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)

Siplast, Inc.
1111 Highway 67 South
Arkadelphia, AR 71923

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 the BCCO and accepted by the Building Code and Product Review Committee 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 Florida Building Code and the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Siplast Modified Bitumen Roofing Systems Over Wood 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. 03-0320.08 and consists of pages 1 through 15.
The submitted documentation was reviewed by Jorge L. Acebo.

PRODUCT CONTROL ACCEPTED

ROOFING ASSEMBLY APPROVAL

Category:	Roofing
Sub-Category:	SBS/SBS Foil Modified Bitumen
Deck Type:	Wood
Maximum Design Pressure	-172.5 psf
Fire Classification:	See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
IREX HT	3.28' x 34'; 89 lbs./sq.	ASTM D 5147	High-melt asphalt sheet with fiberglass scrim reinforcement for use as a base ply sheet for the Veral system.
IREX PR	3.28' x 34'; 89 lbs./sq.	ASTM D 5147	High-melt asphalt sheet with polyester mat / fiberglass scrim reinforcement for use as a mechanically fastened base sheet with the Veral system.
IREX 40	3.28' x 34'; 89 lbs./sq.	ASTM D 5147	High-melt asphalt sheet with random fiberglass mat reinforcement for use as the base ply sheet for a Veral system.
IREX 30	3.28' x 34'; 74 lbs./sq.	ASTM D 5147	High-melt asphalt sheet with random fiberglass mat reinforcement for use as the base ply sheet for a Veral system.
PA 311/311 M Adhesive	5 or 55 gal.	ASTM D 4479	Blend of adhesive asphalts and quick-drying solvents.
PA 1021 Plastic Cement	5 gal.	ASTM D 4586	Asphalt cutback reinforced general purpose cement with non-asbestos fibers.
PA 1125 Asphalt Primer	5 or 55 gal.	ASTM D 41	Asphalt primer.
Parabase	3' x 108'	ASTM D 4601	Asphalt coated fiberglass base sheet for mechanically fastened applications.
Parabase Plus	3.28' x 102.3'; 28 lbs./sq.	ASTM D 5147	Elastomeric asphalt coated base sheet.
Paradiene 20 HV	3.28' x 33.5'; 90 lbs./sq.	ASTM D 5147	Heavy duty asphalt elastomer sheet with random fiberglass mat reinforcement used as a base ply of a Paradiene 20/30 system.
Paradiene 20 HVTG	3.28' x 33.5'; 100 lbs./sq.	ASTM D 5147	Heavy duty asphalt elastomer sheet with random fiberglass mat reinforcement used as a base ply of a Paradiene 20TG/30TG system.
Paradiene 30 HTFR	3.28' x 33.5'; 87 lbs./sq.	ASTM D 5147	Fire-rated asphalt elastomer sheet with mineral surfacing and fiberglass scrim reinforcement for use as the top ply of a Paradiene 20/30 FR system.

