MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

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 and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Siplast Modified Bitumen Roof Systems over Steel Decks.

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

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

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

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

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

This NOA renews and revises NOA No. 18-0620.01 and consists of pages 1 through 23.

The submitted documentation was reviewed by Jorge L. Acebo.

MIAMI-DADE COUNTY APPROVED

ROOFING SYSTEM APPROVAL

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

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Paradiene 20	3.28' x 50' 90 lbs./sq.	ASTM D6163	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 D6163	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 D6163	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 D6163	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 D6164	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 D6163	Asphalt elastomer sheet with random fiberglass reinforcement used as the base ply of a Paradiene 20/30 TG Series system.
Paradiene 20 TG F	3.28' x 33.5' 70 lbs./sq.	ASTM D6163	Asphalt elastomer sheet with random fiberglass reinforcement used 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 D6163	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 D6163	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 D6163	Heavy duty asphalt elastomer sheet with random fiberglass mat reinforcement used as a base ply of a Paradiene 20TG/30TG system.

Product	Dimensions	Test Specification	Product Description
Paradiene 30 FR	3.28' x 33.5' 85 lbs./sq.	ASTM D6163	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 FR	3.28' x 33.5' 87 lbs./sq.	ASTM D6163	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 FR	3.28' x 33.5' 87 lbs./sq.	ASTM D6163	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 FR TG	3.28' x 25.25' 80 lbs./sq.	ASTM D6163	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 HT FR TG	3.28' x 25.25' 80 lbs./sq.	ASTM D6163	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 FR TG BW	3.28' x 25.25' 96 lbs./sq.	ASTM D6163	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.
Parafor 50 LT	3.28’ x 17.5’ 114 lbs./sq.	ASTM D6162	Heavy duty asphalt elastomer sheet with mineral surfacing, polyester mat scrim reinforced.
Parafor 50 TG	3.28’ x 17.5’ 114 lbs./sq.	ASTM D6162	Heavy duty asphalt elastomer sheet with mineral surfacing, polyester mat scrim reinforced.
IREX 40	3.28' x 34' 89 lbs./sq.	ASTM D6163	High-melt asphalt sheet with random fiberglass mat reinforcement for use as the base ply sheet for a Veral system.
IREX HT	3.28' x 34' 89 lbs./sq.	ASTM D6163	High-melt asphalt sheet with fiberglass scrim reinforcement for use as a base ply sheet for the Veral system.
Veral Aluminum	3.28' x 33.5' 90 lbs./sq.	ASTM D6298	Aluminum clad asphalt elastomer sheet with woven fiberglass reinforcement for use as the top ply sheet of a Veral system.
PA 311/ 311 M	5 or 55 gal.	ASTM D4479	Blend of adhesive asphalts and quick-drying solvents.
PA 1125	5 or 55 gal.	ASTM D41	Asphalt primer.
PC – 227	5 or 55 gal	ASTM D6083	Elastomeric roof coating.
SFT Adhesive	5 gal	Proprietary	A single component, solvent free, modified asphalt adhesive

