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
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, including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Siplast Modified Bitumen Roofing Systems Over Steel Decks

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

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

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

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

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA No. 08-0731.03 and consists of pages 1 through 25.
The submitted documentation was reviewed by Jorge L. Acebo.

MIAMI-DADE COUNTY APPROVED

ROOFING ASSEMBLY NOTICE OF ACCEPTANCE

Category:	Roofing
Sub-Category:	Modified Bitumen
Material:	SBS/SBS Foil
Deck Type:	Steel
Maximum Design Pressure	-150 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Parabase	3' x 108'	ASTM D 4601	Asphalt coated fiberglass base sheet for mechanically fastened applications.
Parabase FS	3' x 108'	ASTM D 4601	Asphalt coated fiberglass base sheet with a polyolefin back surfacing for mechanically fastened applications.
Parabase Plus	3.28' x 102.3'; 28 lbs./sq.	ASTM D 5147	Elastomeric asphalt coated base sheet.
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.
Paravent FS	3' x 108'	ASTM D 4601	Asphalt coated venting fiberglass base sheet with 1.5 inch perforations and a polyolefin back surfacing..
Paradiene 20	3.28' x 50'; 90 lbs./ sq.	ASTM D 6163	Asphalt elastomer sheet with random fiberglass mat reinforcement used as the base ply of a Paradiene 20/30 system.
Paradiene 20 HT	3.28' x 50'; 90 lbs./sq.	ASTM D 6163	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 6163	Heavy duty asphalt elastomer sheet with fiberglass scrim reinforcement for use as a base ply in Paradiene systems.
Paradiene 20 HV	3.28' x 33.5'; 90 lbs./sq.	ASTM D 6163	Heavy duty asphalt elastomer sheet with random fiberglass mat reinforcement used as a base ply of a Paradiene 20/30 system.
Paradiene 20 PR	3.28' x 50'; 55 lbs./sq.	ASTM D 6162	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 20 TG	3.28' x 33.5'; 70 lbs./sq.	ASTM D 6163	Asphalt elastomer sheet with random fiberglass reinforcement used as the base ply of a Paradiene 20/30 TG Series system.

Product	Dimensions	Test Specification	Product Description
Paradiene 20 TG F	3.28' x 33.5'; 70 lbs./sq.	ASTM D 4601	Asphalt elastomer sheet with random fiberglass reinforcement and a silica parting agent on the top surface, for use as the base ply of a Paradiene 20/30 TG Series system.
Paradiene 20 HT TG	3.28' x 33.5'; 70 lbs./sq.	ASTM D 6163	Asphalt elastomer sheet with fiberglass scrim reinforcement for use as a base ply of a Paradiene 20/30 system.
Paradiene 20 EG TG	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.
Paradiene 20 HV TG	3.28' x 33.5'; 100 lbs./sq.	ASTM D 6163	Heavy duty asphalt elastomer sheet with random fiberglass mat reinforcement used as a base ply of a Paradiene 20TG/30TG system.
Paradiene 20 PR TG	3.28' x 33.5'; 96 lbs./sq.	ASTM D 6164	High performance SBS modified bitumen finish ply designed for use in gravel surfaced. Used as a surface ply of a Paradiene 20/20TG system.
Paradiene 20 TS	3.28' x 33.5'; 76 lbs./sq.	ASTM D 6163	High performance, semi adhered SBS modified bitumen with random fiberglass mat reinforcement used as a base ply of Paradiene 20/30 systems.
Terabase	3.28' x 50'; 90 lbs./sq.	ASTM D 6163	Asphalt elastomer sheet with random fiberglass mat reinforcement used as the base ply for Teranap systems.
Terabase TG	3.28' x 33.5'; 70 lbs./sq.	ASTM D 6163	Asphalt elastomer sheet with random fiberglass reinforcement used as the base ply for Teranap systems.
Teranap	3.28' x 26'; 97 lbs./sq.	ASTM D 5147	A non-woven polyester mat impregnated and coated with high quality SBS modified bitumen. The surface of the sheet is protected by a polyester film or by sand.
Paradiene 30 Paradiene 30 CR	3.28' x 33.5'; 85 lbs./sq.	ASTM D 6163	Asphalt elastomer sheet with mineral surfacing and random glass mat reinforcement, for use as the top ply of a Paradiene 20/30 system.
Paradiene 30 FR Paradiene 30 FR CR	3.28' x 33.5'; 85 lbs./sq.	ASTM D 6163	Asphalt elastomer sheet with mineral surfacing and random glass mat reinforcement, for use as the top ply of a Paradiene 20/30 system.
Paradiene 30 HT	3.28' x 33.5'; 85 lbs./sq.	ASTM D 6163	Asphalt elastomer sheet with mineral surfacing and fiberglass scrim reinforcement for use as the top ply of a Paradiene 20/30 system.