Product	Dimensions	Test Specification	Product Description
Paradiene 30 FRTG Paradiene 30 CR FR TG	3.28' x 25.25'; 80 lbs./sq.	ASTM D 5147	Fire rated asphalt elastomer sheet with mineral surfacing and random fiberglass mat reinforcement for use as the top ply sheet of a Paradiene 20/30 TG Series system.
Paradiene 30 HTFRTG	3.28' x 25.25'; 80 lbs./sq.	ASTM D 5147	Fire rated asphalt elastomer sheet with mineral surfacing and fiberglass scrim reinforcement for use as the top ply of a Paradiene TG Series system.
Paradiene 30 Paradiene 30 CR	3.28' x 33.5'; 85 lbs./sq.	ASTM D 5147	Asphalt elastomer sheet with mineral surfacing and random glass mat reinforcement, for use as the top ply of a Paradiene 20/30 system.
Paradiene 20	3.28' x 50'; 90 lbs./ sq.	ASTM D 5147	Asphalt elastomer sheet with random fiberglass mat reinforcement used as the base ply of a Paradiene 20/30 system.
Paradiene 30 HT	3.28' x 33.5'; 85 lbs./sq.	ASTM D 5147	Asphalt elastomer sheet with mineral surfacing and fiberglass scrim reinforcement for use as the top ply of a Paradiene 20/30 system.
Paradiene 20 HT	3.28' x 50'; 90 lbs./sq.	ASTM D 5147	Asphalt elastomer sheet with fiberglass scrim reinforcement for use as a base ply of a Paradiene 20/30 system.
Paradiene 20 HTTG	3.28' x 33.5'; 70 lbs./sq.	ASTM D 5147	Asphalt elastomer sheet with fiberglass scrim reinforcement for use as a base ply of a Paradiene 20/30 system.
Paradiene 20 EG	3.28' x 33.5'; 90 lbs./sq.	ASTM D 5147	Heavy duty asphalt elastomer sheet with fiberglass scrim reinforcement for use as a base ply in Paradiene systems.
Paradiene 20 TG	3.28' x 33.5'; 70 lbs./sq.	ASTM D 5147	Asphalt elastomer sheet with random fiberglass reinforcement used as the base ply of a Paradiene 20/30 TG Series system.
Paradiene 20 PR	3.28' x 50'; 90 lbs./sq.	ASTM D 5147	Asphalt elastomer sheet with polyester fiberglass scrim composite reinforcement used as the top ply of a Paradiene 20/20 PR system having a gravel surfacing. Has additional puncture resistance.
Paradiene 30 HTTG	3.28' x 25.25'; 80 lbs./sq.	ASTM D 5147	Asphalt elastomer sheet with mineral surfacing and fiberglass scrim reinforcement for use as the top ply of a Paradiene 20/30 TG Series system requiring high tensile strength.
Paradiene 30FR Paradiene 30 CR FR	3.28' x 33.5'; 85 lbs./sq.	ASTM D 5147	Asphalt elastomer sheet with mineral surfacing and random glass mat reinforcement, for use as the top ply of a Paradiene 20/30 system.

