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)

US Ply, Inc.
2000 E. Richmond Ave.
Fort Worth, TX 76104

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: US Ply APP Modified Bitumen Roofing Systems Over Steel 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 renews NOA #18-0109.08 consists of pages 1 through 24.
The submitted documentation was reviewed by Alex Tigera.

ROOFING ASSEMBLY APPROVAL

Category: Roofing
Sub-Category: Modified Bitumen
Material: APP
Deck Type: Steel
Maximum Design Pressure: -135 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
USP Base	36" x 108'	ASTM D 4601	An asphaltic, fiberglass reinforced base sheet
USP NVB	36" x 36'	ASTM D4897 Type II	Fiberglass reinforced venting base sheet.
USP Type IV Felt	36" x 180'	ASTM D 2178	An asphaltic, fiberglass reinforced, ASTM D2178 Type IV ply sheet.
USP Type VI Felt	36" x 180'	ASTM D 2178	An asphaltic, fiberglass reinforced, ASTM D2178 Type VI ply sheet.
USP Mineral Cap Sheet	36" x 36'	ASTM D 3909	A high strength non-woven fiberglass carrier for added dimensional stability coated on both sides with premium grade asphalt. Mineral granule surfacing for superior weathering characteristics.
USP APP 160S	39-3/8" x 32' 9"	ASTM D 6222 Type I, Grade S	Polyester reinforced, smooth surfaced, APP modified bitumen base / interply sheet.
USP APP 160M	39-3/8" x 32' 9"	ASTM D 6222 Type I, Grade M	Polyester reinforced, mineral granule surfaced, APP modified bitumen cap sheet.
SafeWeld 180S APP	39-3/8 x 32' 9"	ASTM D 6222 Type I, Grade S	Smooth surfaced, polyester reinforced APP modified bitumen membrane with talc underside.
SafeWeld 180M APP	39-3/8 x 32' 9"	ASTM D 6222 Type I, Grade G	Smooth surfaced, polyester reinforced APP modified bitumen membrane with slag underside.
SafeWeld 180FR APP	39-3/8" x 32' 9"	ASTM D 6222 Type I, Grade G	Granule surfaced, polyester reinforced, fire resistant, APP modified bitumen membrane with slag underside.
DuraWeld 4S APP	39-3/8" x 32' 9"	ASTM D 6222 Type I, Grade S	Smooth surfaced, polyester reinforced, APP modified bitumen base / interply sheet.
DuraWeld 4M APP	39-3/8" x 32' 9"	ASTM D 6222 Type I, Grade G	Polyester reinforced, granule surfaced APP modified bitumen cap sheet.
DuraWeld 4M FR APP	39-3/8" X 32' 9"	ASTM D 6222 Type I, Grade G	Polyester reinforced, mineral granule surfaced, fire resistant, APP modified bitumen cap sheet.

