

# DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER) BOARD AND CODE ADMINISTRATION DIVISION NOTICE OF A COMPANION (NO. A.)

PRODUCT CONTROL SECTION 11805 SW 26 Street, Room 208 Miami, Florida 33175-2474 T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/economy

MIAMI-DADE COUNTY

## 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 Liquid Applied 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 renews and revises NOA No.19-0307.01 and consists of pages 1 through 20. The submitted documentation was reviewed by Alex Tigera.

Stepay

MIAMI-DADE COUNTY
APPROVED

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## **ROOFING SYSTEM APPROVAL**

**Category:** Roofing

Sub-Category: Liquid Applied Roof Sytems

MaterialPMMADeck Type:SteelMaximum Design Pressure:-150 psf.

## TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT: TABLE 1

D. 1. 4	D' '	Test	Product
<b>Product</b>	<b>Dimensions</b>	<b>Specification</b>	<u>Description</u>
Parapro Liquid Applied Membrane	20–kg Drums	Proprietary	Multi-component PMMA resin.
Pro Fleece	12"x 16.5' roll 12"x 82' roll 25"x 164' roll 41"x 164' roll	Proprietary	Non-woven, needle punched, polyester fabric reinforcement.
Pro Primer R Resin	5–kg & 10–kg Drums	Proprietary	PMMA primer component for use over BUR, modified bitumen or other soft substrates.
Pro Catalyst Powder	Box of 10 3.2oz bags	Proprietary	Reactive agent for use during priming and membrane application.
Pro Color Finish Resin	5–kg & 10–kg Drums	Proprietary	Color pigmented, multi component, flexible PMMA.
Pro Base TG	3.28' x 50'	ASTM D6163	Asphalt elastomer sheet with random fiberglass mat reinforcement for use as a base ply in torch.
Paradiene 20 PR	3.28' x 50'	ASTM D6163	Asphalt elastomer sheet with random fiberglass mat reinforcement for use as a base ply in torch.
Paradiene 20 TG	3.28' x 33.5'	ASTM D6163	Asphalt elastomer sheet with random fiberglass reinforcement for use as a base ply.
Paradiene 20 HV TG	3.28' x 33.5'	ASTM D6163	Heavy duty asphalt elastomer sheet with random fiberglass mat reinforcement for use as a base ply.
Paradiene 20 TG F	3.28' x 33.5'	ASTM D6163	Asphalt elastomer sheet with random fiberglass reinforcement for use as a base ply.
Paradiene 20 HT TG	3.28' x 33.5'	ASTM D6163	Asphalt elastomer sheet with fiberglass scrim reinforcement for use as a base ply.
Paradiene 20 EG TG	3.28' x 33.5'	ASTM D6163	Heavy duty asphalt elastomer sheet with fiberglass scrim reinforced for use as a base ply.



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## TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT: TABLE 1

<b>Product</b>	<u>Dimensions</u>	Test <b>Specification</b>	Product <u>Description</u>
Paradiene 20	3.28' x 50'	ASTM D6163	Asphalt elastomer sheet with random fiberglass mat reinforcement for use as a base ply.
Paradiene 20 HT	3.28' x 50'	ASTM D6163	Asphalt elastomer sheet with fiberglass scrim reinforcement for use as a base ply.
Paradiene 20 EG	3.28' x 33.5'	ASTM D6163	Heavy duty asphalt elastomer sheet with fiberglass scrim reinforcement for use as a base ply.
Paradiene 20 HV	3.28' x 33.5'	ASTM D6163	Heavy duty asphalt elastomer sheet with random fiberglass mat reinforcement for use as a base ply.
Para-Stik	30 lb. pressurized cylinders	Proprietary	A single component moisture curing urethane foam adhesive.

