



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
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www.miamidade.gov/economy

NOTICE OF ACCEPTANCE (NOA)

Mule-Hide Products Co, Inc.
1195 Prince Hall Drive
Beloit, WI 53511

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Mule-Hide Modified Bitumen Roof System Over Lightweight Concrete Decks

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA 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 NOA consists of pages 1 through 19.

The submitted documentation was reviewed by Alex Tigera.



NOA No.: 15-1201.08
Expiration Date: 07/13/18
Approval Date: 05/25/17
Page 1 of 19

ROOFING ASSEMBLY APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Materials	SBS/APP
Deck Type:	Lightweight Insulating Concrete
Maximum Design Pressure:	-225 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Nail Base	65' 8" x 3' 3-3/8"	ASTM D 6163	SBS modified asphalt coated fiberglass reinforced base sheet.
SA Base Sheet	66' 8" x 3' 3-3/8"	ASTM D 6163	Self-adhered, fiberglass reinforced, SBS modified bitumen membrane with a self-adhering back face and a smooth top surface.
SA Base Sheet FR	66' 8" x 3' 3-3/8"	ASTM D 6163	Self-adhered, fiberglass reinforced, SBS modified bitumen membrane with a fire retardant additive, self-adhering back face and a smooth top surface.
Nail Base P	65' 8" x 3' 3-3/8"	ASTM D 6164	SBS modified asphalt coated polyester reinforced base sheet.
APP Torch S	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a smooth or sanded top surface.
APP Torch G	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a granule top surface.
APP Torch G FR	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, fire-rated, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a granule top surface and fire retardant chemistry.
APP Torch KoolCap G	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a granule top surface.
APP Torch KoolCap G FR	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, fire-rated, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a granule top surface and fire retardant chemistry.
PG 100 Asphalt Primer	1, 3, 5, 50, 55 gal, tube or 17 oz. spray can	ASTM D41	A penetrating solution of solvent and a blend of selected asphalts used to promote adhesion.
XtraFlex 10 Asphalt Primer	1, 3, 5, 50, 55 gal, tube or 17 oz. spray can	ASTM D41	A penetrating solution of solvent and a blend of selected asphalts used to promote adhesion.



TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
PG 325 Cold Process Adhesive	1, 3, 5, 50, 55 gal. or tube	ASTM D3019 Type III	A fibered cold process adhesive for use with roll or BUR roofing.
PG 350 Mod Bit Adhesive	1, 3, 5, 50, 55 gal. or tube	ASTM D3019 Type III	A fibered rubberized adhesive designed for use with modified bitumen membranes.
Polyplus 35 Premium Mod Bit Adhesive	1, 3, 5, 50, 55 gal. or tube	ASTM D3019 Type III	A fibered rubberized adhesive designed for use with modified bitumen membranes.
XtraFlex 35 Premium Mod Bit Adhesive	1, 3, 5, 50, 55 gal. or tube	ASTM D3019 Type III	A fibered rubberized adhesive designed for use with modified bitumen membranes.
PG 450 Flashing Cement	1, 3, 5, 50, 55 gal. or tube	ASTM D4586	A thick, fibered, rubberized flashing cement.
PG 500 MB Flashing Cement	1, 3, 5, 50, 55 gal. or tube	ASTM D4586	A thick, fibered, rubberized flashing cement for use with modified bitumen membranes.
Polyplus 45 Premium Flashing Cement	1, 3, 5, 50, 55 gal. or tube	ASTM D4586	A thick, fibered, rubberized flashing cement.
Polyplus 50 Premium MB Flashing Cement	1, 3, 5, 50, 55 gal. or tube	ASTM D4586	A thick, fibered, rubberized flashing cement for use with modified bitumen membranes.
Polyplus 55 Premium Modified Flashing Cement	1, 3, 5, 50, 55 gal. or tube	ASTM D4586	A mastic compound for use as a roof flashing adhesive.
XtraFlex 50 Premium Modified Wet/Dry Cement	1, 3, 5, 50, 55 gal. or tube	ASTM D4586	A thick, fibered, rubberized flashing cement for use with modified bitumen membranes.
PG 400 Plastic Roof Cement	1, 3, 5, 50, 55 gal. or tube	ASTM D4586 ASTM D3409	A thick, fibered, rubberized flashing cement for use in dry or damp conditions.
PG 425 Wet/Dry Plastic Roof Cement	1, 3, 5, 50, 55 gal. or tube	ASTM D4586 ASTM D3409	A thick, fibered, rubberized flashing cement for use in dry or damp conditions.