SafeWeld Premium APP Modified Bitumen Adhesive	5 gal. or 350 gal.	ASTM D3019	An asphalt based polymer modified adhesive.
USP #442 Fibered Aluminum Roof Coating	5 gal	ASTM D 2824 Type III	A hydrocarbon protective coating.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam-II, ACFoam-III	Polyisocyanurate Insulation	Atlas Roofing Corporation
Tapered ACFoam	Polyisocyanurate insulation with a coated glass mat.	Atlas Roofing Corporation
ACFoam Composite	Polyisocyanurate Insulation	Atlas Roofing Corporation
ENRGY 3	Polyisocyanurate Insulation	Johns Manville Corporation
ISO 95+ GL	Polyisocyanurate foam insulation	Firestone Building Products Company, LLC
H-Shield, Tapered H-Shield, H-Shield CG, H-Shield WF	Polyisocyanurate foam insulation	Hunter Panels, LLC
Multi-Max FA-3	Polyisocyanurate Insulation	Rmax Operating, LLC
Tapered Thermaroof-3	Polyisocyanurate insulation	Rmax Operating, LLC
DensDeck, DensDeck Prime	Water resistant gypsum board	Georgia-Pacific Gypsum LLC
SECUROCK Gypsum-Fiber Roof Board	Gypsum board	United States Gypsum Corporation
FescoBoard	Expanded mineral fiber insulation	Johns Manville Corporation
Structodek High Density Fiberboard Roof Insulation	High Density Wood Fiber insulation board.	Blue Ridge Fiberboard, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	#12 Standard Roofgrip	Self drilling, carbon steel fastener with a CR-10 coating	Various	OMG, Inc.
2.	OMG Heavy Duty	Self drilling fastener for steel used wood, steel or concrete decks	Various	OMG, Inc.
3.	3 in. Ribbed Galvalume Plates	Round Galvalume plated steel plate with reinforcing ribs	3" Round	OMG, Inc.
4.	OMG 3" Galvalume Steel Plate	Galvalume coated steel plate	3" Round	OMG, Inc.
5.	3 in. Round Metal Plates	Insulation fastening plate	3" Round	OMG, Inc.
6.	Trufast 3" Metal Insulation Plate	Galvalume steel stress plate	3" Diameter	Altenloh, Brinck & Co. U.S., Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
7.	Trufast 3" Recessed Metal Insulation Plate	Galvalume metal plate	3" Round	Altenloh, Brinck & Co. U.S., Inc.
8.	Trufast #12 DP Fastener	Self-drilling, carbon steel fastener used in steel and wood decks. Tru-Kote PC-3 coating.	Various	Altenloh, Brinck & Co. U.S., Inc.
9.	Trufast #14 HD Fastener	Self-drilling, carbon steel fastener used in concrete, steel and wood decks. Tru-Kote PC-3 coating.	Various	Altenloh, Brinck & Co. U.S., Inc.
10.	Trufast SIP TP Fastener	Self-drilling, carbon steel fastener used in steel and wood decks. Tru-Kote PC-3 coating.	Various	Altenloh, Brinck & Co. U.S., Inc.
11.	Trufast #15 EHD Fastener	Carbon steel fastener used in concrete, steel and wood decks. Tru-Kote PC-3 coating.	Various	Altenloh, Brinck & Co. U.S., Inc.
12.	PlyFast #14 Fastener T	Fastener used in steel, concrete and wood decks.	Various	U.S. Ply, Inc.
13.	PlyFast 3" Metal Plate T	Galvalume steel stress plate	3" Diameter	U.S. Ply, Inc.
14.	PlyFast #12 Fastener T	Coated steel fastener used in steel and wood decks.	Various	U.S. Ply, Inc.
15.	Dekfast DF-#12-PH3 or Dekfast DF-#14-PH3	Insulation fastener used wood, steel and concrete decks	Various	SFS Group USA, Inc.
16.	Dekfast PLT-H-2-7/8	Galvalume hex stress plate.	2-7/8" Hex	SFS Group USA, Inc.
17.	Dekfast PLT-R-3	Galvalume steel plate	3" Round	SFS Group USA, Inc.
18.	PlyFast Recessed Metal Plate T	Galvalume metal plate	3" Round	U.S. Ply, Inc.
19.	PlyFast #15 Fastener T	Heavy duty corrosion resistant steel fastener.	Various	U.S. Ply, Inc.
20.	PlyFast 3" Metal Plate O	Round Galvalume plated steel plate with reinforcing ribs	3" Round	U.S. Ply, Inc.
21.	PlyFast #12 Fastener O	Self-drilling, carbon steel fastener with a CR-10 coating	Various	U.S. Ply, Inc.
22.	PlyFast #14 Fastener O	Self-drilling fastener for steel used wood, steel or concrete decks	Various	U.S. Ply, Inc.
23.	ICP Adhesives CR-20	Polyurethane Foam Insulation Adhesive	N/A	ICP Adhesives and Sealants, Inc.
24.	OMG OlyBond 500	Spray Polyurethane Foam	N/A	OMG, Inc.
25.	Insta-Stik Quik Set Insulation Adhesive	Single component moisture curing urethane foam adhesive	N/A	The Dow Chemical Company