## **APPROVED INSULATIONS:**

## TABLE 2

<b>Product</b>	<b>Description</b>	Manufacturer (With Current NOA)
Paratherm W	Polyisocyanurate insulation	Siplast
ACFoam II	Polyisocyanurate insulation	Atlas Roofing Corporation
H-Shield	Polyisocyanurate foam insulation	<b>Hunter Panels</b>
Paratherm H	Polyisocyanurate insulation	Siplast
ENRGY 3	Polyisocyanurate insulation	Johns Manville
DensDeck Prime	Water resistant gypsum	Georgia-Pacific Gypsum LLC
SECUROCK Gypsum-Fiber Roof Board	Rigid gypsum based board	United States Gypsum Corporation
EnergyGuard Polyiso Insulation	Polyiso insulation with fiberglass reinforced organic facers	GAF
EnergyGuard Ultra Polyiso Insulation	Polyiso insulation with coated fiberglass facers	GAF
Paratherm G	Polyiso insulation with fiberglass reinforced organic facers	Siplast
Paratherm G CG	Polyiso insulation with coated fiberglass facers	Siplast



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## **APPROVED FASTENERS:**

## TABLE 3

<u>Fastener</u> Number	<u>Product</u> <u>Name</u>	Product Description	<b>Dimensions</b>	Manufacturer (With Current
TYUIIDEI	1144110	<u> Description</u>	<u>Dimensions</u>	NOA)
1.	Parafast PA Fastener	Pre-Assembled Parafast Fastener and Parafast 3" Metal Plate	#12 x 8" max. length; #3 Phillips Head & 3" round plate	Siplast, Inc.
2.	Parafast Roofing Fastener	Phillips head, modified buttress thread, carbon steel fastener for use in steel or wood decks. With CR-10 coating. Available with a pinch point or drill point.	#12 x 8" max. Length, #3 Phillips head	Siplast, Inc.
3.	125 Tri Rib Plates	Round galvalume plated steel stress plate with reinforcing ribs for use with Parafast fasteners.	3" round	Siplast, Inc.
4.	#12 Standard Roofgrip	Phillips head, modified buttress thread, carbon steel fastener for use in steel or wood decks. With CR-10 coating. Available with a pinch point or drill point.	#12 x 8" max. Length, #3 Phillips Head	OMG, Inc.
5.	3" Ribbed Galvalume Plate	Round galvalume plated steel stress plate with reinforcing ribs for use with OMG fasteners.	3" round	OMG, Inc.
6.	Parafast Metal Plates	Round galvalume plated steel stress plate with reinforcing ribs.	3" round	Siplast, Inc.
7.	OMG XHD	Truss head, self-drilling, pinch point, high thread fastener for use in wood, steel or concrete decks.	#15 x 16"max. length; #3 Phillips Head	OMG, Inc.
8.	OMG 2 <sup>3</sup> / <sub>4</sub> " Super XHD Barbed Plate	Round galvanized steel stress plates for use with OMG fasteners	2 <sup>3</sup> / <sub>4</sub> " round	OMG, Inc.
9.	TruFast #15 EHD Fastener	Carbon steel screw with #3 phillips drive, modified truss head for use in steel, wood or concrete decks	#15 x 24" max. length	Altenloh, Brinck & Co. U.S., Inc
10.	Trufast 3" Metal Insulation Plates	3" Round with reinforcing ribs	3" round	Altenloh, Brinck & Co. U.S., Inc
11.	Insta Stik Quik Set Insulation Adhesive	Single component polyurethane adhesive	30 lb. steel tank	The Dow Chemical Co.



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## **APPROVED FASTENERS:**

## TABLE 3

<u>Fastener</u> <u>Number</u>	<u>Product</u> <u>Name</u>	<u>Product</u> <u>Description</u>	<u>Dimensions</u>	Manufacturer (With Current NOA)
12.	OMG OlyBond Adhesive	Dual component polyurethane adhesive	55-gallon drum	OMG, Inc.
13.	OMG OlyBond 500 Adhesive	Two-component, low-rise polyurethane foam adhesive	10-gallon Bag-in-box sets or 1,500 ml cartridges	OMG, Inc.

