WATER BASE BONDING ADHESIVE:				
W-8	Min. 7/16" thick Mule-Hide FR Deck Panel A, Barrier Technology Corp "Blazeguard A", Mule-Hide FR Deck Panel C or Barrier Technology Corp "Blazeguard C" attached to wood supports spaced max. 24" o.c. using No. 8 x 2½-inch long course thread screws spaced 6" o.c. at all supports.	Mule-Hide Standard EPDM or White-on-Black EPDM	Mule-Hide Acrylic Water Base Bonding Adhesive	-120.0
MEMBRANE APPLIED IN MULE-HIDE FR ADHESIVE:				
W-9	Min. 15/32" APA rated plywood at max. 24" spans	Mule-Hide Standard EPDM or White-on-Black EPDM	Mule-Hide FR Adhesive	-120.0
W-10	Min. 15/32" APA rated plywood, Grade CDX, at max. 24" spans	Mule-Hide Standard EPDM or White-on-Black EPDM	Mule-Hide FR Adhesive	-127.5
W-11	Min. 19/32-inch APA rated plywood at max. 24" spans	Mule-Hide Standard EPDM or White-on-Black EPDM	Mule-Hide FR Adhesive	-187.5

TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER								
System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)	MDP (psf)
		Type	Fasten (Note 2, Note 11)	Attach	Type	Attach (Notes 6,7&8)		
MEMBRANE APPLIED IN MULE-HIDE BONDING ADHESIVE OR AEROWEB:								
SC-1	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 0.5-inch DensDeck followed by min. 2-inch Insulfoam VIII	Note 2	1 per 2.0 ft²	Min. 2-inch Insulfoam HD Composite	Helix Max LRA (RIBBON, 6-inch o.c.)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-45.0*
SC-2	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD	Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2	1 per 1.8 ft²	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-52.5
SC-3	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD	Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2	1 per 2.0 ft²	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-60.0
SC-4	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2-inch Poly ISO 1, Poly ISO 1-DWD	Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2	1 per 1.8 ft²	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-60.0
SC-5	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2-inch Poly ISO 1, Poly ISO 1-DWD	Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2	1 per 1.6 ft²	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-67.5

TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER								
System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)	MDP (psf)
		Type	Fasten (Note 2, Note 11)	Attach	Type	Attach (Notes 6,7&8)		
SC-6	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD	Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2	1 per 1.3 ft²	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-82.5
SC-7	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	Min. 2-inch Poly ISO 1, Poly ISO 1-DWD	Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2	1 per 1.3 ft²	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-90.0
SC-8	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	Min. 2-inch Poly ISO 1, Poly ISO 1-DWD	Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2	1 per 1.0 ft²	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-112.5
SC-9	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2-inch Poly ISO 1	Note 2	1 per 1.3 ft²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-60.0
MEMBRANE APPLIED IN HELIX MAX LRA, HELIX LRA-DT:								
SC-10	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers Min. 1.5-inch Poly ISO 1, or AC Foam II	Note 2	1 per 2.0 ft²	Additional layers of base insulation	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-45.0*
SC-11	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1	Note 2	1 per 3.2 ft²	Min. 1.0-inch base insulation	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-45.0*
SC-12	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1	Note 2	1 per 3.2 ft²	Min. 0.25-inch DensDeck Prime	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-45.0*

TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER								
System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)	MDP (psf)
		Type	Fasten (Note 2, Note 11)	Attach	Type	Attach (Notes 6,7&8)		
SC-13	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2.0-inch Poly ISO 1	Note 2	1 per 4.0 ft²	Min. 1.0-inch base insulation	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-45.0*
SC-14	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2.0-inch Poly ISO 1	Note 2	1 per 4.0 ft²	Min. 0.25-inch DensDeck Prime	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-45.0*
SC-15	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 0.5-inch DensDeck followed by min. 2-inch Insulfoam X	Note 2	1 per 2.0 ft²	Min. 2-inch Insulfoam HD Composite	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6 or SPLATTER)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA (FULL)	-45.0*
SC-16	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD	Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2	1 per 2.0 ft²	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch DensDeck Prime, Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-60.0
SC-17	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1	Note 2	1 per 1.6 ft²	Min. 1.0-inch base insulation	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6 or SPLATTER)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-67.5
SC-18	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2-inch Poly ISO 1, Poly ISO 1-DWD	Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2	1 per 1.6 ft²	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch DensDeck Prime, Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-67.5
SC-19	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD	Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2	1 per 1.3 ft²	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-82.5
SC-20	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	Min. 2-inch Poly ISO 1, Poly ISO 1-DWD	Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2	1 per 1.3 ft²	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-90.0

TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER								
System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)	MDP (psf)
		Type	Fasten (Note 2, Note 11)	Attach	Type	Attach (Notes 6,7&8)		
SC-21	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	Min. 2-inch Poly ISO 1, Poly ISO 1-DWD	Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2	1 per 1.0 ft²	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch DensDeck Prime, Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-112.5

TABLE 2B: STEEL DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF) OR RECOVER SYSTEM TYPE B-2: MECHANICALLY ATTACHED BASE INSULATION, BONDED TEMP ROOF, BONDED TOP INSULATION, BONDED ROOF COVER									
System No.	Deck (Note 1)	Base Insulation Layer			Temp Roof	Insulation		Roof Cover (Note 15)	MDP (psf)
		Type	Fastener (Note 2, Note 11)	Attach		Type	Attach (Notes 6,7&8)		
MEMBRANE APPLIED IN HELIX MAX LRA, HELIX LRA-DT:									
SC-22	Min. 22 ga., type B, Grade 33 steel	Min. 0.5-inch DensDeck Prime or min. 0.625-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 2.0 ft²	CAV-GRIP Primer followed by F5 Air and Vapor Barrier, self-adhered	Insulation: Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Insulation: Helix Max LRA or Helix Max LRA-DT (RIBBON) Coverboard: Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-45.0*
SC-23	Min. 22 ga., type B, Grade 33 steel	Min. 0.5-inch DensDeck Prime	Note 2	1 per 2.0 ft²	CAV-GRIP or CCW-702 Primer followed by F5 Air and Vapor Barrier, self-adhered	Min. 1.5-inch Poly ISO 1	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-52.5