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
Paratherm W	Polyisocyanurate Insulation	Siplast
ACFoam II	Polyisocyanurate Insulation	Atlas Roofing Corp.
DensDeck, DensDeck Prime	Water resistant gypsum	Georgia-Pacific Gypsum LLC
H-Shield H-Shield Tapered	Polyisocyanurate foam insulation	Hunter Panels, LLC
ENRGY 3 ENRGY 3 Tapered	Polyisocyanurate Insulation.	Johns Manville
ENRGY 3 AGF ENRGY 3 AGF Tapered	25 psi Polyisocyanurate Insulation with Uncoated Glass Facer	Johns Manville
ENRGY 3 AGF 25 PSI ENRGY 3 AGF 25 PSI Tapered	25 psi Polyisocyanurate Insulation with Uncoated Glass Facer	Johns Manville
ENRGY 3 CGF 25 PSI ENRGY 3 CGF 25 PSI Tapered	25 psi Polyisocyanurate Insulation with Coated Glass Facer	Johns Manville
ENRGY 3 CGF ENRGY 3 CGF Tapered	Polyisocyanurate Insulation with Coated Glass Facer	Johns Manville
ValuTherm AGF ValuTherm AGF Tapered	Polyisocyanurate Insulation with Uncoated Glass Facer	Johns Manville Co
ValuTherm CGF ValuTherm CGF Tapered	Polyisocyanurate Insulation with Coated Glass Facer	Johns Manville
ValuTherm AGF 25 PSI ValuTherm AGF 25 PSI Tapered	Polyisocyanurate Insulation with Uncoated Glass Facer	Johns Manville
ValuTherm CGF 25 PSI ValuTherm CGF 25 PSI Tapered	Polyisocyanurate Insulation with Coated Glass Facer	Johns Manville
DuraBoard	High-density Perlite roof insulation.	Johns Manville
SECUROCK Cement Roof Board	A rigid, gypsum based board stock for use as an overlayment, underlayment or bonding surface.	US Gypsum Corporation
SECUROCK Gypsum-Fiber Roof Board	Water resistant recycled cellulose and synthetic gypsum	US Gypsum Corporation
EnergyGuard Polyiso Insulation (flat and tapered)	Polyiso insulation with fiberglass reinforced organic facers	GAF
EnergyGuard Ultra Polyiso Insulation (flat and tapered)	Polyiso insulation with coated fiberglass facers	GAF
Paratherm N Paratherm N Tapered	Polyisocyanurate Insulation	Siplast, Inc.
Paratherm N CG Paratherm N CG Tapered	Polyisocyanurate Insulation with Coated Glass Facer	Siplast, Inc.
Paratherm N 25 psi Paratherm N 25 psi Tapered	25 psi Polyisocyanurate Insulation	Siplast, Inc.
Paratherm N 25 psi CG Paratherm N 25 psi CG Tapered	25 psi Polyisocyanurate Insulation with Coated Glass Facer	Siplast, Inc.
Paratherm G Paratherm G Tapered	Polyiso insulation with fiberglass reinforced organic facers	Siplast, Inc.
Paratherm G CG Paratherm G CG Tapered	Polyiso insulation with coated fiberglass facers	Siplast, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	#15 Roofgrip Large Head	Carbon steel fastener for use in steel, concrete or wood decks.	#15 x 14" max. Length	OMG, Inc.
2.	#12 Standard Roofgrip	Carbon steel fastener for use in steel, concrete or wood decks.	#12 x 8" max. Length	OMG, Inc.
3.	Flat Bottom Metal Plate	A2-SS aluminized steel plate for use with #12, #14 Roofgrip and #15 Roofgrip.	3" square; .017" thick	OMG, Inc.
4.	Parafast Roofing Fasteners	Carbon steel fastener for use in steel or wood decks.	#12 x 8" max. Length	Siplast, Inc.
5.	Parafast Metal Plates	Round galvalume plated steel stress plate with reinforcing ribs for use with OMG fasteners.	3" round	Siplast, Inc.
6.	125 Tri Rib Plates	Round galvalume plated steel stress plate with reinforcing ribs for use with Parafast fasteners.	3" round	Siplast, Inc.
7.	Parafast PA Fasteners	Pre–Assembled Parafast Fastener and Parafast 3" Metal Plate	#12 x 8" max. length; #3	Siplast, Inc.
8.	OMG XHD	Fastener for use in wood, steel or concrete decks.	#15 x 16"max. length	OMG, Inc.
9.	OMG 2 ¾" Super XHD Barbed Plate	Round galvanized steel stress plates for use with OMG fasteners.	2 ¾" round	OMG, Inc.
10.	3 in. Ribbed Galvalume Plate	Round galvalume plated steel stress plate with reinforcing ribs for use with OMG fasteners.	3" round	OMG, Inc.
11.	Parafast XHD Fasteners	Fastener for use in wood, steel or concrete decks.	#15 x 16"max. length	Siplast, Inc.
12.	OMG Olybond 500 Adhesive Fastener	Two-component, low-rise polyurethane foam adhesive	10-gallon or 1,500 ml cartridges	OMG, Inc.