Product	Dimensions	Test Specification	Product Description
Paradiene 30TG Paradiene 30 CR TG	3.28' x 25.25'; 80 lbs./sq.	ASTM D 5147	Fire rated asphalt elastomer sheet with mineral surfacing and random fiberglass mat reinforcement for use as the top ply sheet of a Paradiene 20/30 TG Series system.
Paradiene 20EGTG	3.28' x 33.5'; 100 lbs./sq.	ASTM D 5147	Heavy duty asphalt elastomer sheet with fiberglass scrim reinforced for use as a base ply in Paradiene 20TG/30TG systems.
Paraglas	3' x 180'; 12 lbs./sq.	ASTM D 2178 Type IV	Asphalt coated fiberglass mat used as a base or ply sheet.
Paravent	3' x 108'	ASTM D 4601	Asphalt coated venting fiberglass base sheet with 1.5 inch perforations.
Veral Stainless Steel	3.28 ' x 33.5'; 105 lbs./sq.	ASTM D 5147	Stainless steel clad asphalt elastomer sheet with fiberglass scrim reinforcement for use as the top ply sheet of a Veral system.
Veral Spectra Series	3.28' x 33.5'; 90 lbs./sq.	ASTM D 5147	Aluminum clad asphalt elastomer sheet with fiberglass scrim reinforcement and factory finished with a Kynar PVDF coating.
Veral Aluminum	3.28' x 33.5'; 90 lbs./sq.	ASTM D 5147	Aluminum clad asphalt elastomer sheet with woven fiberglass reinforcement for use as the top ply sheet of a Veral system.
Veral Copper	3.28' x 33.5'; 105 lbs./sq.	ASTM D 5147	Copper clad asphalt elastomer sheet with fiberglass scrim reinforcement for use as the top ply of a Veral system.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ENRGY 2	Isocyanurate Insulation.	Johns Manville
Fiber Glass Roof Insulation	Fiberglas roof insulation.	Johns Manville
ISORoc	Polyisocyanurate foam insulation.	Johns Manville
ACFoam I, II	Isocyanurate Insulation	Atlas Roofing Corp.
Fiberglas	Fiber glass roof insulation.	Generic
High Density Wood Fiberboard	High Density Wood Fiber insulation board.	Generic
Perlite Insulation Board	Perlite Insulation	Generic
Paratherm	Isocyanurate Insulation	Siplast
Dens Deck	Water Resistant Gypsum	G-P Gypsum Corp.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast Fasteners #12, #14 & #15	Insulation fastener for wood, steel and concrete decks		Construction Fasteners Inc.
2.	Dekfast Hex Plate	Galvalume hex stress plate.	2 $^{7}/_{8}$" x 3 ¼"	Construction Fasteners Inc.
3.	Dekfast Lock Plate	Polypropylene locking plate.	3" x 3 ¼"	Construction Fasteners Inc.
4.	#12 Roofgrip Fasteners	Insulation fastener for wood and steel.		ITW Buildex Corp.
5.	Metal Plate	Galvalume stress plate.	3" round 3" square	ITW Buildex Corp.
6.	Gearlok Plastic Plate	Polypropylene round plate	3.2"	ITW Buildex Corp.
7.	UltraFast	Insulation fastener for wood and steel.		Johns Manville
8.	UltraFast Metal Plate	Galvalume AZ55 steel plate	3" square & 3" round	Johns Manville
9.	UltraFast Plastic Plate	High Density Polyolefin round plate	3" round	Johns Manville
10.	System ES-I	Insulation fastener with polyethylene stress plate for steel and wood decks	3" round	SFS/Stadler
11.	Olympic XHD Screws	Extra Heavy Duty Fasteners for Steel and Wood Decks	N/A	Olympic Mfg. Group
12.	Olympic Base Sheet Disc	Barbed Steel Plates	2-3/4" Round	Olympic Mfg. Group
13.	Parafast XHD Screws	Extra Heavy Duty Fasteners for Steel and Wood Decks	N/A	Siplast, Inc.
14.	Parafast Base Sheet Disc	Barbed Steel Plates	2-3/4" Round	Siplast, Inc.

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
Factory Mutual Research Corp.	Current Insulation Attachment Requirements	FMRC 1996	01.01.96
	FMRC 4470 - PA 114	J.I. 2X1A2.AM	11.04.93
	FMRC 4470 - PA 114	J.I. 0T0A2.AM	10.24.91
	FMRC 4470 - PA 114	J.I. 1M9A7.AM	09.03.86
	FMRC 4470 - PA 114	J.I. 0T2A7.AM	10.28.91
	FMRC 4470 - PA 114	J.I. 1V2A3.AM	06.29.92
	FMRC 4470 - PA 114	J.I. 2Y1A1.AM	04.15.96
	FMRC 4470 - PA 114	J.I. 3Z3A7.AM	04.12.96
	4470	3026320	09.06.06
	4470	3021507	11.04.05
Underwriters Laboratories, Inc.	Fire Resistance Classification UL 790 - PA 114	R10630	01.01.96
Warnock Hersey, Inc.	Physical Properties ASTM D 5147 - PA 110	WH - 1234	12.15.93
Exterior Research & Design, LLC - Trinity Engineering	PA 114	#4701.02.96-1	02.28.96
	PA 114	#4701.09.96-1	08.22.96
Atlantic & Caribbean Roof Consulting, LLC	TAS 114-J	07-034	05-29-07

APPROVED ASSEMBLIES

Membrane Type: SBS

Deck Type 1I: Wood, Insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type A(1): Anchor sheet mechanically fastened; all layers of insulation fully adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ENRGY-2, ACFoam-I, II, ISORoc Minimum 1" thick	**N/A**	**N/A**
Fiberglas Minimum $^{15}/_{16}$" thick	**N/A**	**N/A**
Perlite Minimum ¾" thick	**N/A**	**N/A**
High Density Wood Fiberboard Minimum ½" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the anchor sheet in full mopping of 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. 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.

