MIAMI-DADE

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

W.P. Hickman
30700 Solon Industrial Parkway
Solon, OH 44139

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) 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 Division (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. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division 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 High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: SBS Modified Bitumen Roof System over 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 revises NOA No. 02-1202.04 and consists of pages 1 through 28.
The submitted documentation was reviewed by Jorge L. Acebo

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Material:	SBS
Deck Type:	Concrete
Maximum Design Pressure	-620 psf
Fire Classification:	See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Pika Ply SS-3G	39" x 32.8' (1 sq.)	ASTM D 6163 Type 1 (S)	Fiberglass reinforced SBS modified bitumen membrane sanded on both sides, used as a base and top ply. Applied in hot asphalt or cold adhesive.
Pika Ply SS-3G (HP)	39" x 32.8' (1 sq.)	ASTM D 6163 Type 2 (S)	Heavy-duty fiberglass reinforced SBS modified bitumen membrane sanded on both sides, used as a based and top ply. Applied in hot asphalt or cold adhesive.
Pika Ply SS-3G (TG)	39" x 32.8' (1 sq.)	ASTM D 6163 Type 1 (S)	Fiberglass reinforced SBS modified bitumen membrane covered on both sides with a thermofusible plastic film. Torch applied.
Pika Ply 2.2 (FS)	39" x 49'(1 ½ sq.)	ASTM D 6163 Type 1 (S)	Glass reinforced SBS modified bitumen membrane with thermofusible plastic film for torch bonding to the topside. Applied in hot asphalt or cold adhesive.
Premium Cap Sheet	39" x 32.8' (1 sq.)	ASTM D 6163 Type 1 (G)	Fiberglass reinforced SBS modified bitumen membrane surfaced with colored granules. Top ply membrane formulated for UL Class 'A'. Applied in hot asphalt or cold adhesive.
Pika Ply MS-3G	39" x 32.8' (1 sq.)	ASTM D 6163 Type 1 (G)	Fiberglass reinforced SBS modified bitumen membrane surface with colored granules. Top ply membrane formulated for UL Class 'A'. Applied in hot asphalt or cold adhesive.
Pika Ply MS-3G (HP)	39" x 32.8' (1 sq.)	ASTM D 6163 Type 2 (G)	Heavy-duty fiberglass scrim reinforced SBS modified bitumen membrane surfaced with colored granules. Top ply membrane formulated for UL Class 'A'. Applied in hot asphalt or cold adhesive.
Pika Ply MS-3G (HP) Cap Sheet	39" x 32.8'(1 sq.)	ASTM D 6163 Type 2 (G)	Heavy-duty fiberglass scrim reinforced SBS modified bitumen membrane surfaced with white granules. Top ply membrane formulated for UL Class 'A'. Applied in hot asphalt or cold adhesive.
PikaPly MS-3G Cap Sheet	39" x 32.8' (1 sq.)	ASTM D 6163 Type 1 (G)	Fiberglass reinforced SBS modified bitumen membrane surface with white granules. Top ply membrane formulated for UL Class 'A'. Applied in hot asphalt or cold adhesive.

Pika Ply MS-4G (TG)	39" x 32.8' (1 sq.)	ASTM D 6163 Type 1 (G)	Fiberglass reinforced, SBS modified bitumen membrane surfaced with colored granules. Top ply membrane formulated for UL Class 'A'. Torch applied.
Pika Ply 180 (FS)	39" x 48' (1½ sq.)	ASTM D 6164 Type 1 (S)	Polyester reinforced SBS modified bitumen membrane with thermofusible plastic film for torch applied bonding to the topside, used as a base sheet. Applied in hot asphalt or cold adhesive.
Pika Ply SS-3P	39" x 32.8' (1 sq.)	ASTM D 6164 Type 1 (S)	Non-woven polyester reinforced SBS modified bitumen membrane sanded on both sides, used primarily as a base ply. Applied in hot asphalt or cold adhesive.
Performance Ply SS	39" x 35' (1 sq.)	ASTM D 6164 Type 1 (S)	Non-woven polyester reinforced SBS modified bitumen membrane sanded on both sides, used primarily as a base ply. Applied in hot asphalt or cold adhesive.
Pika Ply SS-3P (TG)	39" x 32.8' (1 sq.)	ASTM D 6164 Type 1 (S)	Non-woven polyester reinforced SBS modified bitumen membrane, both sides covered with thermofusible plastic film, primarily used as a base ply. Torch applied
Pika Ply SS-4	39" x 32.8' (1 sq.)	ASTM D 6164 Type 2 (S)	Non-woven polyester reinforced SBS modified bitumen membrane sanded on both sides, used primarily as a base ply. Applied in hot asphalt or cold adhesive.
Pika Ply 350 S	39" x 26' (¾ sq.)	ASTM D 6164 Type 2 (S)	Non-woven polyester reinforced SBS modified bitumen membrane sanded on both sides, used primarily as a base ply. Applied in hot asphalt or cold adhesive.
Performance Ply MS FR	39" x 32.8' (1 sq.)	ASTM D 6164 Type 1 (G)	Non-woven polyester reinforced SBS modified bitumen membrane surfaced with colored granules. Top ply membrane formulated for UL Class 'A'. Applied in hot asphalt or cold adhesive.
Pika Ply MS-4 (TG)	39" x 26' ($^3/_4$ sq.)	ASTM D 6164 Type 1 (G)	Non-woven polyester reinforced SBS modified bitumen membrane surfaced with colored granules. Torch applied.
Pika Ply 250 GR (TG)	39" x 26' ($^3/_4$ sq.)	ASTM D 6164 Type 2 (G)	Non-woven polyester reinforced SBS modified bitumen membrane surfaced with colored granules. Torch applied.
Pika Ply MS-4	39" x 32.8' (1 sq.)	ASTM D 6164 Type 2 (G)	Non-woven polyester reinforced SBS modified bitumen membrane surfaced with colored granules. Top Ply membrane formulated for UL Class 'A'. Applied in hot asphalt or cold adhesive.
Pika Ply 250 GR FR (TG)	39" x 26' ($^3/_4$ sq.)	ASTM D 6164 Type 2 (G)	Non-woven polyester reinforced SBS modified bitumen membrane surfaced with colored granules. Torch applied
Pika Ply 350 GR	39" x 16' (½ sq.)	ASTM D 6164 Type 2 (G)	Non-woven polyester reinforced SBS modified bitumen membrane surfaced with colored granules. Applied in hot asphalt or cold adhesive.