## **EVIDENCE SUBMITTED:**

<b>Test Agency</b>	<b>Test Identifier</b>	<b>Test Name</b>	<b>Date</b>
Factory Mutual	3029275	FM 4470	03/24/08
	3027962	FM 4470	10/03/06
	3042750	FM 4470	01/20/12
	3037540	FM 4470	10/20/10
	3009110	FM 4470	06/04/01
	3033854	FM 4470	01/16/09
Trinity  ERD	C8500SC.11.07	TAS 117–B / ASTM D6862	11/30/07
<b>3</b> 1	C8500SC.11.07-R1	TAS 117–B / ASTM D6862	08/07/09
	S9000.03.09-R1	Physical Properties	05/06/09
		G155/ D638	
		ASTM D1929/ D2843/ D635	
		TAS 114-D/ TAS 114-J	
	S31630.05.10	ASTM D6163	05/11/10
	S31450.03.10	ASTM E154 / E96	03/22/10
	SPL-SC6940.06.15	PMMA Physical Properties	06/18/15
Momentum Technologies, Inc.	TX31G6A	Physical Properties	08/19/09
PRI Construction Materials	SRI-039-02-01	ASTM D6163	11/20/12
Technologies, LLC.	SRI-041-02-01	ASTM D6164	11/15/12
	SRI-087-02-01	Physical Properties	02/26/16

## **DECK STRESS ANALYSIS CALCULATIONS/REPORTS:**

Engineer/Agency	<u>Identifier</u>	Assemblies:	<u>Date</u>
FM Approval Deck Limitations	N/A	C(1), C(2), C(3), C(4), D(1), D(2)	01/01/13



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#### **APPROVED ASSEMBLIES**

**Membrane Type:** Liquid Applied Membrane

**Deck Type 2I:** Steel, Insulated

**Deck Description:** 18-22 ga., Grade 33 Steel

**System Type B(1):** Base layer of insulation mechanically attached, top layer adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	<b>Insulation Fasteners</b>	<u>Fastener</u>
	(Table 3)	Density/ft <sup>2</sup>
SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime		
Minimum ½" thick	1 or 2 with 5 or 6	1:4 ft <sup>2</sup>

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

**Vaper Barrier:** Base insualtion is primed with an asphatic primer meeting ASTM D-41 at a rate of 0.5 gal/sq.

Paradiene 20 SA is self-adhered to the primed base insulation. The min. 3" side laps are self-

adhered.

Middle Insulation Layer	<u>Insulation Fasteners</u> ( <u>Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
Paratherm H, Paratherm W		
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	<u>Insulation Fasteners</u> (Table 3)	Fastener Density/ft <sup>2</sup>
DensDeck Prime		
Minimum 1/4" thick	N/A	N/A

Note: Middle and top layers of insulation shall be adhered with Para-Stik Roofing Adhesive at a rate of 3/4" to 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

**Base Sheet:** Paradiene 20 TG, Paradiene 20 HT TG, or Paradiene 20 EG TG base membrane is torch

adhered to top insulation layer.

**Membrane:** Base coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of 0.42 lb/ ft<sup>2</sup>

onto the base sheet; followed by one ply of Pro Fleece laid in the wet base coat; followed by a top coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of 0.27 lb/ft²

onto the embedded Pro Fleece.

**Maximum Design** 

**Pressure:** -45 psf. (See General Limitation #9)



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**Deck Description:** 1. Minimum 22 gauge, grade 33 steel decking attached to minimum ½" thick steel supports

spaced maximum 64" o.c.

2. Minimum 20 gauge, grade 33 steel decking attached to minimum 1/4" thick steel supports spaced maximum 6 ft. o.c.

3. Minimum 22 gauge, grade 80 steel decking attached to minimum 1/4" thick steel supports spaced maximum 6 ft. o.c.

Deck secured using two ITW Buildex Traxx/5 fasteners and 3/4" diameter washers spaced at a maximum 6" o.c. at the supports (two fasteners and washers installed at each bearing attachment point) and with side laps attachment using ITW Buildex Traxx/1 fasteners at a maximum spacing of 12" 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

adhered to the roof insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer: <u>Insulation Fasteners</u> <u>Fastener Density/ ft²</u>

Table 3

H-Shield, Paratherm H, ACFoam II, Paratherm W, 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 Fastener Density/ ft<sup>2</sup>

Table 3

DensDeck Prime

Minimum  $\frac{1}{2}$ " thick 1, 2 or 4 with 3, 5, or 6 1:1 ft<sup>2</sup>

Note: All layers shall be simultaneously fastened; see top layer above 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. 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.