EVIDENCE SUBMITTED

Test Agency/Identifier	Name	Report	Date
FM Approvals	FM 4470	3009110	06/04/01
	FM 4470	3011494	08/22/01
	FM 4470	3045166	07/24/12
	FM 4470	3041769	05/26/11
	FM 4470	3048066	04/13/15
	FM 4450	3037540	10/20/10
	FM 4470	3041005	05/31/11
	FM 4470	3038278	11/18/11
	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	3033854	01/16/09
Trinity-ERD	TAS 117	C8500SC.11.07	11/30/07
PRI Construction Materials Technologies LLC	ASTM D3019	SRI-101-02-01	02/17/17
	ASTM D 6083	SRI-101-02-02	04/21/17
	ASTM D 6163	SRI-104-02-01	01/25/18
	ASTM D 6164	SRI-105-02-02	01/03/18
	ASTM D 6163	SRI-106-02-01	01/03/18
	ASTM D 6163	SRI-116-02-02.1	08/15/18
	ASTM D 6163	SRI-125-02-03	08/21/19
	ASTM D 6163	SRI-126-02-03	08/21/19
	ASTM D 6162	SRI-127-02-03	09/09/19

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies	Date
FM Approval Deck Limitations	N/A	C(1), C(2), C(3), C(4), C(5), C(6), C(7), C(8), C(9), C(10), C(11), C(12), C(13), D(1), D(2)	01/01/13

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 80 steel deck 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.

This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

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

All General and System limitations apply.

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

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

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
DensDeck Minimum $^5/_8$" thick	**1 with 3**	**1:1.6 ft^2**

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

Membrane: Paradiene 30 FR, 30 MW FR or 30 HT FR adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq.; Paradiene 30 FR TG or 30 HT FR TG adhered by torch.

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

Surfacing: Optional when granular surfaced membranes are used Required with non-granular surfaced membranes. Install one of the following:

1. 400 lbs./sq. gravel in a flood coat of PA-311 or PA-311 M adhesive at an application rate of 3 gal./sq.
2. 400 lbs./sq. gravel in a flood coat of asphalt applied at a rate of 60 lbs./sq.

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

Membrane Type: SBS Foil

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 80 steel deck 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. **This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.**

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

All General and System limitations apply.

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

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

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
DensDeck Minimum $^5/_8$" thick	**1 with 3**	**1:1.6 ft.^{2}**

Ply Sheet: 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 HV TG, 20 HT TG or 20 EG TG adhered by torch.

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

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

Surfacing: Optional when granular surfaced membranes are used Required with non-granular surfaced membranes. Install one of the following:

1. 400 lbs./sq. gravel in a flood coat of PA-311 or PA-311 M adhesive at an application rate of 3 gal./sq.
2. 400 lbs./sq. gravel in a flood coat of asphalt applied at a rate of 60 lbs./sq.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

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

This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

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

All General and System limitations apply.

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

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

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
DensDeck Prime Minimum ½" thick	**2 or 4 with 3 or 5**	**1:1.6 ft.^{2}**

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

Membrane: Paradiene 30 FR, 30 MW FR or 30 HT FR adhered in approved mopping asphalt at an application rate of 20-25 lbs./sq. Paradiene 30 FR TG or 30 HT FR TG adhered by torch.

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

Surfacing: Optional when granular surfaced membranes are used Required with non-granular surfaced membranes. Install one of the following:

1. 400 lbs./sq. gravel in a flood coat of PA-311 or PA-311 M adhesive at an application rate of 3 gal./sq.
2. 400 lbs./sq. gravel in a flood coat of asphalt applied at a rate of 60 lbs./sq.

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

Membrane Type: SBS Foil

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 80 steel deck 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.

This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

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

All General and System limitations apply.

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

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

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
DensDeck Prime Minimum ½" thick	**8, 10 or 11**	**1:1.6 ft.^{2}**

Ply Sheet: 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 HV TG, 20 HT TG or 20 EG TG applied by torch.

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

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

Surfacing: Optional when granular surfaced membranes are used Required with non-granular surfaced membranes. Install one of the following:

1. 400 lbs./sq. gravel in a flood coat of PA-311 or PA-311 M adhesive at an application rate of 3 gal./sq.
2. 400 lbs./sq. gravel in a flood coat of asphalt applied at a rate of 60 lbs./sq.

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

Membrane Type: SBS/SBS Foil

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 80 steel deck attached to minimum ¼" steel supports spaced 6 ft. o.c. Deck secured 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.