Pika Ply 350 GR FR	39" x 16' (½ sq.)	ASTM D 6164 Type 2 (G)	Non-woven polyester reinforced SBS modified bitumen membrane surfaced with colored granules. Top ply membrane formulated for UL Class 'A'. Applied in hot asphalt or cold adhesive.
Pika Ply 350 GR FR (TG)	39" x 16' (½ sq.)	ASTM D 6164 Type 2 (G)	Non-woven polyester reinforced SBS modified bitumen membrane surfaced with colored granules. Top ply membrane formulated for UL Class 'A'. Torch applied.
Pika Ply Aluminum	39" x 32.8' (1 sq.)	ASTM D 6298	Fiberglass reinforced modified bitumen waterproof sheeting faced with aluminum foil.
Pika Ply Copper	39" x 32.8' (1 sq.)	ASTM D 6298	Fiberglass reinforced modified bitumen waterproof sheeting faced with copper foil.
Pika Ply Stainless	39" x 32.8' (1 sq.)	ASTM D 6298	Fiberglass reinforced modified bitumen waterproof sheeting faced with stainless steel foil.
Weather-Tite Pourable Foam Insulation Adhesive		Proprietary	One part elastomeric urethane foam adhesive.
Weather-Tite One Step Foamable Adhesive		Proprietary	Two part elastomeric urethane foam adhesive.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam II	Polyisocyanurate foam insulation	Atlas Energy Products
ACFoam Composite	Composite polyisocyanurate insulation board	Atlas Energy Products
EnergyGuard Perlite	Perlite insulation board.	GAF Materials Corp.
EnergyGuard High Density Fiberboard	High density wood fiberboard insulation.	GAF Materials Corp.
Gypsum	Gypsum board	generic
High Density Wood Fiberboard	Wood fiber insulation board	generic
Perlite Insulation	Perlite insulation board	generic
Dens Deck	Water resistant gypsum board	G-P Gypsum Corp.
ENRGY 2	Polyisocyanurate foam insulation	Johns Manville
ENRGY 2 Plus, Composite, Fesco Foam	Composite Insulation board	Johns Manville
Fesco Board	Expanded mineral fiber	Johns Manville
Multi-Max FA	Polyisocyanurate foam insulation	Rmax, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	#14, #15 Dekfast Fastener	Insulation fastener		Construction Fasteners, Inc.
2.	Omega Fastener	Stainless steel insulation fastener		Construction Fasteners, Inc.
3.	Dekfast Hex Plate	Galvalume AZ50 steel plate	2 $^7/_8$" x 3 ¼"	Construction Fasteners, Inc.
4.	Dekfast Lock Plate	Polypropylene locking plate.	3" x 3 ¼"	Construction Fasteners, Inc.
5.	#14, #15 Roofgrip Fasteners	Insulation fastener for wood, steel and concrete.		ITW Buildex Corp.
6.	AccuTrac Hextra Fasteners	Insulation fastener for wood, steel and concrete.		ITW Buildex Corp.
7.	Accutrac Plate	Galvalume square stress plate	3" square	ITW Buildex Corp.
8.	Metal Plate	Galvalume stress plate.	3" round 3" square	ITW Buildex Corp.
9.	Gearlok Plastic Plate	Polyolefin round stress plate	3.2" round	ITW Buildex Corp.
10.	Olympic Fastener #14	Insulation fastener.		Olympic Mfg. Group, Inc.
11.	Olympic CD-10	Insulation fastener.		Olympic Mfg. Group, Inc.
12.	Olympic Fluted Nail	Insulation fastener.		Olympic Mfg. Group, Inc.
13.	Olympic Standard	3" round galvalume AZ50 steel plate	3" round	Olympic Mfg. Group, Inc.
14.	Olympic Plastic	Polypropylene stress plate	3.25" round	Olympic Mfg. Group, Inc.
15.	#14 HD Insul-Fixx Fastener	Insulation fastener for wood, steel and concrete.		SFS Intec, Inc.
16.	Isofast Fasteners	Insulation fastener for wood, steel and concrete.		SFS Intec, Inc.
17.	Extra Load Fasteners #15	Fasteners for membrane attachment to steel or concrete decks.		SFS Intec, Inc.
18.	Insul-Fixx S Plate	3" round galvalume AZ50 steel plate	3" round	SFS Intec, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
19.	Insul-Fixx P Plate	Polyethylene stress plate	3" round	SFS Intec, Inc.
20.	Isofast Plate	Square or oblong galvalume steel plates for use with Isofast fasteners		SFS Intec, Inc.
21.	#14 ES-I Fastening Systems	Insulation fastening assembly with plate.	3" round	SFS Intec, Inc.
22.	Tru-Fast Fastener	Insulation fastener for wood, steel and concrete.		The Tru-Fast Corp.
23.	Tru-Fast HD or EHD	Insulation fastener for wood, steel and concrete.		The Tru-Fast Corp.
24.	Tru-Fast MP-3	3" round galvalume AZ50 steel plate	3" round	The Tru-Fast Corp.
25.	Tru-Fast Plastic	Polypropylene plate	3" round	The Tru-Fast Corp.