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
26.	Millennium One Step Foamable Adhesive	Highly elastomeric, one-step, all purpose, foamable adhesive	N/A	H.B. Fuller

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Factory Mutual Research Corp.	2D5A9.AM	FM 4450	06/22/99
	3032172	FM 4470	06/12/09
	3029655	FM 4470	02/25/08
	3024973	FM 4470	11/10/06
PRI Construction Materials Technologies	GAPR-004-02-01	ASTM D 4897	05/19/11
	BWR-506-02-01.1	ASTM D 2178	01/23/09
	BWR-505-02-01.1	ASTM D 2178	01/23/09
	BWR-539-02-01	ASTM D 3909	07/24/13
	USPI-014-02-01	TAS 114 D	1/30/16
Exterior Research & Design, LLC	2005.U0212.09.05-R1	FM 4470	03/31/10
	U0230.12.06-R1	FM 4470	03/31/10
	U0215.05.06-2-R2	ASTM D6222	08/02/10
	U33320.10.10	TAS 114 / FM 4470	10/13/10
	U30120.11.10	TAS 114 / FM 4470	11/09/10
	U41790.05.12-1-R1	ASTM D6222 & TAS 110	01/21/13
	U41790.05.12-2-R2	ASTM D6222 & TAS 110	02/11/13
	U35910.12.11-1	TAS 117	12/21/11
	U35910.12.11-3	ASTM D1878	12/21/11

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies:	Date
Zachary R. Priest	Letter	B(4), B(5), C(2), C(3), D(2)	09/12/16
FM Approval Deck Limitation	RoofNav Listing	B(2), B(3), B(6), B(7)	01/01/13

APPROVED ASSEMBLIES

Membrane Type: APP

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga. Type B, 33ksi. steel deck

System Type B(1): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-II, ACFoam-III, Tapered ACFoam, Multi-Max FA-3, Tapered Thermaroof-3		
Minimum 1.5" thick	**3, 4 with 1, 2 20 with 21, 22 6, 7 with 8 13, 18 with 14**	**1:4 ft^2**
H-Shield, Tapered H-Shield		
Minimum 2" thick	**3, 4 with 1, 2 20 with 21, 22, 7 with 8 13, 18 with 14**	**1:4 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
FescoBoard		
Minimum ¾" thick	**N/A**	**N/A**
Structodek High Density Fiberboard Roof Insulation, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 25 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One ply of USP Base, USP Type IV Felt or USP Type VI Felt, fully adhered with hot asphalt to coverboard.

Ply Sheet:	(Optional with APP Membrane) One or more layers of USP APP 160S, SafeWeld 180S APP, or DuraWeld 4S APP, heat welded. Or (Not for use with APP membrane) One or more plies of USP Type IV Felt or USP Type VI Felt adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs/sq.
Membrane:	(Not for use over USP Type IV or VI Felt) One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded. Or (Not for use with APP ply sheet) One ply of USP Mineral Cap Sheet adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs/sq.
Surfacing:	Only for use with USP APP 160M, SafeWeld 180M APP or DuraWeld 4M APP membranes: USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.
Maximum Design Pressure:	-45 psf. (See General Limitation #9).

Membrane Type: APP

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. Type B, Grade 33 steel deck attached to structural steel supports spaced max. 6 ft. o.c. attached with Teks/5 fasteners spaced max. 6" o.c. at the supports. Deck side laps secured with two Teks/1 fasteners evenly spaced between supports.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type B(2): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-II, ACFoam-III, Tapered ACFoam, Multi-Max FA-3, H-Shield, Tapered H-Shield		
Minimum 2" thick	**3, 4 with 2** **20 with 22** **6, 7 with 9** **13, 18 with 12**	**1:1.45 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with ICP Adhesives CR-20 applied with 3" to 3.5" wide beads spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One ply of USP APP 160S, SafeWeld 180S APP, or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One or more layers of USP APP 160S, SafeWeld 180S APP, or DuraWeld 4S APP, heat welded.

Membrane: One ply of SafeWeld 180M APP, SafeWeld 180FR APP, USP APP 160M, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7).