**Base Sheet:** Pro Base TG base membrane is torch adhered to top insulation layer.

**Membrane:** Base coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of 0.42 lb/ ft<sup>2</sup>

onto the base sheet; followed by one ply of Pro Fleece laid in the wet base coat; followed by a top coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of 0.27 lb/ft<sup>2</sup>

onto the embedded Pro Fleece.

**Maximum Design** 

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



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**Deck Description:** Min. 22 ga., Type B, Grade 80 steel deck attached to steel supports spaced 6 ft. o.c. Buildex

Teks 4 or Teks 5 fasteners spaced 6" o.c. (at the supports), 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

adhered to the roof insulation.

### All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer: Insulation Fasteners Table 3

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

<u>Top Insulation Layer:</u> <u>Insulation Fasteners</u> <u>Fastener Density/ ft²</u>

Table 3

DensDeck

Minimum <sup>5</sup>/<sub>8</sub>" thick 9 with 10 1:1.6 ft<sup>2</sup>

**Base Sheet:** Paradiene 20 TG, Paradiene 20 TG F, Paradiene 20 HV TG, Paradiene 20 HT TG,

Paradiene 20 EG TG adhered by torch. Or Paradiene 20, Paradiene 20 HT, Paradiene 20 EG, or Paradiene 20 HV applied to the cover board in full mopping of approved asphalt within

the EVT range and applied at a rate of 20–25 lbs./100 ft<sup>2</sup>.

Membrane: Base coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of

0.42 lb/ft² onto ply sheet; followed by one ply of Pro Fleece laid in the wet base coat; followed by a top coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of 0.27

lb/ft² onto the embedded Pro Fleece.

**Maximum Design** 

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



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**Deck Description:** 1. Minimum 20 gauge, Type B, grade 33 steel decking

- 1. Minimum 20 gauge, Type B, grade 33 steel decking attached to minimum ¼" thick steel supports spaced maximum 6' o.c.
- 2. Minimum 22 gauge, Type B, grade 33 steel decking attached to minimum <sup>1</sup>/<sub>4</sub>" thick steel supports spaced maximum 64" o.c.
- 3. Minimum 22 gauge, Type B, grade 80 steel decking attached to minimum <sup>1</sup>/<sub>4</sub>" thick steel supports spaced maximum 6 ft. o.c.

Deck secured using two ITW Buildex Traxx/5 fasteners and ¾" diameter washers spaced at a maximum 6" o.c. at the supports (two fasteners and washers installed at each bearing attachment point) and with side laps attachment using ITW Buildex Traxx/1 fasteners at a maximum spacing 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 adhered to the roof insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer:

Insulation Fasteners
Table 3

Fastener Density/ ft²

ACFoam II, Paratherm W, H-Shield, Paratherm H, 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.

<u>Insulation Top Layer:</u> <u>Insulation Fasteners</u> <u>Fastener Density/ ft²</u>

Table 3
DensDeck Prime

Minimum ½" thick 2 or 4 with 3, 5, or 6 1:1 ft<sup>2</sup>

**Base Sheet:** Paradiene 20 TG, 20 HT TG, 20 TG F, or 20 EG TG, is torch adhered to the cover board. Or

Paradiene 20, Paradiene 20 HT, Paradiene 20 EG, or Paradiene 20 HV applied to the cover board in full mopping of approved asphalt within the EVT range and applied at a rate of 20–25

 $1bs./100 ft^2.$ 

Membrane: Base coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of

0.42 lb/ft² onto ply sheet; followed by one ply of Pro Fleece laid in the wet base coat; followed by a top coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of 0.27

lb/ft² onto the embedded Pro Fleece.