Anchor Sheet: Parabase, Parabase Plus or Gafglas #75 fastened to the deck as described below:

Fastening: Anchor sheet shall be lapped 4", fastened with approved roofing nails and tin caps 9" o.c. at the lap and two rows staggered in the center of the sheet 12" o.c.

Base Sheet: (Optional) One or more plies Paraglas adhered to the insulation with approved mopping asphalt at an application rate of 20-25 lbs./sq. See General Limitation #4.

Ply Sheet: Paradiene 20 TG, 20 HVTG, 20 HTTG or 20 EGTG adhered by torch or Paradiene 20, 20 FR, 20 HT, 20 HV or 20 EG adhered with approved mopping asphalt at an application rate of 20-25 lbs./sq. or with PA 311/PA-311M adhesive. See General Limitation #4.

Membrane: Paradiene 30 FR, Paradiene 30 CR FR or 30HTFR adhered in approved mopping asphalt or PA 311/ PA-311M adhesive; Paradiene 30 FRTG, Paradiene 30 CR FR TG or 30 HTFRTG adhered by torch.

Maximum Design Pressure: -52.5 (See General Limitation #9.)

Membrane Type: SBS Foil

Deck Type 1I: Wood, Insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type A(2): Anchor sheet mechanically fastened; all layers of insulation fully adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY-2, ACFoam-I, II, ISORoc Minimum 1" thick	**N/A**	**N/A**
Fiberglas Minimum $^{15}/_{16}$" thick	**N/A**	**N/A**
Perlite Minimum ¾" thick	**N/A**	**N/A**
High Density Wood Fiberboard Minimum ½" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the anchor sheet in full mopping of 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. 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.

Anchor Sheet: Parabase, Parabase Plus or Gafglas #75 fastened to the deck as described below:

Fastening: Anchor sheet shall be lapped 4", fastened with approved roofing nails and tin caps 9" o.c. at the lap and two rows staggered in the center of the sheet 12" o.c.

Base Sheet: (Optional) One or more plies Paraglas adhered to the insulation with approved mopping asphalt at an application rate of 20-25 lbs./sq. See General Limitation #4.

Ply Sheet: IREX 30, IREX 40 or IREX HT adhered in approved mopping asphalt. IREX 40 or IREX HT may be applied by torch. See General Limitation #4.

Membrane: Veral adhered in approved mopping asphalt or adhered by torch.

Maximum Design Pressure: -52.5 (See General Limitation #9.)

Membrane Type:	SBS
Deck Type 1I:	Wood, Insulated
Deck Description:	$^{19}/_{32}$" or greater plywood or wood plank
System Type B(1):	Base layer of insulation mechanically attached, 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, ACFoam-I, II **Minimum 1.3" thick**	**1 or 4**	**1:3 ft^2**
ISORoc **Minimum 1.3" thick**	**1 or 4**	**1:2.67 ft^2**
Fiberglas **Minimum 2-$^7/_{16}$" thick**	**7 or 10**	**1:3 ft^2**
Perlite **Minimum ¾" thick**	**1 or 4**	**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).

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Perlite **Minimum ¾" thick**	**N/A**	**N/A**
High Density Wood Fiberboard **Minimum ½" thick**	**N/A**	**N/A**
Fiberglas **Minimum 2-$^7/_{16}$" thick**	**N/A**	**N/A**

Note: Apply top layer of insulation in a full mopping of any approved mopping 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. 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 Paraglas adhered to the insulation with approved mopping asphalt at an application rate of 20-25 lbs./sq. See General Limitation #4.
Ply Sheet:	Paradiene 20 TG, 20 HVTG, 20 HTTG or 20 EGTG adhered by torch or Paradiene 20, 20 FR, 20 HT, 20 HV or 20 EG adhered with approved mopping asphalt at an application rate of 20-25 lbs./sq. or with PA 311/PA 311M adhesive. See General Limitation #4.
Membrane:	Paradiene 30 FR, Paradiene 30 CR FR or 30 HTFR adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. or with PA 311/PA 311M adhesive, or Paradiene 30 FRTG, Paradiene 30 CR FR TG or 30 HTFRTG adhered by torch.
Maximum Design Pressure:	-52.5 (See General Limitation #9.)

