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

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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Miami, Florida 33175-2474
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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 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 renews NOA 18-0109.04 and consists of pages 1 through 15.
The submitted documentation was reviewed by Alex Tigera.

ROOFING ASSEMBLY NOTICE OF ACCEPTANCE

Category: Roofing
Sub-Category: Modified Bitumen
Material: APP
Deck Type: Lightweight Concrete
Maximum Design Pressure: -240 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 / interplay 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.

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
ENRGY 3	Polyisocyanurate Insulation	Johns Manville Corporation
ISO 95+ GL	Polyisocyanurate foam insulation	Firestone Building Products Company, LLC
H-Shield, H-Shield CG	Polyisocyanurate foam insulation	Hunter Panels, LLC
Multi-Max FA-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	Rigid perlite roof insulation board.	Johns Manville Corporation
Structodek High Density Fiberboard Roof Insulation	High Density Wood Fiber insulation board	Blue Ridge Fiberboard, Inc.
InsulFoam EPS	Closed-cell, expanded polystyrene board	Insulfoam LLC

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Trufast #14 HD Fasteners	Self-drilling, coated, carbon steel fastener used in concrete, steel and wood decks.	Various	Altenloh, Brinck & Co. U.S., Inc.
2.	PlyFast #14 Fastener T	Fastener used in steel, concrete and wood decks.	Various	U.S. Ply, Inc.
3.	Trufast 3" Metal Insulation Plate	Galvalume steel stress plate	3" Diameter	Altenloh, Brinck & Co. U.S., Inc.
4.	PlyFast 3" Metal Plate T	Galvalume steel stress plate	3" Diameter	U.S. Ply, Inc.
5.	OMG Heavy Duty	Self drilling fastener for steel used wood, steel or concrete decks	Various	OMG, Inc.
6.	3 in. Round Metal Plates	Coated fastening plate	3" Round	OMG, Inc.
7.	Trufast Twin Loc-Nail Assembled Fastener	Pre-assembled galvalume steel fastener/plate unit.	Various	Altenloh, Brinck & Co. U.S., Inc.
8.	PlyFast Double Lock Nail E	Pre-assembled, coated steel fastener with dual locking staple shanks	Various	U.S. Ply, Inc.
9.	Trufast FM-90 Base Sheet Fastener	Base sheet fastener	Various	Altenloh, Brinck & Co. U.S., Inc.
10.	PlyFast 1.7" Base Ply Fastener E	Galvanized steel fastener	Various	U.S. Ply, Inc.
11.	PlyFast #14 Fastener O	Self drilling fastener for steel used wood, steel or concrete decks	Various	U.S. Ply, Inc.
12.	ICP Adhesives CR-20	Dual component urethane adhesive.	Various	ICP Adhesives and Sealants, Inc.
13.	OMG OlyBond Adhesive	Spray Polyurethane Foam	Various	OMG, Inc.
14.	OMG OlyBond 500	Spray Polyurethane Foam	Various	OMG, Inc.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Factory Mutual Research Corp.	3026836	FM 4454	07/13/2007
	3014692	FM 4470	08/05/2003
	3032172	FM 4470	06/12/2009
	3008869	FM 4470	03/19/2001
	3023458	FM 4470	07/18/06
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	03/31/2010
	U0215.05.06-2-R2	ASTM D6222	08/02/10
	U0228.12.06-R1	FM 4470	04/01/2010
	02762.03.05-R2	FM 4470	04/01/2010
	02764.09.05-R1	FM 4470	12/10/2007
	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, P.E.	Letter	E(1), E(2)	09/12/16

APPROVED ASSEMBLIES

Membrane Type: APP

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: Min. 240 psi Elastizell Lightweight Insulating Concrete. Minimum 2" think solid pour with over optional minimum 1" EPS holey board and optional minimum 1/8" slurry coat. Over structural concrete.

System Type A(1): One or more layers of insulation adhered with approved asphalt

All General and System limitations apply.

Deck: Min. 2500 psi. structural concrete

One or more layers of any of the following insulations:

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

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: All insulation shall be adhered to the deck with ICP Adhesives CR-20 applied in 3" – 3.5" wide ribbons spaced 12 in. 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 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: -180 psf (See General Limitation #9.)

Membrane Type: APP

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: Min. 240 psi Elastizell Lightweight Insulating Concrete. Minimum 2" think solid pour with over optional minimum 1" EPS holey board and optional minimum 1/8" slurry coat over structural concrete.

System Type A(2): One or more layers of insulation adhered with approved asphalt

All General and System limitations apply.

Deck: Min. 2500 psi structural concrete

One or more layers of any of the following insulations:

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

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck with ICP Adhesives CR-20 applied in 3" – 3.5" wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet fully adhered in hot asphalt.

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: -180.0 psf (See General Limitation #9.)

Membrane Type: APP

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: Min. 270 psi Celcore or Mearlcrete Lightweight Insulating Concrete. Minimum 2" think solid pour with over optional minimum 1" EPS holey board and optional minimum 1/8" slurry coat structural concrete.