Product	Dimensions	Test Specification	Product Description
Paradiene 30 HTFR	3.28' x 33.5'; 87 lbs./sq.	ASTM D 6163	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.
Paradiene 30 MW	3.28' x 33.5'; 87 lbs./sq.	ASTM D 6163	Asphalt elastomer sheet with mineral surfacing and ultra high tensile fiberglass reinforcement for use as the top ply of a Paradiene 20/30 FR system.
Paradiene 30 MW FR	3.28' x 33.5'; 87 lbs./sq.	ASTM D 6163	Fire rated asphalt elastomer sheet with mineral surfacing and ultra high tensile fiberglass reinforcement for use as the top ply of a Paradiene 20/30 FR system.
Paradiene 30 TG 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 30 FRTG Paradiene 30 CR FR TG	3.28' x 25.25'; 80 lbs./sq.	ASTM D 6163	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 HTTG	3.28' x 25.25'; 80 lbs./sq.	ASTM D 6163	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 30 HTFRTG	3.28' x 25.25'; 80 lbs./sq.	ASTM D 6163	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 40 FR	3.28' x 26'; 115 lbs./sq.	ASTM D 5147	Fire rated asphalt elastomer sheet with mineral surfacing, glass mat/glass scrim reinforced.
Parafor 50 LT	3.28' x 17.5'; 141 lbs./sq.	ASTM D 6162	Heavy duty asphalt elastomer sheet with mineral surfacing, polyester mat/fiberglass scrim reinforced.
Paralosa TS	3.28' x 26.25'; 141 lbs./sq.	ASTM D 6162	Heavy duty asphalt elastomer sheet with mineral surfacing, polyester mat/fiberglass scrim reinforced. For use as single ply membrane over concrete decks.
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.
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.

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.
Veral Aluminum	3.28' x 33.5'; 90 lbs./sq.	ASTM D 6298	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 6298	Copper clad asphalt elastomer sheet with fiberglass scrim reinforcement for use as the top ply of a Veral system.
Veral Stainless Steel	3.28 ' x 33.5'; 105 lbs./sq.	ASTM D 6298	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 6298	Aluminum clad asphalt elastomer sheet with fiberglass scrim reinforcement and factory finished with a Kynar PVDF coating.
PA 100 Mopping Asphalt		ASTM D 312 Type IV	Mopping Asphalt
PA 311/311 M/311 LS Adhesive	5 or 55 gal.	ASTM D 4479	Blend of adhesive asphalts and quick-drying solvents.
PA 828 Flashing Cement	5 gal.	ASTM D 4586	Flashing Cement
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.
PC – 227	5 or 55 gal.	ASTM D 6083	Elastomeric Roof Coating.
Para-Stick Insulation Adhesive	30 lb pressurized cylinders	N/A	A single component moisture curing Urethane foam adhesive

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
Paratherm, Paratherm W, Paratherm	Isocyanurate Insulation	Siplast
Siplast Wood Fiberboard	Wood fiber insulation	Siplast
ACFoam II	Polyisocyanurate 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
Dens Deck, Dens Deck Prime	Water resistant gypsum	G-P Gypsum Corp.
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, LLC
ENRGY 3	Polyisocyanurate Insulation.	Johns Manville
Fiber Glass Roof Insulation	Fiberglas roof insulation.	Johns Manville
ISORoc	Polyisocyanurate foam insulation.	Johns Manville
DuraBoard	High-density perlite roof insulation.	Johns Manville
Multi-Max FA	Polyisocyanurate foam insulation	Rmax, Inc.
SecuRock	Water resistant recycled cellulose and synthetic gypsum	USG