Membrane Type:	SBS Foil
Deck Type 1I:	Wood, Insulated
Deck Description:	$^{19}/_{32}$" or greater plywood or wood plank
System Type B(2):	Base layer of insulation mechanically attached, 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, ACFoam-I, II **Minimum 1.3" thick**	**1 or 4**	**1:3 ft^2**
ISORoc **Minimum 1.3" thick**	**1 or 4**	**1:2.67 ft^2**
Fiberglas **Minimum 2-$^7/_{16}$" thick**	**7 or 10**	**1:3 ft^2**
Perlite **Minimum ¾" thick**	**1 or 4**	**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).

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Perlite **Minimum ¾" thick**	**N/A**	**N/A**
High Density Wood Fiberboard **Minimum ½" thick**	**N/A**	**N/A**
Fiberglas **Minimum 2-$^7/_{16}$" thick**	**N/A**	**N/A**

Note: Apply top layer of insulation in a full mopping of any approved mopping 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. 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 Paraglas adhered to the insulation with approved mopping asphalt at an application rate of 20-25 lbs./sq. See General Limitation #4.
Ply Sheet:	IREX 30, IREX 40 or IREX HT adhered in approved mopping asphalt. IREX 40 or IREX HT may be applied by torch. See General Limitation #4
Membrane:	Veral adhered in approved mopping asphalt or adhered by torch.
Maximum Design Pressure:	-52.5 (See General Limitation #9.)

Membrane Type: SBS

Deck Type 1I: Wood, Insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type C(1): All 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**
ENRGY-2, ACFoam-I, II, ISORoc Minimum 1.3" thick	**N/A**	**N/A**
Fiberglas Minimum 2-$^7/_{16}$" thick	**N/A**	**N/A**
Perlite Minimum ¾" thick	**N/A**	**N/A**
High Density Wood Fiberboard Minimum ½" 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 e same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Fiberglas Minimum 2-$^7/_{16}$" thick	**7 or 10**	**1:3 ft^2**
Perlite Minimum ¾" thick	**1 or 4**	**1:2 ft^2**
High Density Wood Fiberboard Minimum ½" thick	**1 or 7**	**1:4 ft^2**

Base Sheet: (Optional) One or more plies Paraglas adhered to the insulation with approved mopping asphalt at an application rate of 20-25 lbs./sq. See General Limitation #4.

Ply Sheet: Paradiene 20 TG, 20 HVTG, 20 HTTG or 20 EGTG adhered by torch or Paradiene 20, 20 FR, 20 HT, 20 HV or 20 EG adhered with approved mopping asphalt at an application rate of 20-25 lbs./sq. or with PA 311/PA-311M adhesive. See General Limitation #4.

Membrane: Paradiene 30 FR, Paradiene 30 CR FR or 30 HTFR adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. or with PA 311/PA 311M adhesive or Paradiene 30 FRTG, Paradiene 30 CR FR TG or 30 HTFRTG adhered by torch.

Maximum Design Pressure: -52.5 (See General Limitation #9.)

Membrane Type: SBS Foil

Deck Type 1I: Wood, Insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type C(2): All 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**
ENRGY-2, ACFoam-I, II, ISORoc Minimum 1.3" thick	**N/A**	**N/A**
Fiberglas Minimum 2-$^7/_{16}$" thick	**N/A**	**N/A**
Perlite Minimum ¾" thick	**N/A**	**N/A**
High Density Wood Fiberboard Minimum ½" 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 e same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Fiberglas Minimum 2-$^7/_{16}$" thick	**7 or 10**	**1:3 ft^2**
Perlite Minimum ¾" thick	**1 or 4**	**1:2 ft^2**
High Density Wood Fiberboard Minimum ½" thick	**1 or 7**	**1:4 ft^2**

Base Sheet: (Optional) One or more plies Paraglas adhered to the insulation with approved mopping asphalt at an application rate of 20-25 lbs./sq. See General Limitation #4.