System Type A(3): One or more layers of insulation adhered with approved asphalt

All General and System limitations apply.

Deck: Min. 2500 structural concrete

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
H-Shield, H-Shield CG, ACFoam-II, ACFoam-III, ISO 95+ GL, ENRGY 3, Multi-Max FA-3 Minimum 1.5" thick	**N/A**	**N/A**

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: All insulation shall be adhered to the deck with ICP Adhesives CR-20 applied in 3" – 3.5" wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet fully adhered in hot asphalt.

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: -187.5 psf with APP membranes
-177.5 psf with USP Mineral Cap Sheet (See General Limitation #9.)

Membrane Type: APP

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: Min. 240 psi Elastizell Lightweight Concrete. Minimum 2" think solid pour with over optional minimum 1" EPS holey board and optional minimum 1/8" slurry coat over structural concrete.

System Type A(4): One or more layers of insulation adhered with approved asphalt

All General and System limitations apply.

Deck: Min. 2500 psi structural concrete

One or more layers of any of the following insulations:

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

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck with OMG OlyBond 500 adhesive applied in ¾" to 1" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base fully adhered in hot asphalt.

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: -187.5 psf with APP membranes
-177.5 psf with USP Mineral Cap Sheet (See General Limitation #9.)

Membrane Type: APP

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: Min. 200 psi Celcore Lightweight Insulating Concrete over structural concrete.

System Type A(5): One or more layers of insulation adhered with approved asphalt

All General and System limitations apply.

Deck: Min. 2500 psi structural concrete

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
H-Shield, H-Shield CG, ACFoam-II, ACFoam-III, ISO 95+ GL, ENRGY 3, Multi-Max FA-3 Minimum 1.5" thick	**N/A**	**N/A**

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

Note: All insulation shall be adhered to the deck with ICP Adhesives CR-20 applied in 3" – 3.5" wide ribbons spaced 12 in. 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 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: -222.5 psf (See General Limitation #9.)

Membrane Type: APP

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: Min. 270 psi Mearlcrete Lightweight Insulating Concrete. Minimum 2" think solid pour with over optional minimum 1" EPS holey board and optional minimum 1/8" slurry coat over structural concrete.

System Type A(6): One or more layers of insulation adhered with approved asphalt

All General and System limitations apply.

Deck: Min. 2500 psi structural concrete

One or more layers of any of the following insulations:

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

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: All insulation shall be adhered to the deck with ICP Adhesives CR-20 applied in 3" – 3.5" wide ribbons spaced 12 in. 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 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: -240.0 psf (See General Limitation #9.)

Membrane Type:	APP
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Min. 350 psi cellular lightweight concrete. Minimum 1/8" slurry coat is followed by a 1" thick Holey Board and a minimum 2" topcoat of cellular lightweight concrete of steel deck.
System Type E(1):	Base sheet mechanically fastened to roof deck

All General and System limitations apply.

Deck:	22 ga. Type BV, Grade 33 steel deck shall be secured 6" o.c. with Teks/5 screws to structural supports spaced a maximum of 5 ft o.c. Side laps attached with Teks/1 screws spaced 20" o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.**
Base Sheet:	One ply of USP Base Sheet mechanically attached with Twin Loc-Nails, PlyFast Double Lock Nail E, PlyFast #14 Fastener O or OMG Heavy Duty with 3 in. Round Metal Plates, Trufast #14 HD Fasteners with Trufast 3" Metal Insulation Plates or PlyFast #14 Fasteners T with PlyFast 3" Metal Plate T spaced 9" o.c. in 4" lap and 9" o.c. in two, equally spaced, staggered rows.
Ply Sheet:	(Optional) One or more layers of USP APP 160S, SafeWeld 180S or DuraWeld 4S APP, heat welded. Or (Required with use of USP Mineral Cap; not for use with APP membrane) One or more plies of USP Type IV Felt or USP 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:	For use on non FR APP membranes only: 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 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Min. 390 psi. Elastizell Lightweight Concrete. An optional 1" Apache EPS is applied to a min. 3" slurry coat of Elastizell Lightweight Concrete over steel deck.
System Type E(2):	Base sheet mechanically fastened to roof deck

All General and System limitations apply.

Deck:	22 ga., type BV, Grade 33 vented steel deck attached at 3 ft spans with Tek/5 screws spaced 6-inch o.c. Side laps attached with Tek/1 screws, 12-inch o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.**
Base Sheet:	One ply of USP Base mechanically fastened to the deck with Trufast FM-90 Base Sheet Fastener or PlyFast 1.7" Base Ply Fastener E spaced 6" o.c. in the 4" lap and 6" o.c. in three, equally spaced, staggered center rows.
Ply Sheet:	(Optional) One or more layers of USP APP 160S, SafeWeld 180S APP, or DuraWeld 4S APP, heat welded. Or (Required with use of USP Mineral Cap; not for use with APP membrane) One or more plies of USP Type IV Felt or USP 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:	For use on non FR APP membranes only: 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.)

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 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered 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 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