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		SFS Intec
2.	Dekfast Hex Plate	Galvalume hex stress plate.	2 7/8" x 3 1/4"	SFS Intec
3.	Dekfast Lock Plate	Polypropylene locking plate.	3" x 3 1/4"	SFS Intec
4.	#12, #15 Roofgrip Fasteners	Insulation fastener for wood and steel.		OMG
5.	Metal Plate	Galvalume stress plate.	3" round 3" square	OMG
6.	Gearlok Plastic Plate	Polypropylene round plate	3.2"	OMG
7.	UltraFast	Insulation fastener for wood and steel.		Johns Manville
8.	Glasfast Plate	Red polypropylene copolymer round plate	3" round	Johns Manville

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
9.	Olympic Fastener #12 & #14	Insulation fastener		OMG
10.	Olympic Polypropylene	Polypropylene plastic plate	3.25" round	OMG
11.	Olympic Standard	3" round galvalume AZ50 steel plate	3" round	OMG
12.	Olympic G-2	3.5" round galvalume AZ55 steel plate	3.5" round	OMG
13.	System ES	Preassembled plate/screw unit for fastening insulation		SFS Intec
14.	Tru-Fast			The Tru-Fast Corp.
15.	Tru-Fast Plates	3" round galvalume AZ55 steel plate	3" round	The Tru-Fast Corp.
16.	Tru-Fast Plates	Polyethylene plastic plate	3" round	The Tru-Fast Corp.
17.	Parafast Roofing Fasteners	Insulation fastener for steel and wood decks		Siplast
18.	Parafast Metal Plates	Galvalume coated steel plates.	3" round	Siplast
19.	Parafast 123 Tri Rib Plates	Galvalume coated steel plates	3" round	Siplast
20.	Parafast PA	Pre Assembled 3"plate/#12 screw unit for fastening insulation		Siplast
21.	Olympic XHD	#15 Screws		OMG
22.	Olympic Super XHD	2-3/4" Super XHD barded stress Plate		OMG
23.	Olympic	3" ribbed galvalume plates		OMG
24.	Parafast XHD Roofing Fasteners	Insulation Fastener for Steel and Wood Decks		Siplast

EVIDENCE SUBMITTED

Test Agency/Identifier	Name	Report	Date
Factory Mutual Research Corp.	Current Insulation Attachment Requirements	FMRC 1996	01/01/96
	FMRC 4470 - TAS 114	J.I. 2Y1A1.AM	04/15/96
	FMRC 4470 - TAS 114	J.I. 3Z3A7.AM	04/12/96
	FM 4470	3009110	06/04/01
	FM 4470	3011494	08/22/01
	FM 4470	3015680	11/24/03
	FM 4470	3023079	05/12/06
	FM 4470	3018923	12/12/05
	FM 4470	3023545	12/10/06
	FM 4470	3026653	05/24/06
	FM 4470	3031655	05/27/08
	FM 4470	3033854	01/16/09
Underwriters Laboratories, Inc.	Fire Resistance Classification UL 790 - PA 114	R10630	01/01/96
Trinity ERD	Wind Uplift TAS 114	#4701.02.96-1	02/28/96
	Wind Uplift TAS114	#4701.09.96-1	08/22/96
	TAS 117	C8500SC.11.07	11/30/07

APPROVED ASSEMBLIES

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

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

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners Table 3	Fastener Density/ft^2
Paratherm W, ENRGY-3, ACFoam II, H-Shield 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 13**	**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. 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) Paraglas; one or more plies adhered to the insulation with approved mopping asphalt at an application rate of 20-25 lbs./sq.
Ply Sheet:	Paradiene 20 TG, 20 TG F, 20 HVTG, 20 HTTG or 20 EGTG or Terabase TG adhered by torch or Paradiene 20, 20 HT, 20 HV, 20 EG or Terabase adhered with approved mopping asphalt at an application rate of 20-40 lbs./sq. or with PA 311 adhesive.
Membrane:	Paradiene 20 PR, 30 FR,30 CR FR, 30 MW FR or 30 HTFR adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. or with PA 311 adhesive; Paradiene 20, PRTG, Teranap, Paradiene 30 FRTG,30 CR FR TG 30 HTFRTG or Parafor 50 LT adhered by torch.
Note:	**Refer to manufacturer's specifications for specific application requirements.**
Surfacing:	None
Maximum Design Pressure:	-52 psf (See General Limitation #9)