Membrane Type: APP

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. Type B, Grade 33 steel deck attached to structural steel supports spaced max. 6 ft o.c. attached with Teks/5 fasteners spaced max. 6 in. o.c. at the supports. Deck side laps secured with two Teks/1 fasteners evenly spaced between supports.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type B(3): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III, Tapered ACFoam, Multi-Max FA-3, H-Shield, Tapered H-Shield		
Minimum 2" thick	**3, 4 with 2** **20 with 22** **6, 7 with 9** **13, 18 with 12**	**1:1.45 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board **Minimum ¼" thick**	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 25 lbs/sq. with OMG OlyBond 500 adhesive applied with ¾" to 1" wide beads spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One ply of USP APP 160S, SafeWeld 180S APP, or DuraWeld 4S APP, heat welded

Ply Sheet: (Optional) One or more layers of USP APP 160S, SafeWeld 180S APP, or DuraWeld 4S APP, heat welded.

Membrane: One ply of SafeWeld 180M APP, SafeWeld 180FR APP, USP APP 160M, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -60 psf (See General Limitation #7).

Membrane Type: APP

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. Type B, Grade 33 steel deck attached to structural steel supports spaced max 6 ft. o.c. attached with 5/8" puddle welds 6" o.c. at supports. Side laps attached with Teks/1 screws spaced 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type B(4): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-II, Multi-Max FA-3 Minimum 2" thick	**5 with 1, 21 6 with 8 13 with 14**	**1:2 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
SECUROCK Gypsum-Fiber Roof Board Minimum 3/8" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with Insta-Stik Quik Set Insulation Adhesive, OMG OlyBond 500, Millennium One-Step Foamable Adhesive or ICP Adhesives CR-20 applied in 1" wide beads spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, SafeWeld 180S APP, or DuraWeld 4S APP, heat welded

Ply Sheet: (Optional) One or more layers of USP APP 160S, SafeWeld 180S APP, or DuraWeld 4S APP, heat welded.

Membrane: One ply of SafeWeld 180M APP, SafeWeld 180FR APP, USP APP 160M, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -60 psf (See General Limitation #7).

Membrane Type: APP

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. Type B, Grade 33 steel deck attached to structural steel supports spaced max 6 ft. o.c. with Buildex Teks/5 fasteners 6" o.c. at supports. Side laps attached with Teks/1 screws spaced 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type B(5): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISO 95+ GL, ENRGY 3 **Minimum 2" thick**	**22, 2 with 5**	**1: 1.6 ft^2**
ACFoam-II, Multi-Max FA-3 **Minimum 2" thick**	**6 with 9** **13 with 12** **22, 2 with 5**	**1: 1.6 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
FescoBoard **Minimum ¾" thick**	**N/A**	**N/A**
Structodek High Density Fiberboard Roof Insulation **Minimum ½" thick**	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board **Minimum ¼" thick**	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 25 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One ply of USP Base is fully adhered with hot asphalt to coverboard.

Ply Sheet:	(Optional with APP Membrane) One or more layers of USP APP 160S, SafeWeld 180S APP, or DuraWeld 4S APP, heat welded. Or (Not for use with APP membrane) One or more plies of USP Type IV Felt or USP Type VI Felt adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs/sq.
Membrane:	(Not for use over USP Type IV or VI Felt) One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded. Or (Not for use with APP ply sheet) One ply of USP Mineral Cap Sheet adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs/sq.
Surfacing:	Only for use with USP APP 160M, SafeWeld 180M APP or DuraWeld 4M APP membranes: USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.
Maximum Design Pressure:	-67.5 psf. (See General Limitation #7)

Membrane Type: APP

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. Type B, Grade 33 steel deck attached to structural steel supports spaced max. 6 ft o.c. attached with Teks/5 fasteners spaced max. 6 in. o.c. at the supports. Deck side laps secured with two Teks/1 fasteners evenly spaced between supports.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type B(6): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III, Tapered ACFoam, Multi-Max FA-3, H-Shield, Tapered H-Shield		
Minimum 2" thick	**3, 4 with 1, 2** **20 with 21, 22** **6 with 8** **13 with 14**	**1: 1.45 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Structodek High Density Fiberboard Roof Insulation		
Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 25 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One ply of USP Base, USP Type IV Felt or USP Type VI Felt, fully adhered with hot asphalt to coverboard.