EVIDENCE SUBMITTED

Test Agency/Identifier	Report No.	Date
Factory Mutual Research Corporation	J.I. 0PA2.AM	11.29.89
	J.I. 2P2A7.AM	11.29.89
	J.I. 1W8A1.AM	07.15.93
	J.I. 1Z3A6.AM	04.27.95
	J.I. 152A1.AM	11.28.84
	J.I. 2D0A0.AM	08.15.97
	J.I. 3001445	02.05.99
Dynatech Engineering Corp.	10.94.27	10.27.94
	2491-04.95	01.04.95
Exterior Research & Design, LLC.	2003.02.97-1	02.15.97
	2003-2.04.97-1	04.15.97
	2002.07.97-1	08.15.97
ITS / Warnock Hersey		05.27.93
Underwriters Laboratories, Inc.	UL Roofing Materials and Systems Directory	Published Annually
	File No. R11436	
	Fire Classification	
	03NK36665	04.21.04
	ASTM E 108	

APPROVED ASSEMBLIES:

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(1): One or more layers of insulation 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**
AC Foam II, ENRGY-2 Minimum 1.4" thick	**N/A**	**N/A**

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Toprox Minimum 1" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
BP High Strength, FM-90 Traffic Top/High Density, GAFTEMP High Density, Roof Insulation Board, High Density Fiberboard, Fiber Base HD1, HD6, Structodek Minimum ½" thick	**N/A**	**N/A**
GAFTEMP Permalite, Fesco Board Minimum ¾" thick	**N/A**	**N/A**
Dens Deck Minimum ¼" thick	**N/A**	**N/A**
Fireguard, type X gypsum Minimum 5/8" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2 or in Henry III Insulbond at 2.0-2.5 gallons/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) One or more plies of Multi-Ply Glass CL, Multi-Ply Glass, Performance Ply or Pika Ply SS-2 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet:	(Optional, required if no base sheet used) One or more plies of Pika Ply SS-3G (TG) or Pika Ply SS-3P (TG) heat welded or One or more plies of Pika Ply SS-3G, Pika Ply SS-3P, Pika Ply SS-4, Pika Ply 350 S, Performance Ply SS, Pika Ply SS-3G (HP), Pika Ply 2.2 (FS), Pika Ply 180 (FS), Premium Ply, HK Glass Ply or ASTM D 2178 Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Membrane:	Pika Ply 350 GR FR (TG), Pika Ply 250 GR FR (TG), Pika Ply 250 GR (TG), Pika Ply MS-4 (TG), Pika Ply MS-4G (TG), Pika Ply Copper, Pika Ply Stainless or Pika Ply Aluminum heat welded or Pika Ply SS-3G, Pika Ply SS-3P, Pika Ply SS-4, Pika Ply 350 S, Premium Cap Sheet, Pika Ply MS-3G, Pika Ply 350 GR, Pika Ply MS-4, Performance Ply MS FR, Pika Ply 350 GR FR, Performance Ply SS, Pika Ply MS-3G (HP), Pika Ply MS-3G Cap Sheet, Pika Ply MS-3G (HP) Cap Sheet or Pika Ply SS-3G (HP) adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Optional) Install one of the following: 1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq. 2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.

Maximum Design Pressure:

-420 psf;	(for min. 1.5" thick Approved polyisocyanurate in asphalt followed by min. ¾" FescoBoard in asphalt.) (See General Limitation #9.)
-345 psf;	(for min. 1.5" thick Approved polyisocyanurate in asphalt followed by min. ½" thick High Density Fiberboard or ¾" thick GAFTEMP Permalite in asphalt.) (See General Limitation #9.)
-177 psf;	(for min. 1.5" thick Approved polyisocyanurate in asphalt followed by min. ¼" thick Georgia Pacific Dens Deck in asphalt.) (See General Limitation #9.)
-237 psf;	(for min. ¼" thick Dens Deck in asphalt only.) (See General Limitation #9.)
-130 psf;	(for min. 1.5" thick Approved polyisocyanurate in Henry III Insulbond at a rate of 2-2.5 gal./sq., followed by min. ½" thick High Density Fiberboard or ¾" thick GAFTEMP Permalite in Henry III Insulbond.) (See General Limitation #9.)
-60 psf;	(for all other applications) (See General Limitation #9.)