Membrane Type:	SBS Foil
Deck Type 2I:	Steel, Insulated
Deck Description:	18-22 ga. steel
System Type B(2):	Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
Paratherm W, ENRGY-3, ACFoam II, H-Shield 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 13**	**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. 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) Paraglas; one or more plies adhered to the insulation with approved mopping asphalt at an application rate of 20-25 lbs./sq.
Ply Sheet:	IREX 30, IREX 40, IREX HT, Paradiene 20, 20 HT, 20 HV or 20 EG adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. or IREX 40, IREX HT, Paradiene 20 TG, 20 TG F, 20 HVTG, 20 HTTG or 20 EGTG applied by torch.
Membrane:	Veral adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. or by torch.
Surfacing:	None
Maximum Design Pressure:	-52 psf (See General Limitation #9)

Membrane Type: SBS Foil

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

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

Deck: Minimum 22 ga., steel decking meeting ASTM Designation A 1008 SS Grade 80 or A653 SS Grade 80 attached to minimum ¼" steel supports spaced 6 ft. o.c. with ITW Buildex Traxx 5 fasteners (at the bottom flute), and deck side laps attached with Buildex Traxx 1 fasteners spaced at max. of 24" o.c.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
AC Foam II, Paratherm, H-Shield Minimum 1.5" thick	**20 or 17-18**	**1:1.33ft.^{2}**

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.

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

Ply Sheet: Paradiene 20, adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq.

Membrane: Paradiene 30 FR, 30 CR FR, 30 HT, 30 HT FR, Paradiene 40 FR Parafor 30, or Parafor 50 LT in approved mopping asphalt or PA-311Cold Adhesive applied at a rate of 1.5 gal/square or Paradiene 30 TG, 30 CR TG, 30 FR TG, 30 CR FR TG, 30 HT FR TG, Parafor 30 TG, Parafor 50 LT TG, Veral Aluminum, Veral Copper, Veral Stainless, or Veral Spectra by torch.

Note: **Refer to manufacturer's specifications for specific application requirements.**

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type C(1): All layers of insulation simultaneously attached.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners Table 3	Fastener Density/ft^2
Paratherm W, ENRGY-3, ACFoam II, ISORoc, H-Shield Minimum 1.3" thick	**N/A**	**N/A**
Fiberglas Minimum 2-$^7/_{16}$" thick	**N/A**	**N/A**
Perlite, DuraBoard 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 the 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 13**	**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 of Paraglas adhered to the insulation with approved mopping asphalt at an application rate of 20-25 lbs./sq.
Ply Sheet:	Paradiene 20 TG, TG S, 20 HVTG, 20 HTTG, 20 EGTG or Terabase TG adhered by torch; Paradiene 20, 20 HT, 20 HV, 20 EG or Terabase adhered with approved mopping asphalt at an application rate of 20-25 lbs./sq. or with PA 311 adhesive.
Membrane:	Paradiene 20 PR, 30 FR,30 CR FR, 30 MW FR or 30 HTFR adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. or with PA 311 adhesive; Paradiene 20 PR, PRTG, Teranap, Paradiene 30 FRTG,30CR FR TG, 30 HTFRTG or Parafor 50 LT adhered by torch.
Note:	**Refer to manufacturer's specifications for specific application requirements.**
Surfacing:	None
Maximum Design Pressure:	-52 psf (See General Limitation #9)

Membrane Type: SBS Foil

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type C(2): All layers of insulation simultaneously attached.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners Table 3	Fastener Density/ft^2
Paratherm, ENRGY-2, ACFoam-I, II, ISORoc, H-Shield 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 the 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 13**	**1:3 ft.^{2}**
Perlite, DuraBoard 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) Paraglas; one or more plies adhered to the insulation with approved mopping asphalt at an application rate of 20-25 lbs./sq.

Ply Sheet: IREX 30, IREX 40, IREX HT, Paradiene 20, 20 HT, 20 HV or 20 EG adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. or IREX 40, IREX HT, Paradiene 20 TG, 20 TG F, 20 HVTG, 20 HTTG or 20 EGTG applied by torch.