This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

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

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
AC Foam II, Paratherm W, H-Shield, ENRGY 3, Paratherm N, EnergyGuard Polyiso Insulation, Paratherm G, EnergyGuard Ultra Polyiso Insulation, Paratherm G CG 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 Gypsum-Fiber Roof Board Minimum ¼" thick	**2 with 10 or 4 with 6 2 with 3 or 4 with 5**	**1:1.33 ft.^{2}**

Primer: SECUROCK Gypsum-Fiber Roof Board 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 HT TG or 20 EG TG adhered by torch.

Membrane: Paradiene 30 FR, 30 HT FR or Parafor 50 LT in approved mopping asphalt at an application rate of 20-25 lbs./sq. or 30 FR TG, 30 HT FR TG, Parafor 50 TG, or Veral Aluminum adhered by torch.

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

Surfacing: Optional when granular surfaced membranes are used Required with non-granular surfaced membranes. Install one of the following:

1. 400 lbs./sq. gravel in a flood coat of PA-311 or PA-311 M adhesive at an application rate of 3 gal./sq.
2. 400 lbs./sq. gravel in a flood coat of asphalt applied at a rate of 60 lbs./sq.

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

Membrane Type: SBS/SBS Foil

Deck Type 2I: Steel, Insulated

Deck Description: Min 22 ga., Type B, Grade 80 steel deck 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.

This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

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

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
AC Foam II, Paratherm W, H-Shield, Paratherm H, ENRGY 3, Paratherm N, EnergyGuard Polyiso Insulation, Paratherm G, EnergyGuard Ultra Polyiso Insulation, Paratherm G CG 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 Gypsum-Fiber Roof Board Minimum ¼" thick	**8 with 10 or 11 with 6**	**1:1 ft.^{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 Gypsum-Fiber Roof Board 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 HT TG or 20 EG TG adhered by torch.

Membrane: Paradiene 30 FR TG, 30 HT FR TG, Parafor 50 TG or Veral Aluminum adhered by torch.

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

Surfacing: Optional when granular surfaced membranes are used Required with non-granular surfaced membranes. Install one of the following:

1. 400 lbs./sq. gravel in a flood coat of PA-311 or PA-311 M adhesive at an application rate of 3 gal./sq.
2. 400 lbs./sq. gravel in a flood coat of asphalt applied at a rate of 60 lbs./sq.

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

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description:

1. Min. 20 ga., Type B, Grade 33 steel deck attached to minimum ¼" steel supports spaced 6 ft. o.c.
2. Min. 22 ga., Type B, Grade 33 steel deck attached to minimum ¼" steel supports spaced 64" o.c.
3. Min. 22 ga., Type B, Grade 80 steel deck attached to minimum ¼" steel supports spaced 6 ft. o.c.

Deck secured 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.

This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

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

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft²**
AC Foam II, Paratherm W, H-Shield, Paratherm H, ENRGY 3, Paratherm N, EnergyGuard Polyiso Insulation, Paratherm G, EnergyGuard Ultra Polyiso Insulation, Paratherm G CG Minimum 1.5" thick	**N/A**	**N/A**

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

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft²**
DensDeck Prime Minimum ½" thick	**4 with 6**	**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 adhered to the cover board using hot asphalt applied at a minimum rate of 20 lb/sq (0.1 kg/m²) or PA-311 LS applied with a squeegee at a rate of 1.5 gal/sq (0.61m²) or, Paradiene 20 TG, 20 HT TG, 20 TG F, or 20 EG TG, is torch adhered to the cover board.

Membrane: Paradiene 30 FR, or 30 HT FR adhered with hot asphalt at 20-25 lb/sq (0.1 kg/m²) or PA-311 LS applied with a squeegee at a rate of 1.5 gal/sq (0.61m²) or, Paradiene 30 FR TG, or 30 HT FR TG torch adhered to base sheet.

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

Surfacing: Optional when granular surfaced membranes are used Required with non-granular surfaced membranes. Install one of the following:

1. 400 lbs./sq. gravel in a flood coat of PA-311 or PA-311 M adhesive at an application rate of 3 gal./sq.
2. 400 lbs./sq. gravel in a flood coat of asphalt applied at a rate of 60 lbs./sq.