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(2): One or more layers of insulation 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**
ENRGY-2		
Minimum 1.4" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Dens Deck		
Minimum ¼" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2 or Weather-Tite Insulation Adhesive applied in continuous ¾" to 1" wide ribbons at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of Pika Ply SS-3G, Pika Ply SS-3G (HP), Pika Ply 2.2 (FS) , Pika Ply 180 (FS), Pika Ply SS-3P, Performance Ply SS, Pika Ply SS-4, Pika Ply 350 S adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: None.

Membrane: Pika Ply SS-3G (TG), Premium Cap Sheet, Pika Ply MS-3G, Pika Ply MS-4 (TG), Pika Ply 250 GR (TG), Pika Ply MS-4 (TG), Pika Ply 250 GR FR (TG), Pika Ply 350 GR FR (TG), Pika Ply Copper, Pika Ply Stainless or Pika Ply Aluminum heat welded.
(Maximum Design Pressure –120 psf, See General Limitation #9.)
Or
Pika Ply SS-3G, Pika Ply SS-3G (HP), Pika Ply SS-3P, Performance Ply SS, Pika Ply SS-4, Pika Ply 350 S, Premium Cap Sheet, Pika Ply MS-3G, Pika Ply 250 GR, Pika Ply 350 GR, Pika Ply MS-4, Performance Ply MS FR, Pika Ply 250 GR FR or Pika Ply 350 GR FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
(Maximum Design Pressure –112.5 psf, See General Limitation #9.)

Surfacing: (Optional) Install one of the following:
1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq.
2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.

Maximum Design Pressure: See Membrane Options Above.

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(3): One or more layers of insulation 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**
Tapered ENRGY-2, Tapered AC Foam II Minimum ½" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Dens Deck Minimum ¼" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2 or Weather-Tite Insulation Adhesive applied in continuous ¾" to 1" wide ribbons at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of Pika Ply SS-3G, Pika Ply SS-3G (HP), Pika Ply 2.2 (FS) , Pika Ply 180 (FS), Pika Ply SS-3P, Performance Ply SS, Pika Ply SS-4, Pika Ply 350 S adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: None.

Membrane: Pika Ply SS-3G, Pika Ply SS-3G (HP), Pika Ply SS-3P, Performance Ply SS, Pika Ply SS-4, Pika Ply 350 S, Pika Ply MS-3G, Premium Cap Sheet, Pika Ply 250 GR, Pika Ply 350 GR, Pika Ply MS-4, Performance Ply MS FR, Pika Ply 250 GR FR, Pika Ply 350 GR FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Install one of the following:

1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq.
2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.

Maximum Design Pressure: -60 psf; (See General Limitation #9.)
-82.5 psf; (for tapered AC Foam II) (See General Limitation #9.)

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

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

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Tapered AC Foam II Minimum ½" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
AC Foam II Composite Minimum 2" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2 or Weather-Tite Insulation Adhesive applied in continuous ¾" to 1" wide ribbons at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of Pika Ply SS-3G, Pika Ply SS-3G (HP), Pika Ply 2.2 (FS) , Pika Ply 180 (FS), Pika Ply SS-3P, Performance Ply SS, Pika Ply SS-4, Pika Ply 350 S adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: None.

Membrane: Pika Ply SS-3G, Pika Ply SS-3G (HP), Pika Ply SS-3P, Performance Ply SS, Pika Ply SS-4, Pika Ply 350 S, Pika Ply MS-3G, Premium Cap Sheet, Pika Ply 250 GR, Pika Ply 350 GR, Pika Ply MS-4, Performance Ply MS FR, Pika Ply 250 GR FR, Pika Ply 350 GR FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Install one of the following:

1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq.
2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.

Maximum Design Pressure: -67.5 psf; (See General Limitation #9.)

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(5): One or more layers of insulation adhered with approved adhesive or 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**
AC Foam II Minimum 2" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Dens Deck Minimum ¼" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2 or Insta-Stick Adhesive applied in continuous ¾" to 1" wide ribbons at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) One or more plies of Multi-Ply Glass CL, Multi-Ply Glass, Performance Ply or Pika Ply SS-2 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional, required if no base sheet used) One or more plies of Pika Ply SS-3G (TG) or Pika Ply SS-3P (TG) heat welded
or
One or more plies of Pika Ply SS-3G, Pika Ply SS-3P, Pika Ply SS-4, Pika Ply 350 S, Performance Ply SS, Pika Ply SS-3G (HP), Pika Ply 2.2 (FS), Pika Ply 180 (FS), Premium Ply, HK Glass Ply or ASTM D 2178 Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: Pika Ply 350 GR FR (TG), Pika Ply 250 GR FR (TG), Pika Ply 250 GR (TG), Pika Ply MS-4 (TG), Pika Ply MS-4G (TG), Pika Ply Copper, Pika Ply Stainless or Pika Ply Aluminum heat welded
or
Pika Ply SS-3G, Pika Ply SS-3G (HP), Pika Ply SS-3P, Performance Ply SS, Pika Ply SS-4, Pika Ply 350 S, Premium Cap Sheet, Pika Ply MS-3G, Pika Ply 250 GR, Pika Ply 350 GR, Pika Ply MS-4, Performance Ply MS FR, Pika Ply 250 GR FR or Pika Ply 350 GR FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Install one of the following:
1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq.
2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.