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

Surfacing: None

Maximum Design Pressure: -52 psf (See General Limitation #9)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

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

Deck: Minimum 22 ga., Type B Grade E steel decking attached to steel supports spaced 6 ft. o.c. 5/8 puddle welds and washers fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached with Buildex Teks 1 fasteners spaced at max. of 30" o.c.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
Any approved Polyisocyanurate Minimum 1.5" thick	**N/A**	**N/A**

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

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
Dens Deck Minimum $^5/_8$" thick	**4(#15), 9(#14), 14 or 17**	**1:1.6 ft.^{2}**

Base Sheet: (Optional) Paraglas; one or more plies adhered to the insulation with approved mopping asphalt at an application rate of 20-25 lbs./sq.

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

Membrane: Paradiene 30 FR,30 CR FR, 30 MW FR or 30 HTFR adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq.; Paradiene 20 PR, PRTG, Teranap, Paradiene 30 FRTG,30 CR FR TG or 30 HTFRTG adhered by torch.

Note: **Refer to manufacturer's specifications for specific application requirements.**

Surfacing: None

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

Membrane Type: SBS Foil

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type C(4): All layers of insulation mechanically fastened to roof deck. Membrane is subsequently fully adhered to the roof insulation.

Deck: Minimum 22 ga., Type B Grade E steel decking attached to steel supports spaced 6 ft. o.c. 5/8 puddle welds and washers fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached with Buildex Teks 1 fasteners spaced at max. of 30" o.c.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
Any approved Polyisocyanurate Minimum 1.5" thick	**N/A**	**N/A**

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

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
Dens Deck Minimum $^5/_8$" thick	**4(#15), 9(#14), 14 or 17**	**1:1.6 ft.^{2}**

Base Sheet: (Optional) Paraglas; one or more plies adhered to the insulation with approved mopping asphalt at an application rate of 20-25 lbs./sq.

Ply Sheet: IREX 30, IREX 40, IREX HT, Paradiene 20, 20 HT, 20 HV or 20 EG adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. or IREX 40, IREX HT, Paradiene 20 TG, 20 TG F, 20 HVTG, 20 HTTG or 20 EGTG applied by torch.

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

Note: **Refer to manufacturer's specifications for specific application requirements.**

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type C(5): All layers of insulation mechanically fastened to roof deck. Membrane is subsequently fully adhered to the roof insulation.

Deck: Minimum 22 ga., Type B steel decking attached to steel supports spaced 6 ft. o.c. Buildex Traxx 5 fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached with Buildex Traxx 1 fasteners spaced at max. of 24" o.c.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
Any approved Polyisocyanurate Minimum 1.5" thick	**N/A**	**N/A**

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

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
Dens Deck Prime Minimum ½" thick	**9 or 17**	**1:1.6 ft.^{2}**

Base Sheet: (Optional) Paraglas; one or more plies adhered to the insulation with approved mopping asphalt at an application rate of 20-25 lbs./sq.

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

Membrane: Paradiene 30 FR,30 CR FR, 30 MW FR or 30 HTFR adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq.; Paradiene 20 PR, PRTG, Teranap, Paradiene 30 FRTG, 30 CR FR TG or 30 HTFRTG adhered by torch.

Note: **Refer to manufacturer's specifications for specific application requirements.**

Surfacing: None

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

Membrane Type: SBS Foil

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type C(6): All layers of insulation mechanically fastened to roof deck. Membrane is subsequently fully adhered to the roof insulation.

Deck: Minimum 22 ga., Type B steel decking attached to steel supports spaced 6 ft. o.c. Buildex Traxx 5 fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached with Buildex Traxx 1 fasteners spaced at max. of 24" o.c.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
Any approved Polyisocyanurate Minimum 1.5" thick	**N/A**	**N/A**

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

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
Dens Deck Prime Minimum ½" thick	**9 or 17**	**1:1.6 ft.^{2}**

Base Sheet: (Optional) Paraglas; one or more plies adhered to the insulation with approved mopping asphalt at an application rate of 20-25 lbs./sq.

Ply Sheet: IREX 30, IREX 40, IREX HT, Paradiene 20, 20 HT, 20 HV or 20 EG adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. or IREX 40, IREX HT, Paradiene 20 TG, 20 TG F, 20 HVTG, 20 HTTG or 20 EGTG applied by torch.