APPROVED INSULATIONS:

TABLE 2

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
Poly ISO 2	Polyisocyanurate foam insulation	Mule-Hide Products Co, Inc.
Poly ISO 2 Composite	Polyisocyanurate/perlite composite insulation.	Mule-Hide Products Co, Inc.
ACFoam-II	Polyisocyanurate foam insulation	Atlas Roofing Corporation
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, LLC
FescoBoard	Expanded mineral fiber	Johns Manville Corp.
Multi-Max FA-3	Polyisocyanurate foam insulation	Rmax Operating, LLC
Thermarroof Composite-3	Polyisocyanurate foam insulation	Rmax Operating, LLC
SECUROCK Gypsum-Fiber Roof Board	Fiber reinforced coverboard	USG Corporation
DensDeck Prime	Gypsum insulation board	Georgia-Pacific Gypsum LLC
DEXcell FA Glass Mat Roof Board	Gypsum Board	National Gypsum Company



APPROVED FASTENERS/ADHESIVES:

TABLE 3

<u>Fastener Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Dimensions</u>	<u>Manufacturer (With Current NOA)</u>
1.	Dekfast 15 HS	Insulation fastener for wood, steel and concrete decks		SFS Intec, Inc.
2.	CR Base Sheet Fastener (1.2") or CR Base Sheet Fastener (1.7")	Galvanized fastener for gypsum and lightweight insulating concrete		OMG, Inc.
3.	Trufast Twin Loc-Nail Assembled Fastener	Pre-assembled Galvalume Base Sheet Fastener and stress plate.	Various	Altenloh, Brinck & Co. U.S., Inc.
4.	Trufast FM-290 Base Sheet Fasteners	Pre-assembled Galvalume Base Sheet Fastener and stress plate.	Various	Altenloh, Brinck & Co. U.S., Inc.
5.	Trufast FM-90 Base Sheet Fastener	Pre-assembled Galvalume Base Sheet Fastener and stress plate	Various	Altenloh, Brinck & Co. U.S., Inc.
6.	Maxload Fastener	Insulation fastener for wood, steel, and concrete decks.	Various	OMG, Inc.
7.	Flat Bottom Metal Plate	Galvalume stress plate.	3" square	OMG, Inc.
8.	ICP Adhesives CR-20	A two component elastomeric polyurethane foam adhesive		ICP Adhesives and Sealants, Inc.
9.	OlyBond 500	A two component polyurethane foam adhesive		OMG, Inc.
10.	OlyBond 500 Green	A two component, low rise, polyurethane foam adhesive		OMG, Inc.



APPROVED SURFACING:

TABLE 4

Chosen components must be applied according to manufacturer’s application instructions.

<u>Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Application Rate</u>	<u>Specification</u>	<u>Manufacturer</u>
1.	Gravel	To be installed in a flood coat of approved asphalt at 60 lbs/sq	400 lbs/sq	N/A	Generic
2.	Slag	To be installed in a flood coat of approved asphalt at 60 lbs/sq	300 lbs/sq	N/A	Generic
3.	KM Acryl 15	A premium white elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	KM Coatings Manufacturing
4.	KM Acryl 15 QS	A premium white quick setting, elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	KM Coatings Manufacturing
5.	KM Acryl 25	A premium white elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	KM Coatings Manufacturing
6.	KM Acryl 25 QS	A premium white quick setting, elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	KM Coatings Manufacturing
7.	PS #220	A single component, solvent, moisture cure silicone coating.	1.25 gal/sq	ASTM D6694	KM Coatings Manufacturing
8.	PS #250	A premium grade high solids, single component, moisture cure, fluid applied silicone coating	1.25 gal/sq	ASTM D6694	KM Coatings Manufacturing
9.	PG 200 Non-Fibered Roof Coating	A non fibered asphaltic coating used to add life and rejuvenate existing BUR roofing substrates.	1½-2 gal/sq	TAS 140	Polyglass USA, Inc.
10.	PG 300 Fibered Roof Coating	An asphalt cutback fibered roof coating. May be applied by brush or spray equipment to rejuvenate aged BUR	1½-2 gal/sq	ASTM D4479	Polyglass USA, Inc.