TABLE 2B: STEEL DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF) OR RECOVER SYSTEM TYPE B-2: MECHANICALLY ATTACHED BASE INSULATION, BONDED TEMP ROOF, BONDED TOP INSULATION, BONDED ROOF COVER									
System No.	Deck (Note 1)	Base Insulation Layer			Temp Roof	Insulation		Roof Cover (Note 15)	MDP (psf)
		Type	Fastener (Note 2, Note 11)	Attach		Type	Attach (Notes 6,7&8)		
SC-24	Min. 22 ga., type B, Grade 33 steel	Min. 0.5-inch DensDeck Prime	Drill Point Fastener with Insulation Fastening Plate	1 per 1.6 ft²	SureMB 90TG or SureMB 120TG, torch-applied	Insulation: Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD Coverboard: Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Insulation: Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) Coverboard: Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-67.5

TABLE 2C: 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 3, Note 13)	Top Insulation Layer			Roof Cover (Note 15)	MDP (psf)
			Type	Fasteners (Note 2, Note 11)	Attach		
MEMBRANE APPLIED IN MULE-HIDE BONDING ADHESIVE OR AEROWEB:							
SC-25	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 0.5-inch thick HP Recovery Board	Note 2	1 per 2.0 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-45.0*
SC-26	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch thick DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 2.0 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-45.0*
SC-27	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1-inch Poly ISO 1	Note 2	1 per 1.6 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-45.0*

TABLE 2C: 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 3, Note 13)	Top Insulation Layer			Roof Cover (Note 15)	MDP (psf)
			Type	Fasteners (Note 2, Note 11)	Attach		
SC-28	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch Poly ISO 1, Poly ISO 2, ACFoam III, H-Shield CG, PSI-25, Multi-Max FA-3	Note 2	1 per 2.0 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-45.0*
SC-29	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2.0-inch Poly ISO 1, Poly ISO 2, ACFoam III, H-Shield CG, PSI-25, Multi-Max FA-3	Note 2	1 per 4.0 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-45.0*
SC-30	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ACFoam Composite/FB, H-Shield-WF Plus	Note 2	1 per 3.0 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-45.0*
SC-31	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1 or Poly ISO 2	Min. 0.5-inch Poly ISO 1-HD90	Note 2	1 per 4.0 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-45.0*
SC-32	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1-inch Poly ISO 1	Min. 0.5-inch DensDeck Prime	Note 2	1 per 1.6 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-52.5
SC-33	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1 or Poly ISO 2	Min. 0.5-inch Poly ISO 1-HD90	Note 2	1 per 1.8 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-60.0
SC-34	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch Poly ISO 1-DWD, H-Shield CG	Note 2	1 per 2.0 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-60.0
SC-35	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 0.5-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board, followed by min. 1.5-inch Styrofoam Roofmate or Highload 60	Min. 0.5-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 1.3 ft²	Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-67.5
SC-36	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1	Min. 0.5-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 1.3 ft²	Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-67.5

TABLE 2C: 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 3, Note 13)	Top Insulation Layer			Roof Cover (Note 15)	MDP (psf)
			Type	Fasteners (Note 2, Note 11)	Attach		
SC-37	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2.0-inch Poly ISO 1 or Poly ISO 2	Note 2	1 per 1.6 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-75.0
SC-38	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1-inch Poly ISO 1	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 1.6 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-75.0
SC-39	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2-inch Poly ISO 1	Min. 19/32-inch APA rated plywood	Note 2	1 per 1.6 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-82.5
SC-40	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 0.5-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board, followed by min. 1.5-inch Styrofoam Roofmate or Highload 60	Min. 0.5-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 1.0 ft²	Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-97.5
SC-41	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1	Min. 0.5-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 1.0 ft²	Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-97.5
SC-42	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1	Min. 19/32-inch APA rated plywood	Note 2	1 per 1.0 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-105.0
SC-43	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch Poly ISO 1-DWD, H-Shield CG, Poly ISO 1-HD-Composite	Note 2	1 per 1.0 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-112.5
SC-44	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1 or Poly ISO 2	Min. 0.5-inch Poly ISO 1-HD90	Note 2	1 per 1.3 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-112.5
SC-45	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch Poly ISO 1-DWD, H-Shield CG, Poly ISO 1-HD-Composite	Note 2	1 per 1.0 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-127.5

TABLE 2C: 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 3, Note 13)	Top Insulation Layer			Roof Cover (Note 15)	MDP (psf)
			Type	Fasteners (Note 2, Note 11)	Attach		
SC-46	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	0.5-inch EcoStorm VSH	Steel: Drill Point Fastener and Insulation Fastening Plate or SecurFast Insulation Fastening Plate Concrete: Note 2	1 per 1.0 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb	-150.0
MEMBRANE APPLIED IN AQUA BASE 120 BA ADHESIVE:							
SC-47	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 2, Poly ISO 1	Min. 0.5-inch HP Recovery Board	Note 2	1 per 2.0 ft²	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Aqua Base 120 BA	-45.0*
SC-48	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch DensDeck Prime	Note 2	1 per 2.0 ft²	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Aqua Base 120 BA	-45.0*
SC-49	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 7/16" APA Rated oriented strand board	Note 2	1 per 2.0 ft²	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Aqua Base 120 BA	-45.0*
SC-50	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1-inch Poly ISO 1	Note 2	1 per 1.6 ft²	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Aqua Base 120 BA	-45.0*
SC-51	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch Poly ISO 1 or Poly ISO 2	Note 2	1 per 2.0 ft²	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Aqua Base 120 BA	-45.0*
SC-52	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 2, Poly ISO 1	Min. 0.5-inch HP Recovery Board	Note 2	1 per 2.0 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Aqua Base 120 BA	-45.0*
SC-53	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch DensDeck Prime	Note 2	1 per 2.0 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Aqua Base 120 BA	-45.0*
SC-54	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch Poly ISO 1 or Poly ISO 2	Note 2	1 per 2.0 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Aqua Base 120 BA	-45.0*
MEMBRANE APPLIED IN LOW VOC BONDING ADHESIVE:							
SC-55	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch Polyiso HP-H or Poly ISO 1, H-Shield	Note 2	1 per 3.2 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Low VOC Bonding Adhesive	-45.0*