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

Membrane Type:	SBS
Deck Type 2I:	Steel, Insulated
Deck Description:	Minimum 22 ga., Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with #12 HWH Teks 5 fasteners and ¾" diameter steel washers spaced 6" o.c. (one fastener and washer are installed at each bearing attachment point) with deck side laps attached with #10 HWH Teks 1 fasteners spaced at max. of 12" o.c. Or Minimum 22 ga., Grade 80 steel deck is secured to supports spaced 6 ft. o.c. with #12 HWH Teks 5 fasteners and ¾" diameter steel washers spaced 6" o.c. (one fastener and washer are installed at each bearing attachment point) with deck side laps attached with #10 HWH Teks 1 fasteners spaced at max. of 12" o.c. **This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.**
System Type C(8):	All layers of insulation mechanically fastened to roof deck. Membrane is subsequently fully adhered to the roof insulation.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
AC Foam II, Paratherm W, H-Shield, Paratherm H, ENRGY 3, Paratherm N, EnergyGuard Polyiso Insulation, Paratherm G, EnergyGuard Ultra Polyiso Insulation, Paratherm G CG 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**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**4 with 5 or 7**	**1:1 ft.^{2}**

Base Sheet:	One ply of Paradiene 20 TG, 20 HT TG, 20 EG TG, or 20 HV TG is torch adhered to the cover board. Minimum 3" wide side laps of the base ply are heat fused with a torch.
Membrane:	Paradiene 30 FR TG, 30 HT FR TG or 30 FR TG BW is torch adhered to the base ply. Minimum 3" wide side laps are heat fused with a torch.
Maximum Design Pressure:	-82.5 psf. – On SS Grade 33 steel deck (See General Limitation #7) -112.5 psf. – On SS Grade 80 steel deck (See General Limitation #7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with #12 HWH Teks 5 fasteners and ¾" diameter steel washers spaced 6" o.c. (one fastener and washer are installed at each bearing attachment point) with deck side laps attached with #10 HWH Teks 1 fasteners spaced at max. of 12" o.c.

Or

Minimum 22 ga., Grade 80 steel deck is secured to supports spaced 6 ft. o.c. with #12 HWH Teks 5 fasteners and ¾" diameter steel washers spaced 6" o.c. (one fastener and washer are installed at each bearing attachment point) with deck side laps attached with #10 HWH Teks 1 fasteners spaced at max. of 12" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

System Type C(9): subsequently fully adhered to the roof insulation.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
AC Foam II, Paratherm W, H-Shield, Paratherm H, ENRGY 3, Paratherm N, EnergyGuard Polyiso Insulation, Paratherm G, EnergyGuard Ultra Polyiso Insulation, Paratherm G CG 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**
SECUROCK Cement Roof Board Minimum ½" thick	**4 with 5 or 7**	**1:1 ft.^{2}**

Base Sheet: One ply of Paradiene 20 TG, 20 HT TG, 20 EG TG, or 20 HV TG is torch adhered to the cover board. The cover board is primed with a primer meeting ASTM D-41 standards at 0.5 gal/sq. Minimum 3" wide side laps are heat fused with a torch.

Membrane: Paradiene 30 FR TG, 30 HT FR TG, or 30 FR TG BW, is torch adhered to the base ply. Minimum 3" wide side laps are heat fused with a torch.

Maximum Design Pressure: -82.5 psf. – On SS Grade 33 steel deck (See General Limitation #7)
-112.5 psf. – On SS Grade 80 steel deck (See General Limitation #7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with #12 HWH Teks 5 fasteners and ¾" diameter steel washers spaced 6" o.c. (one fastener and washer are installed at each bearing attachment point) with deck side laps attached with #10 HWH Teks 1 fasteners spaced at max. of 12" o.c.

Or

Minimum 22 ga., Grade 80 steel deck is secured to supports spaced 6 ft. o.c. with #12 HWH Teks 5 fasteners and ¾" diameter steel washers spaced 6" o.c. (one fastener and washer are installed at each bearing attachment point) with deck side laps attached with #10 HWH Teks 1 fasteners spaced at max. of 12" o.c

This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

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

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
AC Foam II, Paratherm W, H-Shield, Paratherm H, ENRGY 3, Paratherm N, EnergyGuard Polyiso Insulation, Paratherm G, EnergyGuard Ultra Polyiso Insulation, Paratherm G CG 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**
DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**4 with 5 or 7**	**1:1 ft.^{2}**

Base Sheet: One ply of Paradiene 20, 20 FR, 20 HT, 20 HT FR, 20 EG or 20 HV base membrane is fully adhered to the cover board with Siplast SFT adhesive applied to the substrate at 2.0 gal/sq. with a squeegee. Minimum 3" wide side and end laps of the base sheet are sealed with Siplast SFT adhesive.