APPROVED SURFACING:

TABLE 4

Chosen components must be applied according to manufacturer’s application instructions.

<u>Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Application Rate</u>	<u>Specification</u>	<u>Manufacturer</u>
11.	PG 600 Non-Fibered Aluminum Roof Coating	Non-fibered aluminum roof coating.	½-1 gal/sq	ASTM D2824 Type I	Polyglass USA, Inc.
12.	PG 650 Fibered Aluminum Roof Coating	Fibered aluminum roof coating.	1½-2 gal/sq	ASTM D2824 Type III	Polyglass USA, Inc.
13.	PG 700 Elastomeric Roof Coating	A premium white elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	Polyglass USA, Inc.
14.	PG 700 QS Elastomeric Roof Coating	A premium white quick setting, elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	Polyglass USA, Inc.
15.	PG 800 Non-Fibered Asphalt Emulsion Roof Coating	An asphalt base, unfibered clay emulsion	3 gal/sq in two coats	ASTM D1227	Polyglass USA, Inc.
16.	Polybrite 70 Premium Grade Elastomeric Roof Coating	A premium white elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	Polyglass USA, Inc.
17.	Polybrite 70 QS Premium Grade Elastomeric Roof Coating	A premium white quick setting, elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	Polyglass USA, Inc.
18.	Polybrite 90 High Solids Silicone Roof Coating	A premium grade high solids, single component, moisture cure, fluid applied silicone coating	1.25 gal/sq	ASTM D6694	Polyglass USA, Inc.
19.	Polybrite 95 Silicone Roof Coating	A single component, solvent, moisture cure silicone coating.	1.25 gal/sq	ASTM D6694	Polyglass USA, Inc.
20.	Polyplus 60 Premium Non-Fibered Aluminum Roof Coating	Non-fibered aluminum roof coating.	½-1 gal/sq	ASTM D2824 Type I	Polyglass USA, Inc.



APPROVED SURFACING:

TABLE 4

Chosen components must be applied according to manufacturer’s application instructions.

<u>Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Application Rate</u>	<u>Specification</u>	<u>Manufacturer</u>
21.	Polyplus 65 Premium Fibered Aluminum Roof Coating	Fibered aluminum roof coating.	1½-2 gal/sq	ASTM D2824 Type III	Polyglass USA, Inc.
22.	XtraFlex 20 Bituminous Roof Coating	A non fibered asphaltic coating used to add life and rejuvenate existing BUR roofing substrates.	1½-2 gal/sq	TAS 140	Polyglass USA, Inc
23.	XtraFlex 60 Aluminum Roof Coating	Non-fibered aluminum roof coating.	½-1 gal/sq	ASTM D2824 Type I	Polyglass USA, Inc.
24.	XtraFlex 65 Aluminum Roof Coating Fibered	Fibered aluminum roof coating.	1½-2 gal/sq	ASTM D2824 Type III	Polyglass USA, Inc.
25.	XtraFlex 70 Premium Acrylic FR Roof Coating	A premium white elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	Polyglass USA, Inc.
26.	XtraFlex 80 Emulsion Roof Coating	An asphalt based, non-fibered clay emulsion	3 gal/sq in two coats	ASTM D1227	Polyglass USA, Inc.
27.	XtraFlex Bituminous Roof Coating Fibered	An asphalt cutback fibered roof coating. May be applied by brush or spray equipment to rejuvenate aged BUR	1½-2 gal/sq	ASTM D4479	Polyglass USA, Inc.
28.	XtraFlex SRC 8000 Silicone Roof Coating	A single component, solvent, moisture cure silicone coating.	1.25 gal/sq	ASTM D6694	Polyglass USA, Inc.
29.	XtraFlex SRC 9600 High Solids Silicone Roof Coating	A premium grade high solids, single component, moisture cure, fluid applied silicone coating	1.25 gal/sq	ASTM D6694	Polyglass USA, Inc.



EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Name/Report</u>	<u>Report No.</u>	<u>Date</u>	
Factory Mutual Research Corporation	4470	2W7A7.AM	08.04.94	
	4470	3001334	02.15.00	
	4470	3000857	01.12.00	
	4470	3004091	01.12.00	
	4470	3014692	08.05.03	
	4470	3023458	07.18.06	
	4470	3031350	09.27.07	
	4470	RR202591	10.22.15	
Underwriters Laboratory	TAS 114	00NK20869	06.08.00	
	UL 790	R14571	06.30.15	
Trintiy ERD	TAS 114	11776.06.02	06.13.02	
	TAS 114	11758.08.03	08.11.03	
	TAS 114	020843.02.05-1	02.10.05	
	TAS 114	02764.09.05	09.09.05	
	TAS 117(B)-ASTM D6862	C8500SC.11.07	11.30.07	
	ASTM D 6164 / D 6222	P10490.10.08-R1	10.03.08	
	ASTM D6163 / ASTM D 4601	P33960.03.11	03/15/11	
	FM 4470 & TAS 114	P33970.03.11	03.15.11	
	ASTM D6222	P37590.07.13-2	07.01.13	
	ASTM D6222	P37590.03.13-5-R1	07.01.13	
	ASTM D6509	P37590.03.13-1-R1	06.26.13	
	ASTM D6164	P37590.03.13-3A	03.06.13	
	ASTM D6222	P37590.07.13-2	07.01.13	
	ASTM D6164	P37590.07.13-1	07.02.13	
	ASTM D6163	P37590.03.13-2-R1	07.01.13	
	ASTM D4601 / TAS 117	P45940.09.13	09.04.13	
	ASTM D4601	P44370.10.13	10.04.13	
	ASTM D6162	SC5170.05.15	05.08.15	
	ASTM D6162	SC5170.12.15-1	12/29/15	
	TAS 114	PLYG-SC12095.07.16	07.13.16	
	FM 4470 & TAS 114	P1739.01.07-R1	07.19.16	
	FM 4474, UL1897, TAS 114	PLYG-SC8905.05.16-1	05.17.16	
	ASTM D6163	PLYG-P45440SC.03.15-2-R1	12/29/15	
	ASTM D6163	PLYG-P45440SC.03.15-1-R1	02/19/16	
	TAS 114	P1734.07.06-R2	08/24/16	
	PRI Asphalt Technologies	ASTM D6222	PUSA-062-02-01	12.04.07
		ASTM D6163	PUSA-064-02-02	02.27.08
ASTM D6694		PUSA-134-02-01	05.16.14	
ASTM D6694		PUSA-135-02-01	05.16.14	



DECK STRESS ANALYSIS CALCULATIONS/REPORTS

<u>Engineer/Agency</u>	<u>Identifier</u>	<u>Assemblies</u>	<u>Date</u>
Robert Nieminen, P.E.	Signed/Sealed Calculations	E(1), E(2), E(3)	07/19/16



APPROVED ASSEMBLIES:

- Membrane Type:** SBS/APP
- Deck Type 4I:** Lightweight Concrete, Insulated
- Deck Description:** Min. 200 psi Elastizell LWIC over min 2500 psi structural concrete
- System Type A(1):** One or more layers of insulation adhered with approved adhesive. Membranes subsequently adhered to insulation layer.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Poly ISO 2, H-Shield, Mule-Hide Poly ISO 1 Minimum 2” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A

Note: Apply insulation in ICP Adhesives CR-20 in continuous 3” to 3-1/2” beads/ribbons spaced 12” o.c. Additional layers of insulation to be adhered with ICP Adhesives CR-20 in continuous 3” to 3-1/2” beads/ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

- Base Sheet:** One or more plies of Nail Base, Nail Base P or APP Torch S torch applied.
Or
One or more plies of Nail Base or Nail Base P adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Or
One ply of SA Base Sheet* or SA Base Sheet FR* self-adhered.
*Requires torch-applied cap sheet.

Membrane: One ply of APP Torch S, APP Torch G, APP Torch G FR, APP Torch KoolCap G or APP Torch KoolCap G FR torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

**Maximum Design
Pressure:** -180.0 psf (See General Limitation #9)



Membrane Type: SBS/APP
Deck Type 4I: Lightweight Concrete, Insulated
Deck Description: Min. 200 psi. Elastizell LWIC over 2500 psi structural concrete
System Type A(2): One or more layers of insulation adhered with approved adhesive. Membranes subsequently adhered to insulation layer.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Poly ISO 2, H-Shield, Mule-Hide Poly ISO 1 Minimum 2” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A

Note: Apply insulation in Olybond 500, OlyBond 500 Green or SpotShot Adhesive in continuous ¾” to 1” beads/ribbons spaced 12” o.c. Additional layers of insulation to be adhered with Olybond 500, OlyBond 500 Green or SpotShot Adhesive in continuous ¾” to 1” beads/ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of Nail Base, Nail Base P or APP Torch S, torch applied.
 Or
 One or more plies of Nail Base or Nail Base P adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
 Or
 One ply of SA Base Sheet* or SA Base Sheet FR* self-adhered.
 *Requires torch-applied cap sheet.

Membrane: One ply of APP Torch S, APP Torch G, APP Torch G FR, APP Torch KoolCap G or APP Torch KoolCap G FR torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

**Maximum Design
Pressure:** -225.0 psf (See General Limitation #9)



Membrane Type: SBS/APP
Deck Type 4I: Lightweight Concrete, Insulated
Deck Description: Min. 200 psi Celcore or Mearlcrete LWIC over min 2500 psi structural concrete
System Type A(3): One or more layers of insulation adhered with approved adhesive. Membranes subsequently adhered to insulation layer.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Poly ISO 2, H-Shield, Mule-Hide Poly ISO 1 Minimum 2” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A

Note: Apply insulation in ICP Adhesives CR-20 in continuous 3” to 3-1/2” beads/ribbons spaced 12” o.c. Additional layers of insulation to be adhered with ICP Adhesives CR-20 in continuous 3” to 3-1/2” beads/ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of Nail Base, Nail Base P or APP Torch S torch applied.
 Or
 One or more plies of Nail Base or Nail Base P adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
 Or
 One ply of SA Base Sheet* or SA Base Sheet FR* self-adhered.
 *Requires torch-applied cap sheet.

Membrane: One ply of APP Torch S, APP Torch G, APP Torch G FR, APP Torch KoolCap G or APP Torch KoolCap G FR torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

**Maximum Design
Pressure:** -225.0 psf (See General Limitation #9)



Membrane Type: SBS/APP
Deck Type 4I: Lightweight Concrete, Insulated
Deck Description: Min. 390 psi Celcore MF over min 2500 psi structural concrete; cast over concrete deck with min. 1" EPS Holey Board embedded in 1/8" slurry. Followed by a min. 2" top coat of Celcore MF with Celcore PVA Curing Compound at 200 ft²/gal.
System Type A(4): One or more layers of insulation adhered with approved adhesive. Membranes subsequently adhered to insulation layer.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Poly ISO 2, H-Shield, Mule-Hide Poly ISO 1, Multi-Max FA-3, ENRGY 3 Minimum 1" thick	N/A	N/A
SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime, DEXcell FA Glass Mat Roof Board Minimum 1/4" thick	N/A	N/A

Note: Apply insulation in Olybond 500 or OlyBond 500 Green Adhesive in continuous 3/4" to 1" beads/ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of SA Base Sheet, SA Base Sheet FR or APP Torch S self-adhered.
Membrane: One ply of APP Torch G or APP Torch KoolCap torch-applied.
**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.
**Maximum Design
Pressure:** -262.5 psf (See General Limitation #9)



Membrane Type: SBS/APP
Deck Type 4I: Lightweight Concrete, Insulated
Deck Description: Min 390 psi. Celcore MF over min 2500 psi structural concrete cast over concrete deck with min. 1” EPS Holey Board embedded in 1/8” slurry. Followed by a min. 2” top coat of Celcore MF with Celcore PVA Curing Compound at 200 ft²/gal.
System Type A(5): One or more layers of insulation adhered with approved adhesive. Membranes subsequently adhered to insulation layer.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer (Optional)</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Poly ISO 2, H-Shield, Mule-Hide Poly ISO 1, Multi-Max FA-3, ENRGY 3 Minimum 1” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime, DEXcell FA Glass Mat Roof Board Minimum ¼” thick	N/A	N/A