TABLE 2C: 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 3, Note 13)	Top Insulation Layer			Roof Cover (Note 15)	MDP (psf)
			Type	Fasteners (Note 2, Note 11)	Attach		
SC-56	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2.0-inch Polyiso HP-H or Poly ISO 1, H-Shield	Note 2	1 per 4 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Low VOC Bonding Adhesive	-45.0*
SC-57	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 2, ACFoam II, Polyiso HP-H, HP-N, HP-W, Poly ISO 1, H-Shield, ENRGY 3	Min. 0.5-inch HP Recovery Board	Note 2	1 per 2 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Low VOC Bonding Adhesive	-45.0*
SC-58	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2.0-inch Polyiso HP-H or Poly ISO 1, H-Shield	Note 2	1 per 1.6 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Low VOC Bonding Adhesive	-75.0
SC-59	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch Poly ISO 1-DWD	Note 2	1 per 1 ft²	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Low VOC Bonding Adhesive	-75.0
MEMBRANE APPLIED IN MULE-HIDE ACRYLIC WATER BASE BONDING ADHESIVE: ALEX							
SC-60	Min. 22 ga., type B, Grade 33 steel or Min. 2,500 psi structural concrete	(Optional for Recover) One or more layers, any combination, min. 1.5-inch thick, loose laid	Min. 0.5-inch Dens Deck Prime, SECUROCK Gypsum-Fiber Roof Board or Min. 19/32-inch APA rated plywood	Mule-Hide Drill Point (steel only), Mule-Hide HDP or Mule-Hide EHD (steel only) Fastener or Mule-Hide Fluted Concrete Nail *(concrete only)* with Mule-Hide 3 in. Insulation Plate	1 per 2.0 ft²	Mule-Hide Standard Black EPDM or Standard Reinforced EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive	-45.0*
SC-61	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 0.25-inch Dens Deck or SECUROCK Gypsum-Fiber Roof Board or Min. 1.5-inch Poly ISO 1 or H-Shield, loose laid.	Min. 19/32-inch APA rated plywood	Note 2	1 per 2.0 ft²	Mule-Hide Standard Black EPDM or White-on-Black EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive	-45.0*
SC-62	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 0.25-inch Dens Deck or SECUROCK Gypsum-Fiber Roof Board or Min. 1.5-inch Poly ISO 1 or H-Shield, loose laid.	Min. 19/32-inch APA rated plywood	Note 2	1 per 1.6 ft²	Mule-Hide Standard Black EPDM or White-on-Black EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive	-82.5
SC-63	Min. 22 ga., type B, Grade 33 steel or Min. 2,500 psi structural concrete	Min. 0.25-inch Dens Deck or SECUROCK Gypsum-Fiber Roof Board or Min. 1.5-inch Poly ISO 1 or H-Shield, loose laid.	Min. 19/32-inch APA rated plywood	Mule-Hide HD Fasteners and Mule-Hide 3 in. Insulation Plates or Trufast #14 HD Fasteners and Trufast 3" Metal Insulation Plate plates	1 per 1.3 ft²	Mule-Hide Standard Black EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive	-105.0

TABLE 2C: 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 3, Note 13)	Top Insulation Layer			Roof Cover (Note 15)	MDP (psf)
			Type	Fasteners (Note 2, Note 11)	Attach		
SC-64	Min. 22 ga., type B, Grade 33 steel or Min. 2,500 psi structural concrete	(Optional) Min. 0.25-inch Dens Deck or SECUROCK Gypsum-Fiber Roof Board or Min. 1.5-inch Poly ISO 1 or H-Shield, loose laid.	Min. 2-inch Poly ISO 1-NB or H-Shield NB or Min. 3-inch Poly ISO 1 Cool-Vent or Cool-Vent	Mule-Hide HD Fasteners and Mule-Hide 3 in. Insulation Plates or Trufast #14 HD Fasteners and Trufast 3" Metal Insulation Plate plates	1 per 1.3 ft²	Mule-Hide Standard Black EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive	-105.0
MEMBRANE APPLIED IN, HELIX MAX LRA, HELIX LRA-DT:							
SC-65	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch thick, one or more layers, any combination, loose laid	Min 0.5-inch HP Recovery Board	Note 2	1 per 2.0 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (RIBBON, 12-inch o.c.)	-45.0*
SC-66	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch thick, one or more layers, any combination, loose laid	Min 0.5-inch DensDeck Prime	Note 2	1 per 2.0 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (RIBBON, 12-inch o.c.)	-45.0*
SC-67	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1 or Poly ISO 2	Min. 0.5-inch Poly ISO 1-HD90	Note 2	1 per 4.0 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA (FULL)	-45.0*
SC-68	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1 or Poly ISO 2	Min. 0.5-inch Poly ISO 1-HD90	Note 2	1 per 1.8 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA (FULL)	-60.0
SC-69	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch thick, one or more layers, any combination, loose laid	Min. 19/32-inch APA rated plywood	Note 2	1 per 1.9 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-75.0
SC-70	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch thick, one or more layers, any combination, loose laid	0.5-inch EcoStorm VSH	Steel: Drill Point Fastener and Insulation Fastening Plate or SecurFast Insulation Fastening Plate Concrete: Note 2	1 per 1.0 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-82.5
SC-71	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch thick, one or more layers, any combination, loose laid	Min. 0.5-inch DensDeck Prime	Note 2	1 per 1.0 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA (FULL)	-97.5
SC-72	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch Poly ISO 1	Note 2	1 per 1.0 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA (FULL)	-112.5