Ply Sheet: One ply of Paradiene 20, 20 FR, 20 HT, 20 HT FR, 20 EG or 20 HV base membrane is fully adhered to the base ply with PA-311 or PA-311 M applied to the substrate at 2.0 gal/sq. with a squeegee. Minimum 3" wide side and end laps of the ply sheet are sealed with PA-311 or PA-311 M.

Membrane: Paradiene 30 FR or 30 HT FR is fully adhered to the ply sheet with PA-311 or PA-311 M applied to the substrate at 1.5 gal/sq. with a squeegee. Minimum 3" wide side and end laps of the membrane are sealed with PA-311 or PA-311 M.

Maximum Design Pressure: -82.5 psf. – On SS Grade 33 steel deck (See General Limitation #7)
-135 psf. – On SS Grade 80 steel deck (See General Limitation #7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners and ¾" diameter steel washers spaced 6" o.c. (two fasteners and washer are installed at each bearing attachment point) with deck side laps attached with Traxx 1fasteners spaced at max. of 12" o.c.
Or
Minimum 22 ga., Grade 80 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners and ¾" diameter steel washers spaced 6" o.c. (two fasteners and washer are installed at each bearing attachment point) with deck side laps attached with Traxx 1fasteners spaced at max. of 12" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

System Type C(11): All layers of insulation mechanically fastened to roof deck. Membrane is subsequently fully adhered to the roof insulation.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft²**
AC Foam II, Paratherm W, H-Shield, Paratherm H, ENRGY 3, Paratherm N, EnergyGuard Polyiso Insulation, Paratherm G, EnergyGuard Ultra Polyiso Insulation, Paratherm G CG Minimum 1.5" thick	**N/A**	**N/A**

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

Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**7 with 8 or 10**	**1:1 ft.²**

Base Sheet: One ply of Paradiene 20, 20 FR, 20 HT, 20 HT FR, 20 EG or 20 HV base membrane is fully adhered to the cover board with Siplast SFT adhesive applied to the substrate at 2.0 gal/sq. with a squeegee. Minimum 3" wide side and end laps of the base sheet are sealed with Siplast SFT adhesive.

Membrane: Paradiene 30 FR, 30 HT FR, Paradiene 30 or Paradiene 30 HT is fully adhered to the ply sheet with Siplast SFT adhesive applied to the substrate at a rate of 2.0 gal/sq. with a squeegee. Minimum 3" wide side and end laps of the membrane are sealed with SFT Adhesive.

Maximum Design Pressure: -82.5 psf. - On SS Grade 33 steel deck (See General Limitation #7)
-120 psf. - On SS Grade 80 steel deck (See General Limitation #7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners and ¾" diameter steel washers spaced 6" o.c. (two fasteners and washer are installed at each bearing attachment point) with deck side laps attached with Traxx 1fasteners spaced at max. of 12" o.c.
Or
Minimum 22 ga., Grade 80 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners and ¾" diameter steel washers spaced 6" o.c. (two fasteners and washer are installed at each bearing attachment point) with deck side laps attached with Traxx 1fasteners spaced at max. of 12" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

System Type C(12): All layers of insulation mechanically fastened to roof deck. Membrane is subsequently fully adhered to the roof insulation.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
AC Foam II, Paratherm W, H-Shield, Paratherm H, ENRGY 3, Paratherm N, EnergyGuard Polyiso Insulation, Paratherm G, EnergyGuard Ultra Polyiso Insulation, Paratherm G CG 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**
DensDeck Prime Minimum ½" thick	**7 with 8 or 10**	**1:1 ft.^{2}**

Base Sheet: One ply of Paradiene 20, 20 FR, 20 HT, 20 HT FR, 20 EG or 20 HV base membrane is fully adhered to the cover board with Siplast SFT adhesive applied to the substrate at 2.0 gal/sq. with a squeegee. Minimum 3" wide side and end laps of the base sheet are sealed with Siplast SFT adhesive.