**Maximum Design** 

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



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**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 3/4" 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(4):** All layers of insulation mechanically fastened to roof deck. Membrane is subsequently

adhered to the roof insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer: <u>Insulation Fasteners</u> <u>Fastener Density/ ft²</u>

Table 3

ACFoam II, Paratherm W, H-Shield, Paratherm H, EnergyGuard Polyiso Insulation, Paratherm G,

EnergyGuard Ultra Polyiso Insulation, Paratherm G CG

Minimum 1.5" thick 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.

Insulation Top Layer: Insulation Fasteners Fastener Density/ ft<sup>2</sup>

Table 3

**SECUROCK Gypsum-Fiber Roof Board** 

Minimum  $\frac{1}{2}$ " thick 1 or 2 with 5 or 6 1:1 ft<sup>2</sup>

**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 at 0.5 gal/sq. Optional - The cover board is primed with a primer meeting ASTM D-41 standards. Minimum 3" wide side laps of the base ply are heat fused with a torch.

**Membrane:** Base coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of

0.42 lb/ft² onto ply sheet; followed by one ply of Pro Fleece laid in the wet base coat; followed by a top coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of 0.27

lb/ft² onto the embedded Pro Fleece.

**Maximum Design** -82.5 psf – On SS Grade 33 steel deck (See General Limitation #7)

**Pressure:** -112.5 psf – On SS Grade 80 steel deck (See General Limitation #7)



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**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 3/4" 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(5):** All layers of insulation mechanically fastened to roof deck. Membrane is subsequently

adhered to the roof insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer:</u> <u>Insulation Fasteners</u> <u>Fastener Density/ ft²</u>

Table 3

ACFoam II, Paratherm W, H-Shield, Paratherm H, 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.

Insulation Top Layer: Insulation Fasteners Fastener Density/ ft<sup>2</sup>

Table 3

SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime

Minimum  $\frac{1}{2}$ " thick 1 or 2 with 5 or 6 1:1 ft<sup>2</sup>

**Primer (Optional):** An asphaltic primer metting ASTM D-41 roller applied at a rate of 0.5 gal./sq.

Base Sheet: (over unprimed insulation only) One ply of Pro Base LP is fully adhered to the top

insulation with SFT Adhesive squeegee applied to the substrate at a rate of 2.0 gal/sq.

The minimum 3" wide side and end laps are sealed with SFT Adhesive.

Or

(over primed SECUROCK or unprimed DensDeck only) One ply of Pro Base LP TG torch adhered to cover board. The min. 3" wide side and end laps are torch adhered.

Or

(over primed insulation only) One ply of Pro Base LP SA is self-adhered to the primed

insulation. Then minimum 3" wide base ply side laps are self-adhered.

**Membrane:** Base coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of



NOA No.: 19-1028.10 Expiration Date: 12/16/25 Approval Date: 11/26/20 Page 11 of 20 0.42 lb/ft² onto ply sheet; followed by one ply of Pro Fleece laid in the wet base coat; followed by a top coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of 0.27 lb/ft² onto the embedded Pro Fleece.

Maximum Design Pressure:

-82.5 psf. – On Grade 33 steel deck with Pro Base LP or LP TG (See General Limitation #7) -135 psf. – On Grade 80 steel deck with Pro Base LP or LP TG (See General Limitation #7)

-75 psf. – with Pro Base LP SA (See General Limitation #7)



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**Deck Description:** Minimum 22 ga., Grade 33 steel deck

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

adhered to the roof insulation.

## All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer: Insulation Fasteners Table 3

ACFoam II, Paratherm W, H-Shield, Paratherm H, 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.