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

Note: **Refer to manufacturer's specifications for specific application requirements.**

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

Membrane Type: SBS Foil

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type C(7): All layers of insulation mechanically fastened to roof deck. Membrane is subsequently fully adhered to the roof insulation.

Deck: Minimum 22 ga., steel decking meeting ASTM Designation A 1008 SS Grade 80 or A653 SS Grade 80 attached to minimum ¼" steel supports spaced 6 ft. o.c. with ITW Buildex Traxx 5 fasteners and ¾" diameter low carbon steel flat washers outside diameter; 0.328 in. diameter center hole; 0.065 in. spaced 6" o.c. (two fasteners and washers are installed at each bearing attachment point) (at the bottom flute), and with deck side laps attached with Buildex Traxx 1 fasteners spaced at max. of 12" o.c.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
AC Foam II, Paratherm, H-Shield Minimum 2.0" thick	**N/A**	**N/A**

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

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
SecuRock Roof Guard Panels Minimum ¼" thick	**9 or 17 Plates 11,18,19 or 23**	**1:1.33 ft.^{2}**

Note: Top layer shall be walked into and adhered to Insulation Panels with Para-Stik roofing adhesive or Dow Chemical Insta-Stik roofing Adhesive Applied at ¾" to 1" wide ribbons with minimum 6" o.c. spacing. Panels shall be allowed to set up then mechanically fastened using the fastener density listed above.

Primer: The SecuRock Roof Guard panel shall be primed with Siplast PA-1125 primer roller applied at a rate of 1/2-1 gallon/square.

Ply Sheet: Paradiene 20, 20 HT, 20 HV or 20 EG adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. or Paradiene 20 TG, 20 HTTG or 20 EGTG applied by torch.

Membrane: Paradiene 30 FR, 30 CR FR, 30 HT, 30 HT FR Parafor 30, or Parafor 50 LT in approved mopping asphalt or Paradiene 30 TG, 30 CR TG, 30 FR TG, 30 CR FR TG, 30 HT FR TG, Parafor 30 TG, Parafor 50 LT TG, Veral Aluminum, Veral Copper, Veral Stainless, or Veral Spectra by torch.

Note: **Refer to manufacturer's specifications for specific application requirements.**

Maximum Design Pressure: -120 psf (See General Limitation #7)

Membrane Type: SBS Foil

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type C(8): All layers of insulation mechanically fastened to roof deck. Membrane is subsequently fully adhered to the roof insulation.

Deck: Minimum 22 ga., steel decking meeting ASTM Designation A 1008 SS Grade 80 or A653 SS Grade 80 attached to minimum ¼" steel supports spaced 6 ft. o.c. with ITW Buildex Traxx 5 fasteners and ¾" diameter low carbon steel flat washers outside diameter; 0.328 in. diameter center hole; 0.065 in. spaced 6" o.c. (two fasteners and washers are installed at each bearing attachment point) (at the bottom flute), and with deck side laps attached with Buildex Traxx 1 fasteners spaced at max. of 12" o.c.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
AC Foam II, Paratherm, H-Shield Minimum 2.0" thick	**N/A**	**N/A**

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

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
SecuRock Roof Guard Panels Minimum ¼" thick	**9 or 17 Plates 11,18,19 or 23**	**1:1.33 ft.^{2}**

Note: Top layer shall be walked into and adhered to Insulation Panels with Para-Stik roofing adhesive or Dow Chemical Insta-Stik roofing Adhesive Applied at ¾" to 1" wide ribbons with minimum 6" o.c. spacing. Panels shall be allowed to set up then mechanically fastened using the fastener density listed above.

Primer: The SecuRock Roof Guard panel shall be primed with Siplast PA-1125 primer roller applied at a rate of 1/2-1 gallon/square.

Ply Sheet: Paradiene 20, 20 HT, 20 HV or 20 EG adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. or Paradiene 20 TG, 20 HTTG or 20 EGTG applied by torch.