Maximum Design Pressure: -90 psf; (See General Limitation #9.)

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(6): One or more layers of insulation adhered with approved adhesive or 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**
AC Foam II, ENRGY 2 Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Dens Deck Minimum ¼" thick	**N/A**	**N/A**
High Density Wood Fiberboard Minimum ½" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2 or Weather-Tite Insulation Adhesive applied in continuous ¾" to 1" wide ribbons at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One or more plies of Multi-Ply Glass CL, Multi-Ply Glass, Performance Ply or Pika Ply SS-2 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional, required if no base sheet used) One or more plies of Pika Ply SS-3G (TG) or Pika Ply SS-3P (TG) heat welded
or
One or more plies of Pika Ply SS-3G, Pika Ply SS-3P, Pika Ply SS-4, Pika Ply 350 S, Performance Ply SS, Pika Ply SS-3G (HP), Pika Ply 2.2 (FS), Pika Ply 180 (FS), Premium Ply, HK Glass Ply or ASTM D 2178 Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: Pika Ply SS-3G (TG), Pika Ply MS-4 (TG), Pika Ply 250 GR (TG), Pika Ply MS-4 (TG), Pika Ply 250 GR FR (TG), Pika Ply 350 GR FR (TG), Pika Ply Copper, Pika Ply Stainless or Pika Ply Aluminum heat welded.
or
Pika Ply SS-3G, Pika Ply SS-3G (HP), Pika Ply SS-3P, Performance Ply SS, Pika Ply SS-4, Pika Ply 350 S, Premium Cap Sheet, Pika Ply MS-3G, Pika Ply 250 GR, Pika Ply 350 GR, Pika Ply MS-4, Performance Ply MS FR, Pika Ply 250 GR FR or Pika Ply 350 GR FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing:	(Optional) Install one of the following: 1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq. 2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.
Maximum Design Pressure:	-105 psf; (for ½" thick High Density Wood Fiberboard) (See General Limitation #9.) -127.5 psf; (for ¼" thick Dens Deck) (See General Limitation #9.)

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(7): One or more layers of insulation adhered with approved adhesive or 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
AC Foam II, ENRGY 2		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. Base insulation layer shall be adhered to the vapor barrier or primed deck in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2 or OlyBond Insulation Adhesive applied at a rate of 1 gal./100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Dens Deck		
Minimum ¼" thick	**N/A**	**N/A**
High Density Wood Fiberboard (requires two coat application of OlyBond)		
Minimum ½" thick	**N/A**	**N/A**

Note: Apply top layer of insulation in a full mopping of any approved mopping hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2 or OlyBond Insulation Adhesive applied at a rate of 1 gal./100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as Base Layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) One or more plies of Multi-Ply Glass CL, Multi-Ply Glass, Performance Ply or Pika Ply SS-2 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional, required if no base sheet used) One or more plies of Pika Ply SS-3G (TG) or Pika Ply SS-3P (TG) heat welded
or
One or more plies of Pika Ply SS-3G, Pika Ply SS-3P, Pika Ply SS-4, Pika Ply 350 S, Performance Ply SS, Pika Ply SS-3G (HP), Pika Ply 2.2 (FS), Pika Ply 180 (FS), Premium Ply, HK Glass Ply or ASTM D 2178 Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane:	Pika Ply SS-3G (TG), Pika Ply MS-4 (TG), Pika Ply 250 GR (TG), Pika Ply MS-4 (TG), Pika Ply 250 GR FR (TG), Pika Ply 350 GR FR (TG), Pika Ply Copper, Pika Ply Stainless or Pika Ply Aluminum heat welded. or Pika Ply SS-3G, Pika Ply SS-3G (HP), Pika Ply SS-3P, Performance Ply SS, Pika Ply SS-4, Pika Ply 350 S, Premium Cap Sheet, Pika Ply MS-3G, Pika Ply 250 GR, Pika Ply 350 GR, Pika Ply MS-4, Performance Ply MS FR, Pika Ply 250 GR FR or Pika Ply 350 GR FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Optional) Install one of the following: 1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq. 2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.
Maximum Design Pressure:	-217.5 psf; (for ½" thick High Density Wood Fiberboard) (See General Limitation #9.) -232.5 psf; (for ¼" thick Dens Deck) (See General Limitation #9.)