<u>Top Insulation Layer:</u> <u>Insulation Fasteners</u> <u>Fastener Density/ ft<sup>2</sup></u>

Table 3

SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime

Minimum ½" thick 1 or 2 with 5 or 6 1:3.2 ft<sup>2</sup>

**Primer (Optional):** An asphaltic primer metting ASTM D-41 roller applied at a rate of 0.5 gal./sq.

**Base Sheet:** (over unprimed insulation only) One ply of Pro Base LP is fully adhered to the top

insulation with SFT Adhesive squeegee applied to the substrate at a rate of 2.0 gal/sq.

The minimum 3" wide side and end laps are sealed with SFT Adhesive.

Or

(over primed SECUROCK or unprimed DensDeck only) One ply of Pro Base LP TG torch adhered to cover board. The min. 3" wide side and end laps are torch adhered.

Or

(over primed insulation only) One ply of Pro Base LP SA is self-adhered to the primed

insulation. Then minimum 3" wide base ply side laps are self-adhered.

Membrane: Base coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of

0.42 lb/ft² onto ply sheet; followed by one ply of Pro Fleece laid in the wet base coat; followed by a top coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of 0.27

lb/ft² onto the embedded Pro Fleece.

**Maximum Design** 

**Pressure:** -45 psf. (See General Limitation #9)



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**Deck Type 2I:** Steel, Insulated

**Deck Description:** Minimum 22 gauge, grade 33 or 80 steel decking attached to minimum ½" thick steel supports

spaced maximum 6 ft. o.c. Deck secured using two ITW Buildex Traxx/5 fasteners and ¾" diameter washers spaced at a maximum 6" o.c. at the supports (two fasteners and washers installed at each bearing attachment point) and with side laps attachment using ITW Buildex

Traxx/1 fasteners at a maximum spacing of 12" o.c.

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.

One or more layers of any of the following insulations:

Base Insulation LayerInsulation Fasteners<br/>(Table 3)Fastener<br/>Density/ft²ACFoam II, Paratherm W, H-Shield, Paratherm H, EnergyGuard Polyiso Insulation, Paratherm G,<br/>EnergyGuard Ultra Polyiso Insulation, Paratherm G CGN/AN/A

Top Insulation LayerInsulation FastenersFastener(Table 3)Density/ft²

SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime

Minimum ½" thick 1 or 2 with 5 or 6

Note: All layers shall be simultaneously fastened; see top layer 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.

**Base Sheet:** Paradiene 20, Paradiene 20 HT, Paradiene 20 EG, or Paradiene 20 HV is fully adhered to the

coverboard with Siplast SFT Adhesive applied to the substrate at a rate of 2.0 gal/square. The

minimum 3" wide side and end laps are sealed with SFT Adhesive.

Membrane: Base coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of 0.42 lb/ ft²

onto the base sheet; followed by one ply of Pro Fleece laid in the wet base coat; followed by a top coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of 0.27 lb/ft<sup>2</sup>

onto the embedded Pro Fleece.

**Maximum Design** 

**Pressure:** -82.5 psf. with Grade 33 deck (See General Limitation #7)

-90 psf. with DensDeck over Grade 80 deck (See General Limitation #7)-120 psf. with SECUROCK over Grade 80 deck (See General Limitation #7)



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**Deck Type 2I:** Steel, Insulated

**Deck Description:** 

- 1. Minimum 20 ga., Type B, Grade 33 steel decking, attached to minimum <sup>1</sup>/<sub>4</sub>" thick steel supports spaced at a maximum 6' o.c.
- 2. Minimum 22 ga., Type B, Grade 33 steel decking, attached to minimum <sup>1</sup>/<sub>4</sub>" thick steel supports spaced at a maximum 67" o.c.
- 3. Minimum 22 ga., Type B, Grade 80 steel decking, attached to minimum <sup>1</sup>/<sub>4</sub>" thick steel supports spaced at a maximum 6" o.c.

Deck secured using two ITW Buildex Traxx/5 fasteners and ¾" diameter washers spaced at a maximum 6" o.c. at the supports (two fasteners and washers installed at each bearing attachment point) and with side laps attachment using ITW Buildex Traxx/1 fasteners at a maximum spacing of 24" o.c.