Membrane: Paradiene 30 FR, 30 CR FR, 30 HT, 30 HT FR Parafor 30, or Parafor 50 LT in approved mopping asphalt or Paradiene 30 TG, 30 CR TG, 30 FR TG, 30 CR FR TG, 30 HT FR TG, Parafor 30 TG, Parafor 50 LT TG, Veral Aluminum, Veral Copper, Veral Stainless, or Veral Spectra by torch.

Note: **Refer to manufacturer's specifications for specific application requirements.**

Maximum Design Pressure: -120 psf (See General Limitation #7)

Membrane Type: SBS Foil

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type C(9): All layers of insulation mechanically fastened to roof deck. Membrane is subsequently fully adhered to the roof insulation.

Deck: Minimum 22 ga., steel decking meeting ASTM Designation A 1008 SS Grade 80 or A653 SS Grade 80 attached to minimum ¼" steel supports spaced 6 ft. o.c. with ITW Buildex Traxx 5 fasteners and ¾" diameter low carbon steel flat washers outside diameter; 0.328 in. diameter center hole; 0.065 in. spaced 6" o.c. (two fasteners and washers are installed at each bearing attachment point) (at the bottom flute), and with deck side laps attached with Buildex Traxx 1 fasteners spaced at max. of 12" o.c.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
AC Foam II, Paratherm, H-Shield Minimum 2.0" thick	**N/A**	**N/A**

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

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
SecuRock Roof Guard Panels Minimum ¼" thick	**21-Plates 23**	**1:1ft.^{2}**

Note: Top layer shall be walked into and adhered to Insulation Panels with OMG OlyBond 500 Adhesive applied at ¾" to 1" wide ribbons with minimum 6" o.c. spacing. Panels shall be allowed to set up then mechanically fastened using the fastener density listed above.

Primer: The SecuRock Roof Guard panel is then primed with Siplast PA-1125 primer roller applied at a rate of 1/2-1 gallon/square.

Ply Sheet: Paradiene 20 TG, 20 HTTG or 20 EGTG applied by torch.

Membrane: Paradiene 30 TG, 30 CR TG, 30 FR TG, 30 CR FR TG, 30 HT FR TG, Parafor 30 TG, Parafor 50 LT TG, Veral Aluminum, Veral Copper, Veral Stainless, or Veral Spectra by torch.

Note: **Refer to manufacturer's specifications for specific application requirements.**

Maximum Design Pressure: -150 psf (See General Limitation #7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type C(10): All layers of insulation mechanically fastened to roof deck. Membrane is subsequently fully adhered to the roof insulation.

Deck: Minimum 22 ga., ASTM A653 SS Grade 33 steel deck attached to minimum ¼" steel supports spaced 6 ft. o.c. with ITW Buildex Traxx 5 fasteners and ¾" diameter washers spaced 6" o.c. (one fastener and washer installed at each bearing attachment point), and with deck side laps attached with ITW Buildex Traxx 1 fasteners spaced at max. of 24" o.c.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners Table 3	Fastener Density/ft^2
AC Foam II, Paratherm W, H-Shield or Paratherm H Minimum 1.5" thick	**N/A**	**N/A**

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

Top Insulation Layer	Insulation Fasteners Table 3	Fastener Density/ft^2
Dens Deck Prime Minimum ½" thick	**17 & 19**	**1:1 ft.^{2}**

Note: Stress plates shall be primed with ASTM-D41 asphaltic primer

Base Sheet: Paradiene 20, 20 HT, 20 EG, or 20 HV base membrane is secured to the cover board using hot asphalt applied at a minimum rate of 20 lb/sq (0.1 kg/m^2) or PA-311 LS applied with a squeegee at a rate of 1.5 gal/sq (0.61m^2) or, Paradiene 20 TG, 20 HT TG, 20 TG F, or 20 EG TG, is torch adhered to the cover board.

Membrane: Paradiene 30, 30 FR, 30 CR FR, 30 HT or 30 HT FR adhered with hot asphalt at 20-25 lb/sq (0.1 kg/m^2) or PA-311 LS applied with a squeegee at a rate of 1.5 gal/sq (0.61m^2) or, Paradiene 30 TG, 30 FR TG, 30 HT TG or 30 HTFR TG torch adhered to base sheet.