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

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
ENRGY 2, PSI-25		
Minimum 1.4" thick	**1, 5, 10, 11, 12, 15, 21 or 23**	**1:2.67 ft^2**
AC Foam II, Multi-Max FA		
Minimum 1.5" thick	**1, 5, 10, 11, 12, 15, 21 or 23**	**1:2 ft^2**
ACFoam II, ENRGY-2, PSI-25, Multi-Max FA		
Minimum 2" thick	**1, 5, 10, 11, 12, 15, 21 or 23**	**1:4 ft^2**
ACFoam Composite, ENRGY-2 Composite, ENRGY-2 Plus, Thermaroof Composite		
Minimum 1.5" thick	**1, 5, 10, 11, 12, 15, 21 or 23**	**1:4 ft^2**
Toprox		
Minimum 1" thick	**10**	**1:2.4 ft^2**
Dens Deck		
Minimum ¼" thick	**1, 10 or 15**	**1:4 ft^2**
Fireguard		
Minimum 5/8" thick	**1, 10 or 15**	**1:4 ft^2**
EnergyGuard Perlite, Fesco Board		
Minimum ¾" thick	**1**	**1:2 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described above. 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).

(Optional) Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EPS Board - For use between Dens Deck or Fireguard base layer and Approved wood fiber top layer only.		
Minimum 1" thick	**N/A**	**N/A**

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
BP High Strength, FM-90 Traffic Top/High Density, EnergyGuard High Density, Roof Insulation Board, High Density Fiberboard, Fiber Base HD1, HD6, Structodek		
Minimum ½" thick	**N/A**	**N/A**
EnergyGuard Perlite, Fesco Board		
Minimum ¾" thick	**N/A**	**N/A**
Dens Deck		
Minimum ¼" thick	**N/A**	**N/A**
Fireguard, type X gypsum		
Minimum $^5/_8$" thick	**N/A**	**N/A**

Fireguard, type X gypsum **Minimum 1" thick**	**N/A**	**N/A**

Note: Apply optional top layer of insulation shall be adhered with approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	(Optional) One or more plies of Multi-Ply Glass CL, Multi-Ply Glass, Performance Ply or Pika Ply SS-2 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Ply Sheet:	(Optional, required if no base sheet used) One or more plies of Pika Ply SS-3G (TG) or Pika Ply SS-3P (TG) heat welded or One or more plies of Pika Ply SS-3G, Pika Ply SS-3P, Pika Ply SS-4, Pika Ply 350 S, Performance Ply SS, Pika Ply SS-3G (HP), Pika Ply 2.2 (FS), Pika Ply 180 (FS), Premium Ply, HK Glass Ply or ASTM D 2178 Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Membrane:	Pika Ply 350 GR FR (TG), Pika Ply 250 GR FR (TG), Pika Ply 250 GR (TG), Pika Ply MS-4 (TG), Pika Ply MS-4G (TG), Pika Ply Copper, Pika Ply Stainless or Pika Ply Aluminum heat welded or Pika Ply SS-3G, Pika Ply MS-3G (HP), Pika Ply MS-3G Cap Sheet, Pika Ply MS-36 (HP) Cap Sheet, Pika Ply SS-3G (HP), Pika Ply SS-3P, Performance Ply SS, Pika Ply SS-4, Pika Ply MS-3G, Premium Cap Sheet, Pika Ply 350 GR, Pika Ply MS-4, Performance Ply MS FR or Pika Ply 350 GR FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Optional) Install one of the following: 1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq. 2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.
Maximum Design Pressure:	-52.5 psf; (See General Limitation #9.)

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

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
AC Foam II, ENRGY-2, PSI-25		
Minimum 1.5" thick	**1, 2, 5, 6, 10, 12, 15, 21 or 21**	**1:1.33 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described above. 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
BP High Strength, FM-90 Traffic Top/High Density, EnergyGuard High Density, Roof Insulation Board, High Density Fiberboard, Fiber Base HD1, HD6, Structodek		
Minimum ½" thick	**N/A**	**N/A**
GAFTEMP Permalite, Fesco Board		
Minimum ¾" thick	**N/A**	**N/A**

Note: Apply optional top layer of insulation shall be adhered with approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: (Optional) One or more plies of Multi-Ply Glass CL, Multi-Ply Glass, Performance Ply or Pika Ply SS-2 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: One or more plies of Pika Ply SS-3G, Pika Ply SS-3P, Pika Ply SS-4, Pika Ply 350 S, Performance Ply SS, Pika Ply SS-3G (HP), Pika Ply 2.2 (FS), Pika Ply 180 (FS), Premium Ply, HK Glass Ply or ASTM D 2178 Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: Pika Ply SS-3G (TG), Pika Ply MS-4 (TG), Pika Ply 250 GR (TG), Pika Ply MS-4 (TG), Pika Ply 250 GR FR (TG), Pika Ply 350 GR FR (TG), Pika Ply Copper, Pika Ply Stainless or Pika Ply Aluminum heat welded.
or
Pika Ply SS-3G, Pika Ply SS-3G (HP), Pika Ply SS-3P, Performance Ply SS, Pika Ply SS-4, Pika Ply 350 S, Premium Cap Sheet, Pika Ply MS-3G, Pika Ply 250 GR, Pika Ply 350 GR, Pika Ply MS-4, Performance Ply MS FR, Pika Ply 250 GR FR or Pika Ply 350 GR FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing:	(Optional) Install one of the following: 1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq. 2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.
Maximum Design Pressure:	-67.5 psf; (Min. ¾" thick Approved Perlite in asphalt) (See General Limitation #7.) -75 psf; (Min. ½" thick Approved High Density Fiberboard in asphalt) (See General Limitation #7.)