Membrane: Paradiene 30 FR, 30 HT FR, Paradiene 30 or Paradiene 30 HT is fully adhered to the ply sheet with Siplast SFT adhesive applied to the substrate at a rate of 2.0 gal/sq. with a squeegee. Minimum 3" wide side and end laps of the membrane are sealed with SFT Adhesive.

Maximum Design Pressure: -82.5 psf. - On SS Grade 33 steel deck (See General Limitation #7)
-90 psf. - On SS Grade 80 steel deck (See General Limitation #7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners and ¾" diameter steel washers spaced 6" o.c. (two fasteners and washer are installed at each bearing attachment point) with deck side laps attached with Traxx 1fasteners spaced at max. of 12" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

System Type C(13): All layers of insulation mechanically fastened to roof deck. Membrane is subsequently fully adhered to the roof insulation.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
AC Foam II, Paratherm W, H-Shield, Paratherm H, ENRGY 3, Paratherm N, EnergyGuard Polyiso Insulation, Paratherm G, EnergyGuard Ultra Polyiso Insulation, Paratherm G CG 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**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**7 with 8 or 10**	**1:1 ft.^{2}**

Base Sheet: One ply of Paradiene 20, 20 FR, 20 HT, 20 HT FR, 20 EG or 20 HV base membrane is fully adhered to the cover board with Siplast PA-311 Cold Adhesive or Siplast PA-311M Cold Adhesive applied to the substrate at a rate of 1.5 - 2.0 gal/sq. with a squeegee. Minimum 3" wide side and end laps of the base sheet are sealed with Siplast PA-311 Cold Adhesive or Siplast PA-311M Cold Adhesive.

Membrane: Paradiene 30 FR, 30 HT FR, Paradiene 30 or Paradiene 30 HT is fully adhered to the ply sheet with Siplast PA-311 Cold Adhesive or Siplast PA-311M Cold Adhesive applied to the substrate at a rate of 1.5 - 2.0 gal/sq. with a squeegee. Minimum 3" wide side and end laps of the membrane are sealed with Siplast PA-311 Cold Adhesive or Siplast PA-311M Cold Adhesive.

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

Membrane Type: SBS/SBS Foil

Deck Type 2I: Steel, Insulated

Deck Description:

1. Min. 18 ga., Type B, Grade 33 steel deck attached to minimum ¼" steel supports spaced 6 ft. o.c.
2. Min. 20 ga., Type B, Grade 33 steel deck attached to minimum ¼" steel supports spaced 63" o.c.
3. Min. 22 ga., Type B, Grade 33 steel deck attached to minimum ¼" steel supports spaced 57" o.c.
4. Min. 22 ga., Type B, Grade 80 steel deck attached to minimum ¼" steel supports spaced 6 ft. o.c.

Deck secured 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.

This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

System Type D: 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.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
AC Foam II, Paratherm W, H-Shield, Paratherm H, ENRGY 3, Paratherm N, EnergyGuard Polyiso Insulation, Paratherm G, EnergyGuard Ultra Polyiso Insulation, Paratherm G CG Minimum 1.5" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners Table 3**	**Fastener Density/ft^2**
SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment prior to the installation of the base sheet at a minimum application rate of five (5) fasteners per 4 x 8 ft. board. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: Paradiene 20 PR is mechanically fastened through insulation layers to the deck with OMG XHD fasteners and OMG 2-3/4" Super XHD barbed stress plates 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 HT TG or 20 EG TG adhered by torch.

Membrane: Paradiene 30 FR TG, 30 HT FR TG, Parafor 50 TG or Veral Aluminum adhered by torch.

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

Surfacing: Optional when granular surfaced membranes are used Required with non-granular surfaced membranes. Install one of the following:

1. 400 lbs./sq. gravel in a flood coat of PA-311 or PA-311 M adhesive at an application rate of 3 gal./sq.
2. 400 lbs./sq. gravel in a flood coat of asphalt applied at a rate of 60 lbs./sq.

Maximum Design Pressure: -135 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 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE