



**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/Icopal
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.

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 #03-0320.11 and consists of pages 1 through 22.
The submitted documentation was reviewed by Frank Zuloaga, RRC



**NOA No: 03-1211.04
Expiration Date: 04/14/08
Approval Date: 05/20/04
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ROOFING ASSEMBLY NOTICE OF ACCEPTANCE

Category: Roofing
Sub-Category: SBS/SBS Foil Modified Bitumen
Deck Type: Steel
Maximum Design Pressure -67.5 psf
Fire Classification: See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
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.



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<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
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.
Paradiene 20 TS SA	3.28' x 33.5'; 76 lbs./sq.	ASTM D 6163	High performance, semi adhered, self adhesive, SBS modified bitumen with random fiberglass mat reinforcement used as a base ply of Paradiene 20/30 systems.
Paradiene 20 HT TS SA	3.28' x 33.5'; 73 lbs./sq.	ASTM D 6163	High performance, semi adhered, self adhered, SBS modified bitumen with random fiberglass mat/fiberglass crim reinforcement used as a base ply of Paradiene 20/30 systems.
Paradiene 20 SA	3.28' x 33.5'; 72 lbs./sq.	ASTM D 6163	High performance, self adhesive, SBS modified bitumen with random fiberglass mat reinforcement used as a utility sheet.
Paradiene 20 EG SA	3.28' x 33.5'; 90 lbs./sq.	ASTM D 6163	High duty, self-adhesive, asphalt elastomer sheet with fiberglass scrim reinforcement for use as a base ply in Paradiene systems.
Paradiene 20 HT SA	3.28' x 50'; 90 lbs./sq.	ASTM D 6163	High performance, self adhesive, asphalt elastomer sheet with fiberglass scrim reinforcement for use as a base ply of a 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.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
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 nonwoven 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	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	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.
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	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	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.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
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.
IRES 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.
IRES 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.
IRES 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.
IRES 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 C 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



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
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.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
Paratherm	Isocyanurate Insulation	Siplast
Siplast Wood Fiberboard	Wood fiber insulation	Siplast
ACFoam I, II	Isocyanurate Insulation	Atlas Roofing Corp.
Fiberglas	Fiber glass roof insulation.	Generic
High Density Wood Fiberboard	High Density Wood Fiber insulation board.	Generic
Perlite Insulation Board	Perlite Insulation	Generic
Dens Deck Dens Deck Prime	Water resistant gypsum	G-P Gypsum Corp.
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, LLC
ENRGY 2	Isocyanurate Insulation.	Johns Manville
Fiber Glass Roof Insulation	Fiberglas roof insulation.	Johns Manville
ISORoc	Polyisocyanurate foam insulation.	Johns Manville
DuraBoard	A high-density perlite roof insulation.	Johns Manville
Multi-Max FA	Polyisocyanurate foam insulation	Rmax, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast Fasteners #12, #14 & #15	Insulation fastener for wood, steel and concrete decks		Construction Fasteners Inc.
2.	Dekfast Hex Plate	Galvalume hex stress plate.	2 7/8" x 3 1/4"	Construction Fasteners Inc.
3.	Dekfast Lock Plate	Polypropylene locking plate.	3" x 3 1/4"	Construction Fasteners Inc.



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APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
4.	#12, #15 Roofgrip Fasteners	Insulation fastener for wood and steel.		ITW Buildex Corp.
5.	Metal Plate	Galvalume stress plate.	3" round 3" square	ITW Buildex Corp.
6.	Gearlok Plastic Plate	Polypropylene round plate	3.2"	ITW Buildex Corp.
7.	UltraFast	Insulation fastener for wood and steel.		Johns Manville
8.	Glasfast Plate	Red polypropylene copolymer round plate	3" round	Johns Manville
9.	Olympic Fastener #12 & #14	Insulation fastener		Olympic Mfg. Group, Inc.
10.	Olympic Polypropylene	Polypropylene plastic plate	3.25" round	Olympic Mfg. Group, Inc.
11.	Olympic Standard	3" round galvalume AZ50 steel plate	3" round	Olympic Mfg. Group, Inc.
12.	Olympic G-2	3.5" round galvalume AZ55 steel plate	3.5" round	Olympic Mfg. Group, Inc.
13.	System ES	Preassembled plate/screw unit for fastening insulation		SFS Stadler, Inc.
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

EVIDENCE SUBMITTED

<u>Test Agency/Identifier</u>	<u>Name</u>	<u>Report</u>	<u>Date</u>
Factory Mutual Research Corp.	Current Insulation Attachment Requirements	FMRC 1996	01.01.96
Factory Mutual Research Corp.	FMRC 4470 - PA 114	J.I. 2Y1A1.AM	04.15.96