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.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners	<u>Fastener</u>
	<u>(Table 3)</u>	Density/ft <sup>2</sup>
ACFoam II, Paratherm W, H-Shield, Paratherm H, EnergyGua	ard Polyiso Insulation, Paratheri	n G,
EnergyGuard Ultra Polyiso Insulation, Paratherm G CG		
Minimum 1.5" thick	N/A	N/A
<b>Top Insulation Layer</b>	<b>Insulation Fasteners</b>	<b>Fastener</b>
	<u>(Table 3)</u>	Density/ft <sup>2</sup>
DensDeck Prime		
Minimum ½" thick	7 with 5 or 3	1:1 ft <sup>2</sup>

Note: The stress plates are primed with ASTM D-41 primer prior to appliation of the base sheet. All layers shall be simultaneously fastened; see top layer 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.

**Base Sheet:** Paradiene 20 SA base sheet is self-adhered to the top insulation. The minimum 3" wide side

and end laps are sealed with SFT Adhesive.

**Membrane:** Base coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of 0.42 lb/ ft<sup>2</sup>

onto the base sheet; followed by one ply of Pro Fleece laid in the wet base coat; followed by a top coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of  $0.27\ lb/ft^2$ 

onto the embedded Pro Fleece.

**Maximum Design** 

**Pressure:** -97.5 psf. (See General Limitation #7)



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**Deck Type 2I:** Steel, Insulated

**Deck Description:** 

- 1. Minimum 22 ga., Type B, Grade 80 steel decking, attached to minimum <sup>1</sup>/<sub>4</sub>" thick steel supports spaced at a maximum 6' o.c.
- 2. Minimum 22 ga., Type B, Grade 33 steel decking, attached to minimum 1/4" thick steel supports spaced at a maximum 57" o.c.
- 3. Minimum 20 ga., Type B, Grade 33 steel decking, attached to minimum <sup>1</sup>/<sub>4</sub>" thick steel supports spaced at a maximum 63" o.c.
- 4. Minimum 18 ga., Type B, Grade 33 steel decking, attached to minimum <sup>1</sup>/<sub>4</sub>" thick steel supports spaced at a maximum 6" o.c

Deck secured using 2 ITW Buildex Traxx 5 fasteners and ¾" steel washers spaced at a maximum 6" o.c. at the supports (two fasteners and washers installed at each bearing attachment point) and with side laps attachment using ITW Buildex Traxx 1 fasteners at a maximum spacing of 12" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table

**System Type D(1):** 

All layers of insulation to be loose laid on roof deck with preliminary fastening. Base sheet is mechanically attached through all layers of insulation to the roof deck. Membrane is subsequently fully adhered to the roof insulation.

#### All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	<u>Fastener</u> <u>Density/ft<sup>2</sup></u>
ACFoam II, Paratherm W, H-Shield, Paratherm H, EnergyG EnergyGuard Ultra Polyiso Insulation, Paratherm G CG	uard Polyiso Insulation, Parathern	n G,
Minimum 1.5" thick	N/A	N/A
<b>Top Insulation Layer</b>	<u>Insulation Fasteners</u> (Table 3)	<u>Fastener</u> Density/ft <sup>2</sup>
DensDeck Prime Minimum <sup>1</sup> / <sub>4</sub> " thick	N/A	N/A

Note: 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 layer shall receive preliminary fastening as specified in RAS 117 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 and OMG 2 3/4" Super XHD barbed plates spaced 12" o.c. through the 4" wide side lap and spaced 12" o.c. along one staggered intermediate row in the field of the sheet. The side laps of the base membrane are torch adhered prior to fastening through the side laps.



NOA No.: 19-1028.10 Expiration Date: 12/16/25 Approval Date: 11/26/20 Page 16 of 20 Ply Sheet: Paradiene 20 TG, Paradiene 20 HT TG, or Paradiene 20 EG TG torch adhered to the base

sheet.

**Membrane:** Base coat of Parapro Roof Membrane Resin roller applied at a minimum rate of 0.42 lb/ft<sup>2</sup>

onto ply sheet; followed by one ply of Pro Fleece laid in the wet base coat; followed by a top coat of Parapro Roof Membrane Resin roller applied at a minimum rate of 0.27 lb/ft² onto the

embedded Pro Fleece.

**Maximum Design** 

**Pressure:** -135 psf. (See General Limitation #7)



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**Deck Type 2I:** Steel, Insulated

**Deck Description:** 

- 1. Minimum 22 ga., Type B, Grade 80 steel decking, attached to minimum <sup>1</sup>/<sub>4</sub>" thick steel supports spaced at a maximum 6' o.c.
- 2. Minimum 22 ga., Type B, Grade 33 steel decking, attached to minimum 1/4" thick steel supports spaced at a maximum 4.5" o.c.
- 3. Minimum 20 ga., Type B, Grade 33 steel decking, attached to minimum <sup>1</sup>/<sub>4</sub>" thick steel supports spaced at a maximum 5" o.c.
- 4. Minimum 18 ga., Type B, Grade 33 steel decking, attached to minimum <sup>1</sup>/<sub>4</sub>" thick steel supports spaced at a maximum 70" o.c

Deck secured using 2 ITW Buildex Traxx 5 fasteners and ¾" diameter steel washers spaced at a maximum 6" o.c. (two fasteners and washers are installed at each bearing attachment point) and with side laps attachment using ITW Buildex Traxx 1 fasteners at a maximum spacing 12" o.c.

<u>This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table</u>

System Type D(2):

All layers of insulation to be loose laid on roof deck with preliminary fastening. Base sheet is mechanically attached through all layers of insulation to the roof deck. Membrane is subsequently fully adhered to the roof insulation.

#### All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	<u>Insulation Fasteners</u> (Table 3)	<u>Fastener</u> <u>Density/ft²</u>
ACFoam II, Paratherm W, H-Shield, Paratherm H, EnergyGu EnergyGuard Ultra Polyiso Insulation, Paratherm G CG	ard Polyiso Insulation, Parather	m G,
Minimum 1.5" thick	N/A	N/A
<b>Top Insulation Layer</b>	Insulation Fasteners (Table 3)	<u>Fastener</u> Density/ft <sup>2</sup>
DensDeck Prime Minimum <sup>1</sup> / <sub>4</sub> " thick	N/A	N/A

Note: 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 layer shall be walked into and adhered to Base Insulation Panels with Para-Stik Insulation Adhesive or Insta Stik Quik Set Insulation Adhesive applied at 3/4" to 1" wide ribbons with 6" o.c. spacing. Panels shall be allowed to set up and shall receive preliminary fastening as specified in RAS 117 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 and OMG 2 3/4" Super XHD barbed plates spaced 12" o.c. through the 4" wide side lap and spaced 12" o.c. along one staggered intermediate row in the field of the sheet. The side laps of the base membrane are torch adhered prior to fastening through the side laps.



NOA No.: 19-1028.10 Expiration Date: 12/16/25 Approval Date: 11/26/20 Page 18 of 20 Ply Sheet: Paradiene 20 TG, Paradiene 20 HT TG, or Paradiene 20 EG TG torch adhered to the base

sheet.

Membrane: Base coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of 0.42 lb/ft<sup>2</sup>

onto ply sheet; followed by one ply of Pro Fleece laid in the wet base coat; followed by a top coat of Parapro Liquid Applied Membrane roller applied at a minimum rate of 0.27 lb/ft² onto

the embedded Pro Fleece.

**Maximum Design** 

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



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#### 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 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./100 ft<sup>2</sup>., 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./100 ft².
  - Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
- **5.** Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field–tested, are below 275 lbf. insulation attachment shall not be acceptable.
- 6. Fastener spacing for mechanical attachment of anchor/ base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
- 7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida Registered Professional Engineer, Registered Architect, or Registered Roof Consultant (When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)
- **8.** All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform 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 61G20-3 of the Florida Administrative Code.

## END OF THIS ACCEPTANCE



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