Ply Sheet: (Optional with APP Membrane) One or more layers of USP APP 160S, SafeWeld 180S APP, or DuraWeld 4S APP, heat welded.

Or

(Not for use with APP membrane) One or more plies of USP Type IV Felt or USP Type VI Felt adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs/sq.

Membrane:	(Not for use over USP Type IV or VI Felt) One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded. Or (Not for use with APP ply sheet) One ply of USP Mineral Cap Sheet adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs/sq.
Surfacing:	Only for use with USP APP 160M, SafeWeld 180M APP or DuraWeld 4M APP membranes: USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.
Maximum Design Pressure:	-67.5 psf. (See General Limitation #7).

Membrane Type: APP

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. Type B, Grade 33 steel deck attached to structural steel supports spaced max. 6 ft o.c. attached with Teks/5 fasteners spaced max. 6 in. o.c. at the supports. Deck side laps secured with two Teks/1 fasteners evenly spaced between supports.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type B(7): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III, Tapered ACFoam, Multi-Max FA-3, H-Shield, Tapered H-Shield		
Minimum 2" thick	**3, 4 with 1, 2** **20 with 21, 22** **6 with 8** **13 with 14**	**1:1.45 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FescoBoard **Minimum ¾" thick**	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 25 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One ply of USP Base, USP Type IV Felt or USP Type VI Felt, fully adhered with hot asphalt to coverboard.

Ply Sheet: (Optional with APP Membrane) One or more layers of USP APP 160S, SafeWeld 180S APP, or DuraWeld 4S APP, heat welded.
Or
(Not for use with APP membrane) One or more plies of USP Type IV Felt or USP Type VI Felt adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs/sq.

Membrane:	(Not for use over USP Type IV or VI Felt) One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded. Or (Not for use with APP ply sheet) One ply of USP Mineral Cap Sheet adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs/sq.
Surfacing:	Only for use with USP APP 160M, SafeWeld 180M APP or DuraWeld 4M APP membranes: USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.
Maximum Design Pressure:	-75 psf. (See General Limitation #7).

Membrane Type: APP

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck**.**

System Type C(1): All layers of insulation mechanically attached to roof deck. Membrane is subsequently fully or partially adhered to insulation.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, H-Shield, ENRGY 3, ISO 95+ GL Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	**21, 22, 1, 2 with 4 9, 8 with 6 12, 14 with 13 15 with 16, 17**	**1:2 ft²**

Primer: (Optional) Coverboard is primed with ASTM D41 primer applied at a rate of 0.75 gal/sq.

Base Sheet: One ply of SafeWeld 180S APP, or DuraWeld 4S APP, heat welded to coverboard.

Or

One ply of SafeWeld 180S APP adhered with SafeWeld Premium APP Modified Bitumen Adhesive at a rate of 1.5 – 2.0 gal/sq (0.6 – 0.8 l/m^2).

Membrane: One ply of SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Or

One ply of SafeWeld 180M APP or SafeWeld 180FR APP adhered with SafeWeld Premium APP Modified Bitumen Adhesive at a rate of 1.5 – 2.0 gal/sq (0.6 – 0.8 l/m^2).

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -45.0 psf. (See General Limitation #9).

Membrane Type: APP

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck fastened to supports spaced max. 6 ft o.c. with Teks/5 fasteners spaced max. 6 in. o.c. Side laps stitched with three (3) Teks/1 screws equally spaced between supports**.**

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(2): All layers of insulation mechanically attached to roof deck. Membrane is subsequently fully or partially adhered to insulation.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Multi-Max FA-3 Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**7 with 9 18 with 12**	**1:1.33 ft²**

Base Sheet: One ply of SafeWeld 180S APP with SafeWeld Premium APP Modified Bitumen Adhesive at a rate of 1.5 gal/sq (0.6 l/m^2) or torch applied.