Note: Apply insulation in Olybond 500 or OlyBond 500 Green Adhesive in continuous ¾” to 1” beads/ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of Nail Base, Nail Base P or APP Torch S torch applied.
 Or
 One or more plies of Nail Base P adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of APP Torch S, APP Torch G, APP Torch G FR, APP Torch KoolCap G or APP Torch KoolCap G FR torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

**Maximum Design
Pressure:** -262.5 psf (See General Limitation #9)



Membrane Type: SBS/APP
Deck Type 4I: Lightweight Concrete, Insulated
Deck Description: Min 280 psi Celcore MF Lightweight Concrete over Min. 18-22 ga., Type B, Grade 33 vented steel deck secured to structural supports spaced 5 ft. o.c. with Traxx/5 fasteners spaced 6" o.c. Deck side laps are secured 12" o.c. with Traxx/1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table
System Type E(1): Base sheet mechanically fastened. Membranes subsequently adhered.

All General and System limitations apply.

Base Sheet: Nail Base or Nail Base P fastened as outlined below:

Fastening: Trufast FM-90 Base Sheet Fastener fasteners at 8" o.c. in 4" lap and 8" o.c. in three equally spaced center rows.

Ply Sheet: One ply of Nail Base or one to more plies of Type IV or VI ply sheet adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs.
Or
One ply of SA Base Sheet* or SA Base Sheet FR, self-adhered.
*Requires torch-applied cap sheet

Membrane: One ply of APP Torch S, APP Torch G, APP Torch G FR, APP Torch KoolCap G or APP Torch KoolCap G FR torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

**Maximum Design
Pressure:** -60.0 psf (See General Limitation #7)



Membrane Type: SBS/APP
Deck Type 4I: Lightweight Concrete, Insulated
Deck Description: Min 330 psi Elastizell with Zell-Crete fibers with supplemental attachment using OMG Maxload Fastener and 3" Flat Bottom Metal Plates at 1 per 8ft² over steel deck.
Steel deck shall be min. 18-22 ga., Type B, Grade 33 vented steel deck secured to structural supports spaced 5 ft. o.c. with Traxx/5 fasteners spaced 6" o.c. Deck side laps are secured 12" o.c. with Traxx/1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table

System Type E(2): Base sheet mechanically fastened. Membranes subsequently adhered.

All General and System limitations apply.

Base Sheet: One ply of Nail Base or Nail Base P fastened as outlined below:

Fastening: Trufast Twin Loc-Nail Assembled Fasteners at 6" o.c. in 4" lap and 6" o.c. in three equally spaced center rows.

Ply Sheet: One ply of Nail Base or one to more plies of Type IV or VI ply sheet adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs.
Or
One ply of SA Base Sheet* or SA Base Sheet FR* self-adhered.
*Requires torch-applied cap sheet

Membrane: One ply of APP Torch S, APP Torch G, APP Torch G FR, APP Torch KoolCap G or APP Torch KoolCap G FR torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

Maximum Design Pressure: -60.0 psf (See General Limitation #7)



Membrane Type: SBS/APP
Deck Type 4I: Lightweight Concrete, Insulated
Deck Description: Min 390 psi Celcore MF Lightweight Concrete over Min. 18-22 ga., Type B, Grade 33 vented steel deck secured to structural supports spaced 5 ft. o.c. with Traxx/5 fasteners spaced 6" o.c. Deck side laps are secured 12" o.c. with Traxx/1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.
System Type E(3): Base sheet mechanically fastened. Membranes subsequently adhered.

All General and System limitations apply.

Base Sheet: Nail Base P fastened as outlined below:
Fastening: Trufast FM-290 Base Sheet Fasteners at 10" o.c. in 4" lap and 10" o.c. in three equally spaced center rows.
Ply Sheet: (Optional) One ply of Nail Base or one to more plies of Type IV or VI ply sheet adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs.
Membrane: One ply of APP Torch S, APP Torch G, APP Torch G FR, APP Torch KoolCap G or APP Torch KoolCap G FR torch applied.
Surfacing: (Optional) Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.
Maximum Design Pressure: -90.0 psf (See General Limitation #7)



LIGHTWEIGHT INSULATING CONCRETE SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.
3. For systems where specific lightweight insulating concrete is not referenced, the minimum design mix shall be a minimum of 300 psi.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE