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type C: All layers of insulation 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
AC Foam II, ENRGY-2, PSI-25, Multi-Max FA Minimum 1.4" thick	**N/A**	**N/A**
Dens Deck Minimum ¼" thick	**N/A**	**N/A**
Fireguard, type X gypsum Minimum 5/8" thick	**N/A**	**N/A**
Toprox Minimum 1" thick	**N/A**	**N/A**
GAFTEMP Permalite, Fesco Board Minimum ¾" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam Composite, ENRGY-2 Composite, ENRGY-2 Plus, ENRGY-2, PSI-25, Thermaroof Composite Minimum 1.5" thick	**1, 5, 10, 11, 12, 15, 21 or 23**	**1:4 ft^2**
Toprox Minimum 1" thick	**10**	**1:2.4 ft^2**
Dens Deck Minimum ¼" thick	**1, 10, 11, 12 or 15**	**1:4 ft^2**
Fireguard Minimum 5/8" thick	**1, 10, 11, 12 or 15**	**1:4 ft^2**
GAFTEMP Permalite, Fesco Board Minimum ¾" thick	**1, 5, 10, 11, 12, 15, 21 or 23**	**1:2 ft^2**
Esgard, High Density Fiberboard, GAFTEMP Fiberboard, Huebert Fiberboard Minimum 1" thick	**1, 5, 10, 11, 12, 15, 21 or 23**	**1:2 ft^2**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The 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. (See Roofing Application Standard RAS 117 for fastening details.)

Base Sheet: (Optional) One or more plies of Multi-Ply Glass CL, Multi-Ply Glass, Performance Ply or Pika Ply SS-2 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet:	(Optional, required if no base sheet used) One or more plies of Pika Ply SS-3G (TG) or Pika Ply SS-3P (TG) heat welded or One or more plies of Pika Ply SS-3G, Pika Ply SS-3P, Pika Ply SS-4, Pika Ply 350 S, Performance Ply SS, Pika Ply SS-3G (HP), Pika Ply 2.2 (FS), Pika Ply 180 (FS), Premium Ply, HK Glass Ply or ASTM D 2178 Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Membrane:	Pika Ply 350 GR FR (TG), Pika Ply 250 GR FR (TG), Pika Ply 250 GR (TG), Pika Ply MS-4 (TG), Pika Ply MS-4G (TG), Pika Ply Copper, Pika Ply Stainless or Pika Ply Aluminum heat welded or Pika Ply SS-3G, Pika Ply MS-3G (HP), Pika Ply MS-3G Cap Sheet, Pika Ply MS-3G (HP) Cap Sheet, Pika Ply SS-3G (HP), Pika Ply SS-3P, Performance Ply SS, Pika Ply SS-4, Pika Ply MS-3G, Premium Cap Sheet, Pika Ply 350 GR, Pika Ply MS-4, Performance Ply MS FR or Pika Ply 350 GR FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Optional) Install one of the following: 1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq. 2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.
Maximum Design Pressure:	-52.5 psf; (See General Limitation #9.)

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type D(1): All 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**
AC Foam II, ENRGY-2, Multi-Max FA Minimum 1.4" thick	**N/A**	**N/A**

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Toprox Minimum 1" thick	**N/A**	**N/A**

(Optional) Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
BP High Strength, FM-90 Traffic Top/High Density, EnergyGuard High Density, Roof Insulation Board, High Density Fiberboard, Fiber Base HD1, HD6, Structodek Minimum ½" thick	**N/A**	**N/A**
EnergyGuard Perlite, Fesco Board Minimum ¾" thick	**N/A**	**N/A**
Dens Deck Minimum ¼" thick	**N/A**	**N/A**
Fireguard, type X gypsum Minimum 5/8" 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 Multi-Ply Glass CL, Multi-Ply Glass, Performance Ply or Pika Ply SS-2 fastened to the deck as described below:

Fastening: Attach base sheet using CF #14 Dekfast with Hex Plates or SFS HD Insulfixx S spaced 9" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: (Optional, required if no base sheet used) One or more plies of Pika Ply SS-3G (TG) or Pika Ply SS-3P (TG) heat welded
or
One or more plies of Pika Ply SS-3G, Pika Ply SS-3P, Pika Ply SS-4, Pika Ply 350 S, Performance Ply SS, Pika Ply SS-3G (HP), Pika Ply 2.2 (FS), Pika Ply 180 (FS), Premium Ply, HK Glass Ply or ASTM D 2178 Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane:	Pika Ply 350 GR FR (TG), Pika Ply 250 GR FR (TG), Pika Ply 250 GR (TG), Pika Ply MS-4 (TG), Pika Ply MS-4G (TG), Pika Ply Copper, Pika Ply Stainless or Pika Ply Aluminum heat welded or Pika Ply SS-3G, Pika Ply SS-3P, Pika Ply SS-4, Pika Ply 350 S, Premium Cap Sheet, Pika Ply MS-3G, Pika Ply 350 GR, Pika Ply MS-4, Performance Ply MS FR, Pika Ply 350 GR FR, Performance Ply SS, Pika Ply MS-3G (HP), Pika Ply MS-3G Cap Sheet, Pika Ply MS-3G (HP) Cap Sheet or Pika Ply SS-3G (HP) adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Optional) Install one of the following: 1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq. 2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.
Maximum Design Pressure:	-60 psf; (See General Limitation #9.)