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<u>Test Agency/Identifier</u>	<u>Name</u>	<u>Report</u>	<u>Date</u>
Factory Mutual Research Corp.	FMRC 4470 - PA 114	J.I. 3Z3A7.AM	04.12.96
Factory Mutual Research Corp.	FMRC 4470	3009110	06.04.01
Factory Mutual Research Corp.	FMRC 4470	3011494	08.22.01
Factory Mutual Research Corp.	FMRC 4470	3015680	11.24.03
Underwriters Laboratories, Inc.	Fire Resistance Classification UL 790 - PA 114	R10630	01.01.96
Exterior Research & Design, LLC - Trinity Engineering	Wind Uplift PA 114	#4701.02.96-1	02.28.96
Exterior Research & Design, LLC - Trinity Engineering	Wind Uplift PA 114	#4701.09.96-1	08.22.96



APPROVED ASSEMBLIES

Membrane Type: SBS
Deck Type 2I: Steel, Insulated
Deck Description: 18-22 ga. steel
System Type B: 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-2, AC Foam-I, II Minimum 1.3" thick	1 or 4	1:3 ft. ²
ISORoc Minimum 1.3" thick	1 or 4	1:2.67 ft. ²
Fiberglas Minimum 2- ⁷ / ₁₆ " thick	7 or 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 ft². 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 FR, 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 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 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: 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-2, ACFOAM-I, II Minimum 1.3" thick	1 or 4	1:3 ft. ²
ISORoc Minimum 1.3" thick	1 or 4	1:2.67 ft. ²
Fiberglas Minimum 2- ⁷ / ₁₆ " thick	7 or 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 ft². 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 FR, 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 HTTPG 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
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/ft²
Paratherm W, ENRGY-2, ACFOAM-I, II, ISOROC Minimum 1.3" thick	N/A	N/A
Fiberglas Minimum 2-7/16" thick	N/A	N/A
Perlite, DuraBoard Minimum 3/4" thick	N/A	N/A
High Density Wood Fiberboard Minimum 1/2" 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
Fiberglas Minimum 2-7/16" thick	7 or 13	1:3 ft. ²
Perlite Minimum 3/4" thick	1 or 4	1:2 ft. ²
High Density Wood Fiberboard Minimum 1/2" 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 FR, 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 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, 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 Minimum 1.3" thick	N/A	N/A
Fiberglas Minimum 2-7/16" thick	N/A	N/A
Perlite Minimum 3/4" thick	N/A	N/A
High Density Wood Fiberboard Minimum 1/2" 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 3/4" thick	1 or 4	1:2 ft. ²
High Density Wood Fiberboard Minimum 1/2" 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 FR, 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 HTTPG 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 Tek's 1 fasteners spaced at max. of 30" o.c.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners Table 3	Fastener Density/ft²
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/ft²
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 FR, 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 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 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 Tek's 1 fasteners spaced at max. of 30" o.c.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners Table 3	Fastener Density/ft²
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/ft²
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 FR, 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/ft²
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/ft²
Dens Deck Prime Minimum 1/2" 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 FR, 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 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 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/ft²
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/ft²
Dens Deck Prime Minimum 1/2" 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 FR, 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/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 adhered to the roof insulation.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners Table 3	Fastener Density/ft²
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/ft²
Dens Deck Prime, Strataguard Minimum 1/4" thick	9 or 17	1:2.67 ft ²

Base Sheet: Paradiene 20 TS SA self-adhered sheet.

Ply Sheet: None.

Membrane: Paradiene 30 FRTG, 30 HTFRTG, Parafor 50 LT or Veral adhered by torch.

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

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



Membrane Type: SBS/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 adhered to the roof insulation.

All General and System limitations apply.

Insulation Layer	Insulation Fasteners Table 3	Fastener Density/ft²
H-Shield Minimum 1.5" thick	9 or 17	1:2.67 ft²
AC Foam III Minimum 2" thick	9 or 17	1:2.67 ft²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density.

Base Sheet: Paradiene 20 TS SA self-adhered sheet.
Ply Sheet: None.
Membrane: Paradiene 30 FRTG, 30 HTFRTG, Parafor 50 LT or Veral adhered by torch.
Note: Refer to manufacturer's specifications for specific application requirements.
Maximum Design Pressure: -60 psf (See General Limitation #9)



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 fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida Registered Engineer, 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 sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
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



NOA No: 03-1211.04
Expiration Date: 04/14/08
Approval Date: 05/20/04
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