TABLE 2C: 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 3, Note 13)	Top Insulation Layer			Roof Cover (Note 15)	MDP (psf)
			Type	Fasteners (Note 2, Note 11)	Attach		
SC-73	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1 or Poly ISO 2	Min. 0.5-inch Poly ISO 1-HD90 or EcoStorm VSH	Note 2	1 per 1.3 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA (FULL)	-112.5
SC-74	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch thick, one or more layers, any combination, loose laid	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 1.0 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA (FULL)	-127.5
SC-75	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch Poly ISO 1-DWD, H-Shield CG	Note 2	1 per 1.0 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-135.0
SC-76	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch thick, one or more layers, any combination, loose laid	Min. 19/32-inch APA rated plywood	Note 2	1 per 1.0 ft²	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL)	-135.0

TABLE 2D: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER SYSTEM TYPE D-1: INSULATED, MECHANICALLY ATTACHED ROOF COVER (STRESS PLATES)							
System No.	Deck (Note 1)	Insulation (Note 3, Note 13)		Roof Cover (Note 15)			MDP (psf)
		Type	Attach (Note 5)	Membrane	Fasteners (Note 11)	Attachment	
SC-77	Min. 22 ga, type B, Grade 40 steel or min. 2,500 psi structural concrete	Min. 1.5" thick, one or more layers, any combination	Prelim attach	Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM (0.070" thick)	Mule-Hide HD Fasteners or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Polymer Seam Plates	6-inch o.c. within 6-inch wide laps spaced 114-inch o.c.	-52.5
SC-78	Min. 22 ga, type B, Grade 80 steel or min. 2,500 psi structural concrete	Min. 1.5" thick, one or more layers, any combination	Prelim attach	Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide HD Fasteners or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Polymer Seam Plates	6-inch o.c. within 6-inch wide laps spaced 114-inch o.c.	-52.5
SC-79	Min. 22 ga, type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5" thick, one or more layers, any combination	Prelim attach	Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide HD Fasteners or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Polymer Seam Plates	6-inch o.c. within 6-inch wide laps spaced 90-inch o.c.	-52.5
SC-80	Min. 22 ga, type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5" thick, one or more layers, any combination	Prelim attach	Mule-Hide White-on-Black Fleece-Backed 145	Mule-Hide HD Fasteners or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Polymer Seam Plates	6-inch o.c. within 6-inch wide laps spaced 112-inch o.c.	-52.5
SC-81	Min. 22 ga, type B, Grade 80 steel or min. 2,500 psi structural concrete	Min. 1.5" thick, one or more layers, any combination	Prelim attach	Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM (0.070" thick)	Mule-Hide HD Fasteners or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Polymer Seam Plates	6-inch o.c. within 7-inch wide laps spaced 115-inch o.c.	-60.0

TABLE 2E: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER SYSTEM TYPE D-1: INSULATED, MECHANICALLY ATTACHED ROOF COVER (BATTENS)							
System No.	Deck (Note 1)	Insulation (Note 3, Note 13)		Roof Cover (Note 15)			MDP (psf)
		Type	Attach (Note 5)	Membrane	Fasteners (Note 11)	Attachment	
SC-82	Min. 22 ga, type B, Grade 40 steel or min. 2,500 psi structural concrete	Min. 1.5" thick, one or more layers, any combination	Prelim attach	Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide EHD Fasteners (steel only) or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Metal Batten Bars	Fasteners 6-inch o.c. through batten within 6-inch wide laps spaced 114-inch o.c.	-52.5
SC-83	Min. 22 ga, type B, Grade 80 steel or min. 2,500 psi structural concrete	Min. 1.5" thick, one or more layers, any combination	Prelim attach	Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide EHD Fasteners (steel only) or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Metal Batten Bars	Fasteners 6-inch o.c. through batten within min. 5-inch wide laps spaced max. 115-inch o.c.	-60.0
SC-84	Min. 22 ga, type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5" thick, one or more layers, any combination	Prelim attach	Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide EHD Fasteners (steel only) or Mule-Hide Fluted Concrete Nail (concrete only) with OMG Polymer Batten Strip.	Fasteners 6-inch o.c. through batten within 6-inch wide laps spaced 90-inch o.c.	-60.0
SC-85	Min. 22 ga, type B, Grade 80 steel or min. 2,500 psi structural concrete	Min. 1.5" thick, one or more layers, any combination	Prelim attach	Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide EHD Fasteners (steel only) or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Metal Batten Bars	Fasteners 6-inch o.c. through batten within 6-inch wide laps spaced 90-inch o.c.	-82.5

TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF) SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER NOTE: REFER TO NOTE 16 FOR VAPOR BARRIER OPTIONS								
System No.	Roof Deck (Note 1)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)		MDP (psf)
		Type	Attach (Notes 6,7&8)	Type	Attach (Notes 6,7&8)	Membrane	Application	
MEMBRANE APPLIED IN MULE-HIDE BONDING ADHESIVE OR AEROWEB:								
C-1.	Min. 2,500 psi structural concrete (primed)	Min. 0.5-inch Poly ISO 1	Hot Asphalt	(Optional) Additional layers of base insulation	Hot Asphalt	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-157.5
C-2.	Min. 2,500 psi structural concrete (primed)	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	Hot Asphalt	(Optional) Additional layers of base insulation	Hot Asphalt	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-330.0
C-3.	Min. 2,500 psi structural concrete (primed)	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	Hot Asphalt	Min 0.5-inch HP Recovery Board, GP High Density Roof Fiberboard or Temple Fiber Base HD1 or HD6	Hot Asphalt	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-330.0
C-4.	Min. 2,500 psi structural concrete (primed)	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	Hot Asphalt	Min. 0.25-inch DensDeck, DensDeck Prime	Hot Asphalt	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-352.5
C-5.	Min. 2,500 psi structural concrete	Min. 0.5-inch Poly ISO 1	Helix Max LRA or Helix Max LRA-DT (RIBBON)	(Optional) Additional layers of base insulation	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-157.5
C-6.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Min 0.5-inch HP Recovery Board	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-157.5
C-7.	Min. 2,500 psi structural concrete	Min. 0.5-inch Poly ISO 1, Poly ISO 1-DWD	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-157.5
C-8.	Min. 2,500 psi structural concrete	Min. 0.5-inch Poly ISO 1	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-157.5
C-9.	Min. 2,500 psi structural concrete	Min. 1.5-inch InsulLam (GYP)	Helix Max LRA (FULL)	None	N/A	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-157.5
C-10.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Min. 0.25-inch DensDeck, DensDeck Prime	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-232.5

TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF) SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER NOTE: REFER TO NOTE 16 FOR VAPOR BARRIER OPTIONS								
System No.	Roof Deck (Note 1)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)		MDP (psf)
		Type	Attach (Notes 6,7&8)	Type	Attach (Notes 6,7&8)	Membrane	Application	
C-11.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	Helix Max LRA or Helix Max LRA-DT (RIBBON)	(Optional) Additional layers of base insulation	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-240.0
C-12.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Min. 2-inch H-Shield-WF	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-240.0
C-13.	Min. 2,500 psi structural concrete	Min. 1.5-inch InsulLam (WF)	Helix Max LRA (FULL)	None	N/A	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-255.0
C-14.	Min. 2,500 psi structural concrete	(Optional) Min. 1.5-inch Poly ISO 1-DWD or H-Shield CG	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Min. 1.5-inch Poly ISO 1-HD-Composite	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-270.0
C-15.	Min. 2,500 psi structural concrete	Min. 1.5-inch Insulfoam HD Composite	Helix Max LRA (FULL)	None	N/A	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-270.0
C-16.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	Helix Max LRA or Helix Max LRA-DT (FULL)	(Optional) Additional layers of base insulation	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-330.0
C-17.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	Helix Max LRA or Helix Max LRA-DT (FULL)	Min 0.5-inch HP Recovery Board	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-330.0
C-18.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	Helix Max LRA or Helix Max LRA-DT (FULL)	Min. 2-inch H-Shield-WF	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-330.0
C-19.	Min. 2,500 psi structural concrete	(Optional) Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD or Min. 1-inch Insulfoam IX	Helix Max LRA (RIBBON)	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA (RIBBON)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-352.5
C-20.	Min. 2,500 psi structural concrete	0.5-inch EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (FULL)	None	N/A	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-495.0
C-21.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	OB500	Min 0.5-inch HP Recovery Board	OB500	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-120.0

TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF) SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER NOTE: REFER TO NOTE 16 FOR VAPOR BARRIER OPTIONS								
System No.	Roof Deck (Note 1)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)		MDP (psf)
		Type	Attach (Notes 6,7&8)	Type	Attach (Notes 6,7&8)	Membrane	Application	
C-22.	Min. 2,500 psi structural concrete	Min. 1.0-inch Foamular 250	OB500	Min 0.5-inch HP Recovery Board	OB500	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-120.0
C-23.	Min. 2,500 psi structural concrete	Min. 2.0-inch Insulfoam IX	OB500	Min. 0.25-inch DensDeck or DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	OB500	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-120.0
C-24.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 2, ACFoam III	OB500	(Optional) Additional layers of base insulation	OB500	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-150.0
C-25.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	OB500	Min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	OB500	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-150.0
C-26.	Min. 2,500 psi structural concrete	Min. 0.5-inch Poly ISO 1	OB500	(Optional) Additional layers of base insulation	OB500	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-157.5
C-27.	Min. 2,500 psi structural concrete	Min. 1.0-inch Styrofoam Roofmate or Highload 60	OB500	Min. 0.25-inch DensDeck, DensDeck Prime	OB500	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-232.5
C-28.	Min. 2,500 psi structural concrete	Min. 1.0-inch Foamular 250	OB500	Min. 0.25-inch DensDeck or DensDeck Prime	OB500	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-277.5
MEMBRANE APPLIED IN AQUA BASE 120 BA ADHESIVE:								
C-29.	Min. 2,500 psi structural concrete (primed)	(Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1	Hot Asphalt	Min. 0.5-inch HP Recovery Board	Hot Asphalt	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-90.0
C-30.	Min. 2,500 psi structural concrete (primed)	Min. 0.5-inch Poly ISO 1	Hot Asphalt	(Optional) Additional layers of base insulation	Hot Asphalt	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-157.5
C-31.	Min. 2,500 psi structural concrete (primed)	Min. 1.5-inch Poly ISO 2, Poly ISO 1	Hot Asphalt	(Optional) Additional layers of base insulation	Hot Asphalt	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-165.0
C-32.	Min. 2,500 psi structural concrete (primed)	(Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1	Hot Asphalt	Min. 0.25-inch DensDeck Prime	Hot Asphalt	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-165.0

TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF) SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER NOTE: REFER TO NOTE 16 FOR VAPOR BARRIER OPTIONS								
System No.	Roof Deck (Note 1)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)		MDP (psf)
		Type	Attach (Notes 6,7&8)	Type	Attach (Notes 6,7&8)	Membrane	Application	
C-33.	Min. 2,500 psi structural concrete	(Optional) Min. 1.5-inch Poly ISO 1 or Poly ISO 2	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Min. 0.5-inch HP Recovery Board	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-90.0
C-34.	Min. 2,500 psi structural concrete	Min. 1-inch Insulfoam IX	Helix Max LRA (FULL or RIBBON)	Min. 0.5-inch HP Recovery Board	Helix Max LRA (FULL or RIBBON)	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-90.0
C-35.	Min. 2,500 psi structural concrete	Min. 1.5-inch InsulLam (WF)	Helix Max LRA (FULL)	None	N/A	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-90.0
C-36.	Min. 2,500 psi structural concrete	Min. 0.5-inch Poly ISO 1	Helix Max LRA or Helix Max LRA-DT (RIBBON)	(Optional) Additional layers of base insulation	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-157.5
C-37.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1 or Poly ISO 2	Helix Max LRA or Helix Max LRA-DT (RIBBON)	(Optional) Additional layers of base insulation	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-165.0
C-38.	Min. 2,500 psi structural concrete	(Optional) Min. 1.5-inch Poly ISO 1 or Poly ISO 2	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Min. 0.25-inch DensDeck Prime	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-165.0
C-39.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1 or Poly ISO 2	Helix Max LRA or Helix Max LRA-DT (FULL)	(Optional) Additional layers of base insulation	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Aqua Base 120 BA	-232.5
C-40.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 2, Poly ISO 1	OB500	(Optional) Additional layers of base insulation	OB500	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-105.0
C-41.	Min. 2,500 psi structural concrete	(Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1	OB500	Min. 0.5-inch HP Recovery Board	OB500	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-90.0
C-42.	Min. 2,500 psi structural concrete	(Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1	OB500	Min. 0.25-inch DensDeck Prime	OB500	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-150.0
MEMBRANE APPLIED IN LOW VOC BONDING ADHESIVE:								
C-43.	Min. 2,500 psi structural concrete	Min. 0.5-inch Poly ISO 1, H-Shield	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Low VOC Bonding Adhesive	-75.0

TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF) SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER NOTE: REFER TO NOTE 16 FOR VAPOR BARRIER OPTIONS								
System No.	Roof Deck (Note 1)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)		MDP (psf)
		Type	Attach (Notes 6,7&8)	Type	Attach (Notes 6,7&8)	Membrane	Application	
C-44.	Min. 2,500 psi structural concrete	Min. 1.5-inch Insulam (GYP)	Helix Max LRA (FULL)	None	N/A	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Low VOC Bonding Adhesive	-75.0
C-45.	Min. 2,500 psi structural concrete	(Optional) Min. 1.5-inch Poly ISO 1-DWD or H-Shield CG	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Min. 1.5-inch Poly ISO 1-HD Composite, Poly ISO 1-HD-Composite or H-Shield HD Composite	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Low VOC Bonding Adhesive	-285.0
C-46.	Min. 2,500 psi structural concrete	Min. 1.5-inch Insulfoam HD Composite	Helix Max LRA (FULL)	None	N/A	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Low VOC Bonding Adhesive	-472.5
C-47.	Min. 2,500 psi structural concrete	(Optional) Min. 1.5-inch Poly ISO 1-DWD or H-Shield CG	Helix Max LRA or Helix Max LRA-DT (FULL)	Min. 1.5-inch Poly ISO 1-HD Composite	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Low VOC Bonding Adhesive	-495.0
MEMBRANE APPLIED IN HELIX MAX LRA, HELIX LRA-DT:								
C-48.	Min. 2,500 psi structural concrete	(Optional) Min. 0.5-inch Poly ISO 1, Poly ISO 1-DWD or Min. 1-inch Insulfoam IX	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	-90.0
C-49.	Min. 2,500 psi structural concrete	Min. 1-inch Insulfoam IX	Helix Max LRA (RIBBON)	Min. 0.5-inch HP Recovery Board	Helix Max LRA (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-142.5
C-50.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1 or Poly ISO 2	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Min. 0.5-inch HP Recovery Board	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-157.5
C-51.	Min. 2,500 psi structural concrete	Min. 1.5-inch Kingspan GreeenGuard or Min. 1.0-inch Dow STYROFOAM ROOFMATE	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Min. 0.5-inch HP Recovery Board	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-157.5
C-52.	Min. 2,500 psi structural concrete	Min. 0.5-inch Poly ISO 1, Poly ISO 1-DWD	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-157.5

TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF) SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER NOTE: REFER TO NOTE 16 FOR VAPOR BARRIER OPTIONS								
System No.	Roof Deck (Note 1)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)		MDP (psf)
		Type	Attach (Notes 6,7&8)	Type	Attach (Notes 6,7&8)	Membrane	Application	
C-53.	Min. 2,500 psi structural concrete	(Optional) Poly ISO 1, or AC Foam II	Helix Max LRA or Helix Max LRA-DT (FULL)	Poly ISO 1-NB	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-187.5
C-54.	Min. 2,500 psi structural concrete	Min. 0.5-inch HP Recovery Board	Helix Max LRA (RIBBON)	None	N/A	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-202.5
C-55.	Min. 2,500 psi structural concrete	(Optional) Min. 1.5-inch Poly ISO 1, or AC Foam II	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Min. 19/32-inch APA rated plywood or min. 0.25-inch DensDeck or DensDeck Prime	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-240.0
C-56.	Min. 2,500 psi structural concrete	Min. 1.5-inch InsulLam (WF)	Helix Max LRA (FULL)	None	N/A	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-255.0
C-57.	Min. 2,500 psi structural concrete	Min. 1-inch Insulfoam IX	Helix Max LRA (FULL)	Min. 0.5-inch HP Recovery Board	Helix Max LRA (FULL)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-300.0
C-58.	Min. 2,500 psi structural concrete	Min. 1-inch FM Approved EPS (BASF, NOVA, or Huntsman beads)	Helix Max LRA or Helix Max LRA-DT (FULL)	Min. 0.5-inch HP Recovery Board	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-322.5
C-59.	Min. 2,500 psi structural concrete	Min. 1.5-inch Poly ISO 1 or Poly ISO 2	Helix Max LRA or Helix Max LRA-DT (FULL)	Min. 0.5-inch HP Recovery Board	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-330.0
C-60.	Min. 2,500 psi structural concrete	Min. 1.5-inch Kingspan GreeenGuard or Min. 1.0-inch Dow STYROFOAM ROOFMATE	Helix Max LRA or Helix Max LRA-DT (FULL)	Min. 0.5-inch HP Recovery Board	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-330.0
C-61.	Min. 2,500 psi structural concrete	(Optional) Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD or Min. 1-inch Insulfoam IX	Helix Max LRA (RIBBON)	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-352.5
C-62.	Min. 2,500 psi structural concrete	(Optional) Min. 1.5-inch Poly ISO 1, or AC Foam II	Helix Max LRA or Helix Max LRA-DT (FULL)	Min. 19/32-inch APA rated plywood or min. 0.25-inch DensDeck or DensDeck Prime	Helix Max LRA or Helix Max LRA-DT (FULL)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-457.5

TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER
NOTE: REFER TO NOTE 16 FOR VAPOR BARRIER OPTIONS

System No.	Roof Deck (Note 1)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)		MDP (psf)
		Type	Attach (Notes 6,7&8)	Type	Attach (Notes 6,7&8)	Membrane	Application	
C-63.	Min. 2,500 psi structural concrete	EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (FULL)	None	N/A	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-495.0

TABLE 3B: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER

System No.	Roof Deck (Note 1)	Roof Cover (Note 15)		MDP (psf)
		Membrane	Application	
C-64.	Min. 2,500 psi structural concrete	Mule-Hide White-on-Black EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-240.0
C-65.	Min. 2,500 psi structural concrete	Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-240.0
C-66.	Min. 2,500 psi structural concrete	Mule-Hide Standard Black EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-315.0
C-67.	Min. 2,500 psi structural concrete	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL).	-495.0

TABLE 4A: LIGHTWEIGHT CONCRETE OVER STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER

System No.	Deck (Note 1)	LWC (Note 14)		Roof Cover (Note 15)		MDP (psf)
		Type	Surface Treatment	Membrane	Application	
CELCORE (NOA 18-0717.05):						
MEMBRANE APPLIED IN HELIX MAX LRA, HELIX MAX LRA-DT:						
LWC-1	Min. 22 ga., Type BV, Grade 33 steel; max. 6 ft spans	Min. 36 pcf wet cast density, min. 200 psi, min. 2-inch thick Celcore MF Cellular Concrete.	(Optional) Celcore PVA Curing Compound	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-60.0
LWC-2	Min. 22 ga., Type BV, Grade 33 steel; max. 4 ft spans.	Min. 38 pcf wet cast density, min. 200 psi, min. 2-inch thick Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture.	Celcore PVA Curing Compound	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-67.5
LWC-3	Min. 22 ga., Type BV, Grade 33 steel; max. 6 ft spans	Min. 36 pcf wet cast density, min. 200 psi, min. 2-inch thick Celcore MF Cellular Concrete. When walkable, LWIC is attached with Mule-Hide HDP Fastener with Mule-Hide 3 in. Insulation Plate at a density of 1 per 9 ft^2.	(Optional) Celcore PVA Curing Compound	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-67.5
LWC-4	Min. 22 ga., Type BV, Grade 33 steel; max. 6 ft spans	Min. 36 pcf wet cast density, min. 200 psi, min. 2-inch thick Celcore MF Cellular Concrete. When walkable, LWIC is attached with Mule-Hide HDP Fastener with Mule-Hide 3 in. Insulation Plate at a density of 1 per 1.0 ft^2.	(Optional) Celcore PVA Curing Compound	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-120.0

TABLE 4A: LIGHTWEIGHT CONCRETE OVER STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER						
System No.	Deck (Note 1)	LWC (Note 14)		Roof Cover (Note 15)		MDP (psf)
		Type	Surface Treatment	Membrane	Application	
ELASTIZELL (NOA 23-0817.05):						
MEMBRANE APPLIED IN HELIX MAX LRA, HELIX MAX LRA-DT:						
LWC-5	Min. 22 ga., Type BV, Grade 33 steel; max. 5 ft spans.	Min. 27 pcf wet cast density, min. 250 psi, min. 2-inch thick, Elastizell Range II LWIC	None	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-45.0
LWC-6	Min. 22 ga., Type BV, Grade 33 steel; max. 5 ft spans; primed with Zell Bonding Agent.	Min. 27 pcf wet cast density, min. 250 psi, min. 2-inch thick, Elastizell Range II LWIC	None	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-60.0
LWC-7	Min. 2,500 psi structural concrete	Min. 27 pcf wet cast density, min. 250 psi, min. 2-inch thick, Elastizell Range II LWIC	None	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-90.0

TABLE 5A: RECOVER APPLICATIONS SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER								
[A] The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to 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)	Membrane	Application	
MEMBRANE APPLIED IN MULE-HIDE BONDING ADHESIVE OR AEROWEB:								
R-1	Existing asphaltic BUR	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	Hot Asphalt	(Optional) Additional layers of base insulation	Hot Asphalt	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-330.0
R-2	Existing asphaltic BUR	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	Hot Asphalt	Min 0.5-inch HP Recovery Board, GP High Density Roof Fiberboard or Temple Fiber Base HD1 or HD6	Hot Asphalt	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-330.0
R-3	Existing asphaltic BUR	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	Hot Asphalt	Min. 0.25-inch DensDeck, DensDeck Prime	Hot Asphalt	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-352.5

TABLE 5A: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

[A] The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to 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)	Membrane	Application	
R-4	Existing fully-adhered granule-surfaced asphalt built-up roof (BUR), smooth-surfaced asphalt built-up roof (BUR), granule-surfaced APP or SBS modified bitumen or smooth-surfaced SBS modified bitumen	Min. 1-inch Poly ISO 1, Poly ISO 1-DWD	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Insulation: (Optional) Additional layer(s) base insulation Coverboard: (Optional) Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-167.5
R-5	Existing fully-adhered asphalt built-up roof (BUR) with flood coat & gravel (loose gravel removed)	Min. 1-inch Poly ISO 1, Poly ISO 1-DWD	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	Insulation: (Optional) Additional layer(s) base insulation Coverboard: (Optional) Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-167.5
R-6	Existing fully-adhered granule-surfaced asphalt built-up roof (BUR), smooth-surfaced asphalt built-up roof (BUR), granule-surfaced APP or SBS modified bitumen or smooth-surfaced SBS modified bitumen	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON)	None	N/A	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-302.5

TABLE 5A: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

[A] The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to 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)	Membrane	Application	
R-7	Existing fully-adhered asphalt built-up roof (BUR) with flood coat & gravel (loose gravel removed)	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	None	N/A	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-302.5
R-8	Existing asphaltic BUR or mineral surface cap	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	OB500	(Optional) Additional layers of base insulation	OB500	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-120.0
R-9	Existing asphaltic BUR or mineral surface cap	Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1	OB500	Min 0.5-inch HP Recovery Board, GP High Density Roof Fiberboard or Temple Fiber Base HD1 or HD6 or min. 0.25-inch DensDeck or DensDeck Prime	OB500	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-120.0
R-10	Existing asphaltic BUR or mineral surface cap	Min. 1.0-inch Foamular 250 or Styrofoam Roofmate or Highload 60 or min. 2.0-inch, Insulfoam IX	OB500	Min 0.5-inch HP Recovery Board, GP High Density Roof Fiberboard or Temple Fiber Base HD1 or HD6 or min. 0.25-inch DensDeck or DensDeck Prime	OB500	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-120.0
R-11	Existing asphaltic BUR or mineral surface cap	Min. 1.0-inch Foamular 250	OB500	Min. 0.25-inch DensDeck or DensDeck Prime	OB500	Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Bonding Adhesive or AeroWeb	-120.0
MEMBRANE APPLIED IN AQUA BASE 120 BA ADHESIVE:								
R-12	Existing asphaltic BUR	Min. 1.5-inch Poly ISO 2, Poly ISO 1	Hot Asphalt	(Optional) Additional layers of base insulation	Hot Asphalt	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-165.0
R-13	Existing asphaltic BUR	(Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1	Hot Asphalt	Min. 0.5-inch HP Recovery Board	Hot Asphalt	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-90.0
R-14	Existing asphaltic BUR	(Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1	Hot Asphalt	Min. 0.25-inch DensDeck Prime	Hot Asphalt	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-165.0
R-15	Existing asphaltic BUR or mineral surface cap	Min. 1.5-inch Poly ISO 2, Poly ISO 1	OB500	(Optional) Additional layers of base insulation	OB500	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-105.0

TABLE 5A: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

[A] The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to 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)	Membrane	Application	
R-16	Existing asphaltic BUR or mineral surface cap	(Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1	OB500	Min. 0.5-inch HP Recovery Board	OB500	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-90.0
R-17	Existing asphaltic BUR or mineral surface cap	(Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1	OB500	Min. 0.25-inch DensDeck Prime	OB500	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Aqua Base 120 BA	-150.0
MEMBRANE APPLIED IN LOW VOC BONDING ADHESIVE:								
R-18	Existing asphaltic BUR or mineral surface cap	Min. 0.5-inch Poly ISO 1, H-Shield	OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Low VOC Bonding Adhesive	-75.0*
R-19	Existing asphaltic BUR or mineral surface cap	Min. 1.5-inch Insulam (GYP)	OB500	None	N/A	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Low VOC Bonding Adhesive	-75.0*
R-20	Existing asphaltic BUR or mineral surface cap	Min. 1.5-inch Insulfoam HD Composite	OB500	None	N/A	Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM	Mule-Hide Low VOC Bonding Adhesive	-120.0*
MEMBRANE APPLIED IN HELIX MAX LRA OR HELIX MAX LRA-DT:								
R-21	Existing fully-adhered granule-surfaced asphalt built-up roof (BUR), smooth-surfaced asphalt built-up roof (BUR), granule-surfaced APP or SBS modified bitumen or smooth-surfaced SBS modified bitumen	(Optional) Min. 1-inch Poly ISO 1, Poly ISO 1-DWD	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	-90.0

TABLE 5A: RECOVER APPLICATIONS SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER								
[A] The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to 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)	**Membrane**	**Application**	
R-22	Existing fully-adhered asphalt built-up roof (BUR) with flood coat & gravel (loose gravel removed)	Min. 1-inch Poly ISO 1, Poly ISO 1-DWD	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	-90.0
R-23	Existing fully-adhered asphalt built-up roof (BUR) with flood coat & gravel (loose gravel removed)	Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	None	N/A	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	-90.0
R-24	Existing fully-adhered granule-surfaced asphalt built-up roof (BUR), smooth-surfaced asphalt built-up roof (BUR), granule-surfaced APP or SBS modified bitumen or smooth-surfaced SBS modified bitumen	Min. 1-inch Poly ISO 1, Poly ISO 1-DWD	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Insulation: (Optional) Additional layer(s) base insulation Coverboard: (Optional) Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-167.5
R-25	Existing fully-adhered asphalt built-up roof (BUR) with flood coat & gravel (loose gravel removed)	Min. 1-inch Poly ISO 1, Poly ISO 1-DWD	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	Insulation: (Optional) Additional layer(s) base insulation Coverboard: (Optional) Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON)	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-167.5

TABLE 5A: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

[A] The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to 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)	Membrane	Application	
R-26	Existing fully-adhered granule-surfaced asphalt built-up roof (BUR), smooth-surfaced asphalt built-up roof (BUR), granule-surfaced APP or SBS modified bitumen or smooth-surfaced SBS modified bitumen	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON)	None	N/A	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-302.5
R-27	Existing fully-adhered asphalt built-up roof (BUR) with flood coat & gravel (loose gravel removed)	Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.)	None	N/A	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-302.5

TABLE 5B: RECOVER APPLICATIONS
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER

[A] The reported MDP documents the allowable maximum design pressure of the new roof cover when adhered to 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)	Roof Cover (Note 15)		MDP (psf)[A]
		Membrane	Application	
R-28	Existing, fully-adhered EPDM roof cover over insulated steel deck	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (RIBBON, 6)	-75.0
R-29	Existing, fully-adhered EPDM roof cover over insulated or non-insulated structural concrete deck	Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed	Helix Max LRA or Helix Max LRA-DT (FULL)	-315.0