Ply Sheet: IREX 30, IREX 40 or IREX HT adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. IREX 40 or IREX HT may be applied by torch. See General Limitation #4

Membrane: Veral adhered in approved mopping asphalt or adhered by torch.

Maximum Design Pressure: -52.5 (See General Limitation #9.)

Membrane Type:	SBS
Deck Type 1I:	Wood, Insulated
Deck Description:	$^{19}/_{32}$" or greater plywood or wood plank nailed in the field 6" o.c. with #8 ring shank nails and 4" o.c. at the perimeter of the sheet or plank with #10 ring shank nails. Wood sheathing supports shall be spaced maximum 24" o.c.
System Type D:	All insulation is loose laid with preliminary attachment to roof deck. Membrane is subsequently mechanically fastened through insulation layers to the roof deck.

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, Paratherm Minimum 1.5" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at an 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.

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

Base Sheet:	Paradiene 20 PR mechanically fastened through base and top insulation layers, into wood decking with Parafast XHD Screws and Parafast Base Sheet Disc at 12 O.C. at the previously heat welded 4" side lap and three staggered rows 12" O.C. in the field of the sheet.
Ply Sheet:	Paradiene 20 TG, 20 HVTG, 20 HTTG or 20 EGTG adhered by torch or Paradiene 20, 20 FR, 20 HT, 20 HV or 20 EG adhered with approved mopping asphalt at an application rate of 20-25 lbs./sq. or with PA 311/PA-311M adhesive. See General Limitation #4.
Membrane:	Paradiene 30 FR, Paradiene 30 CR FR or 30 HTFR adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. or Paradiene 30 FRTG, Paradiene 30 CR FR TG or 30 HTFRTG adhered by torch.
Maximum Design Pressure:	-172.5 (See General Limitation #7.)

Membrane Type: SBS

Deck Type 1: Wood, Non-Insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type E(1): Base sheet mechanically fastened.

All General and System limitations apply.

Base Sheet: Parabase, Parabase Plus or Gafglas #75, mechanically fastened as detailed below:

Fastening: Base sheet shall be lapped 4", fastened with approved roofing nails and tin caps 9" o.c. in the lap and two rows staggered in the center of the sheet 12" o.c.

Ply Sheet: Paradiene 20 TG, 20 HVTG, 20 HTTG or 20 EGTG, adhered by torch, or Paradiene 20, 20 FR, 20 HT, 20 HV or 20 EG adhered with approved mopping asphalt at an application rate of 20-25 lbs./sq. or with PA 311/ PA 311M adhesive.

Membrane: Paradiene 30 FR, Paradiene 30 CR FR or 30 HT FR adhered with approved roofing asphalt or PA 311/ PA 311M adhesive, or Paradiene 30 FRTG, Paradiene 30 CR FR TG or 30 HTFRTG adhered by torch.

Maximum Design Pressure: -52.5 (See General Limitation #9.)

Membrane Type: SBS Foil

Deck Type 1: Wood, Non-Insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

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

All General and System limitations apply.

Base Sheet: Parabase, Parabase Plus or Gafglas #75, mechanically fastened as detailed below:

Fastening: Base sheet shall be lapped 4", fastened with approved roofing nails and tin caps 9" o.c. in the lap and two rows staggered in the center of the sheet 12" o.c.

Ply Sheet: IREX 30, IREX 40 or IREX HT, adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq.. IREX 40 or IREX HT may be applied by torch.

Membrane: Veral adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. or by torch.

Maximum Design Pressure: -45 (See General Limitation #9.)

WOOD DECK SYSTEM LIMITATIONS:

1 A slip sheet is required with Ply 4 and Ply 6 when used as a mechanically fastened base or anchor sheet.

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 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. **(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.)**

END OF THIS ACCEPTANCE