Note: **Refer to manufacturer's specifications for specific application requirements.**

Maximum Design Pressure: -105 psf (See General Limitation #7)

Membrane Type: SBS Foil

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type D(1): All layers of insulation to be loose laid on roof deck. Base sheet is mechanically attached though all layers of insulation to the roof deck. Membrane is subsequently fully adhered to the roof insulation.

Deck: Minimum 22 ga., steel decking meeting ASTM Designation A 1008 SS Grade 80 or A653 SS Grade 80 attached to minimum ¼" steel supports spaced 6 ft. o.c. with ITW Buildex Traxx 5 fasteners and ¾" diameter low carbon steel flat washers outside diameter; 0.328 in. diameter center hole; 0.065 in. spaced 6" o.c. (two fasteners and washers are installed at each bearing attachment point) (at the bottom flute), and with deck side laps attached with Buildex Traxx 1 fasteners spaced at max. of 12" o.c.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
AC Foam II, Paratherm, H-Shield Minimum 2.0" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
SecuRock Roof Guard Panels Minimum ¼" thick	**N/A**	**N/A**

Base Sheet: Paradiene 20 PR base sheet is mechanically fastened through insulation layers to the deck with OMG XHD Fasteners (table 3 #21) and OMG 2-3/4" Super XHD barbed stress plates (table 3 #22) spaced 12" o.c. through the 4" lap and spaced 12" o.c. along one staggered intermediate field row in the field of the sheet. The side laps of the base membrane were torch adhered prior to fastening through the side laps.

Ply Sheet: Paradiene 20 TG, 20 HTTG or 20 EGTG applied by torch.

Membrane: Paradiene 30 TG, 30 CR TG, 30 FR TG, 30 CR FR TG, 30 HT FR TG, Parafor 30 TG, Parafor 50 TG, 50 LT TG, Veral Aluminum, Veral Copper, Veral Stainless, or Veral Spectra by torch.

Note: **Refer to manufacturer's specifications for specific application requirements.**

Maximum Design Pressure: -135 psf (See General Limitation #7)

Membrane Type:	SBS Foil
Deck Type 2I:	Steel, Insulated
Deck Description:	18-22 ga. steel
System Type D(2):	Base layer of insulation to be loose laid on roof deck. Top layer of insulation to be adhered to base layer. Base sheet is mechanically attached though all layers of insulation to the roof deck. Membrane is subsequently fully adhered to the roof insulation.

Deck: Minimum 22 ga., steel decking meeting ASTM Designation A 1008 SS Grade 80 or A653 SS Grade 80 attached to minimum ¼" steel supports spaced 6 ft. o.c. with ITW Buildex Traxx 5 fasteners and ¾" diameter low carbon steel flat washers outside diameter; 0.328 in. diameter center hole; 0.065 in. spaced 6" o.c. (two fasteners and washers are installed at each bearing attachment point) (at the bottom flute), and with deck side laps attached with Buildex Traxx 1 fasteners spaced at max. of 12" o.c.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
AC Foam II, Paratherm, H-Shield Minimum 2.0" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
SecuRock Roof Guard Panels Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer shall be walked into and adhered to Insulation Panels with Para-Stik roofing adhesive or Dow Chemical Insta-Stik roofing Adhesive Applied at ¾" to 1" wide ribbons with minimum 6" o.c. spacing. Panels shall be allowed to set up then Base sheet shall be mechanically fastened as described below.

Base Sheet	Paradiene 20 PR base sheet is mechanically fastened through insulation layers to the deck with OMG XHD Fasteners (table 3 #21) and OMG 2-3/4" Super XHD barbed stress plates (table 3 #22) spaced 12" o.c. through the 4" lap and spaced 12" o.c. along three staggered intermediate field rows in the field of the sheet. The side laps of the base membrane were torch adhered prior to fastening through the side laps.
Ply Sheet:	Paradiene 20 TG, 20 HTTG or 20 EGTG applied by torch.
Membrane:	Paradiene 30 TG, 30 CR TG, 30 FR TG, 30 CR FR TG, 30 HT FR TG, Parafor 30 TG, Parafor 50 TG, 50 LT TG, Veral Aluminum, Veral Copper, Veral Stainless, or Veral Spectra by torch.
Note:	**Refer to manufacturer's specifications for specific application requirements.**
Maximum Design Pressure:	-150 psf (See General Limitation #7)

STEEL DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.
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.

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. 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