Deck Type 3I:	Concrete Decks, Insulated
Deck Description:	2500 psi structural concrete or concrete plank
System Type E:	Base sheet mechanically fastened.

All General and System Limitations apply.

Barrier:	(Optional) Tritex Rocroof, loose laid
Base Sheet:	One ply of Multi-Ply Glass CL, Multi-Ply Glass, Performance Ply or Pika Ply SS-2 fastened to the deck as described below:
Fastening:	Attach base sheet using CF #14 Dekfast with Hex Plates or SFS HD Insulfixx S spaced 9" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.
Ply Sheet:	(Optional, required if no base sheet used) One or more plies of Pika Ply SS-3G (TG) or Pika Ply SS-3P (TG) heat welded or One or more plies of Pika Ply SS-3G, Pika Ply SS-3P, Pika Ply SS-4, Pika Ply 350 S, Performance Ply SS, Pika Ply SS-3G (HP), Pika Ply 2.2 (FS), Pika Ply 180 (FS), Premium Ply, HK Glass Ply or ASTM D 2178 Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Membrane:	Pika Ply 350 GR FR (TG), Pika Ply 250 GR FR (TG), Pika Ply 250 GR (TG), Pika Ply MS-4 (TG), Pika Ply MS-4G (TG), Pika Ply Copper, Pika Ply Stainless or Pika Ply Aluminum heat welded or Pika Ply SS-3G, Pika Ply SS-3P, Pika Ply SS-4, Pika Ply 350 S, Premium Cap Sheet, Pika Ply MS-3G, Pika Ply 350 GR, Pika Ply MS-4, Performance Ply MS FR, Pika Ply 350 GR FR, Performance Ply SS, Pika Ply MS-3G (HP), Pika Ply MS-3G Cap Sheet, Pika Ply MS-3G (HP) Cap Sheet or Pika Ply SS-3G (HP) adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Optional) Install one of the following: 1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq. 2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.
Maximum Design Pressure:	-45 psf (See General Limitation #9.)

Deck Type 3: Concrete Decks, Non-insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type F(1): Base sheet adhered to primed substrate.

All General and System Limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet: (Optional) One or more plies of Multi-Ply Glass CL, Multi-Ply Glass, Performance Ply or Pika Ply SS-2 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: One or more plies of Pika Ply SS-3G (TG) or Pika Ply SS-3P (TG) heat welded
or
One or more plies of Pika Ply SS-3G, Pika Ply SS-3P, Pika Ply SS-4, Pika Ply 350 S, Performance Ply SS, Pika Ply SS-3G (HP), Pika Ply 2.2 (FS), Pika Ply 180 (FS), Premium Ply, HK Glass Ply or ASTM D 2178 Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: Pika Ply 350 GR FR (TG), Pika Ply 250 GR FR (TG), Pika Ply 250 GR (TG), Pika Ply MS-4 (TG), Pika Ply MS-4G (TG), Pika Ply Copper, Pika Ply Stainless or Pika Ply Aluminum heat welded
or
Pika Ply SS-3G, Pika Ply SS-3P, Pika Ply SS-4, Pika Ply 350 S, Premium Cap Sheet, Pika Ply MS-3G, Pika Ply 350 GR, Pika Ply MS-4, Performance Ply MS FR, Pika Ply 350 GR FR, Performance Ply SS, Pika Ply MS-3G (HP), Pika Ply MS-3G Cap Sheet, Pika Ply MS-3G (HP) Cap Sheet or Pika Ply SS-3G (HP) adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Install one of the following:
1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq.
2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.

Maximum Design Pressure: -620 psf; (See General Limitation #9.)

Deck Type 3: Concrete Decks, Non-insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type F(3): Base sheet loose laid.

All General and System Limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet: One ply of Sopra G-Vent loose laid.

Ply Sheet: One or more plies of Pika Ply SS-3G (TG) or Pika Ply SS-3P (TG) heat welded.

Membrane: Pika Ply 350 GR FR (TG), Pika Ply 250 GR FR (TG), Pika Ply 250 GR (TG), Pika Ply MS-4 (TG), Pika Ply MS-4G (TG), Pika Ply Copper, Pika Ply Stainless or Pika Ply Aluminum heat welded.

Surfacing: (Optional) Install one of the following:

1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq.
2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.

Maximum Design Pressure: -157.5 psf; (See General Limitation #9.)

CONCRETE 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 117, 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 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 9B-72 of the Florida Administrative Code.

END OF THIS ACCEPTANCE