Membrane: One ply of SafeWeld 180M APP or SafeWeld 180FR APP adhered with SafeWeld Premium APP Modified Bitumen Adhesive at a rate of 1.5 gal/sq (0.6 l/m^2) or torch applied.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

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

Membrane Type: APP

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck secured to supports spaced 6 ft o.c. using two Tek/5 screws with washers spaced 6" o.c. Side laps attached 12" o.c. using Tek/1 screws**.**

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table

System Type C(3): All layers of insulation mechanically attached to roof deck. Membrane is subsequently fully or partially adhered to insulation.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Any Approved Polyisocyanurate Insulation Listed in Table 2 Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**9 with 6 12 with 13**	**1:1 ft²**

Base Sheet: One ply of SafeWeld 180S APP, or DuraWeld 4S APP, heat welded to coverboard.

Or

One ply of SafeWeld 180S APP adhered with SafeWeld Premium APP Modified Bitumen Adhesive at a rate of 1.5 – 2.0 gal/sq (0.6 – 0.8 l/m^2).

Membrane: One ply of SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Or

One ply of SafeWeld 180M APP or SafeWeld 180FR APP adhered with SafeWeld Premium APP Modified Bitumen Adhesive at a rate of 1.5 – 2.0 gal/sq (0.6 – 0.8 l/m^2).

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -67.5 psf. (See General Limitation #7).

Membrane Type: APP

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. 33ksi. steel deck

System Type D(1): One or more layers of insulation and base sheet simultaneously attached.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-II, ACFoam-III, Tapered ACFoam, ACFoam Composite, Multi-Max FA-3 Minimum 1.5" thick	**N/A**	**N/A**
H-Shield, Tapered H-Shield Minimum 2" thick	**N/A**	**N/A**

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	**N/A**	**N/A**
FescoBoard Minimum ¾" thick	**N/A**	**N/A**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One ply of USP Base or USP NVB mechanically fastened to the deck with 3 in. Ribbed Galvalume Plate or OMG 3" Galvalume Steel Plate with #12 Standard Roofgrip or Heavy Duty fasteners or PlyFast 3" Metal Plate O with PlyFast #12 Fastener O or PlyFast #14 Fastener O or with Trufast 3" Metal Insulation Plates with Trufast #12 DP fasteners or with PlyFast 3" Metal Plate T with PlyFast #12 Fastener T spaced 12" o.c. in 2" wide laps and 18" o.c. in two, equally spaced, staggered rows.

Ply Sheet: (Optional) One or more layers of USP APP 160S, SafeWeld 180S APP, or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -45.0 psf. (See General Limitation #9)

Membrane Type:	APP
Deck Type 2I:	22 ga. Type B, Grade 80 steel attached 6“ o.c. with Teks/5 screws to structural steel supports spaced max. 6 ft o.c. Side laps attached with Teks/1 screws spaced 24” o.c.
	This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table
Deck Description:	Minimum 22 ga. 33ksi. steel deck
System Type D(2):	One or more layers of insulation and base sheet simultaneously attached.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Any Approved Polyisocyanurate Listed in Table 1 Minimum 2” thick	**N/A**	**N/A**
(Optional) Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet:	One ply of USP Base mechanically fastened to the deck with PlyFast #14 Fastener O or OMG Heavy Duty fasteners with 3 in. Round Metal Plates, or Trufast #14 HD Fasteners with Trufast 3” Metal Insulation Plates, or PlyFast #14 Fastener T with PlyFast 3” Metal Plate T spaced 6” o.c. in a 4" side lap and 6" o.c. in two, equally spaced, staggered rows.
Ply Sheet:	(Optional) One or more layers of USP APP 160S, SafeWeld 180S APP, or DuraWeld 4S APP, heat welded.
Membrane:	One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.
Surfacing:	For use on non FR membranes: USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.
Maximum Design Pressure:	-135.0 psf. (See General Limitation #7)

STEEL DECK 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 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.

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 sidelap 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 Engineer, 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 with 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.)**

END OF THIS ACCEPTANCE