



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)

The Garland Company, Inc.
3800 East 91st Street
Cleveland, OH 44105-2197

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: Garland Built-Up Roofing Systems Over Steel Decks.

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

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

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

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

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

This NOA revises NOA No. 11-0628.02 and consists of pages 1 through 16.
 The submitted documentation was reviewed by Jorge L. Acebo.



NOA No.: 13-1022.04
 Expiration Date: 12/03/16
 Approval Date: 11/14/13
 Page 1 of 16

ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Built-Up Roofing
Material: Fiberglass/Asphalt
Deck Type: Steel
Maximum Design Pressure: -120 psf.

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>
HPR Organic Base Sheet	36" x 72'	ASTM D2626	Asphalt coated organic base sheet.
HPR Glasbase	36" x 108' 75 lbs.	ASTM D4601 Type II	Type II, asphalt coated fiberglass base sheet.
HPR Premium Glasbase	36" x 72' 75 lbs.	ASTM D4601 Type II	Type II, asphalt coated fiberglass base sheet.
BK Glasfelt	36" x 180'	ASTM D4990 Type I	Coal Tar impregnated glass felt.
BK Premium Glasfelt	36" x 180'	ASTM D4990 Type I	Coal Tar impregnated glass felt.
HPR Glasfelt	36" x 180'; roll weight: 95 lbs.	ASTM D2178	Type IV asphalt impregnated glass felt for use in conventional and modified built-up roof systems.
HPR Premium Glasfelt	36" x 180'; roll weight: 95 lbs.	ASTM D2178	Type VI asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
HPR Polyscrim Plus	40" x 324'	ASTM D5726	Polyester felt.
Millennium Base	39" x 51'5"	ASTM D6162	Smooth surfaced, SBS modified coal tar, fiberglass/polyester reinforced base sheet.
Garland Flashing Bond	5 gallon	ASTM D4586	Trowel grade, asphalt based roofing mastic for use in repair and patching against leaks in built-up asphalt roofs.
Garla-Flex VOC.	2, 5 gallon pail	ASTM D4586	Elastomeric, asphaltic compound formulated from a special weather and ozone-resistant thermoplastic rubber, plasticizing oils and bitumen. Asbestos free.
Garla-Shield	5, 55 gallon	ASTM D1227 Type IV	Asphalt emulsion roof coating.
Garla-Brite	5 gallon	ASTM D2824 Type I	Aluminum roof coating.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Garla-Prime VOC	5, 55 gallon	ASTM D41	Non-fibered, quick drying asphalt roof primer.
Silver-Shield	5, 55 gallon	ASTM D2824 Type III	High solids, aluminized roof coating.
Black Knight or Black Knight LV Flood Coat	70 lb. keg	Proprietary	Polymer modified coal tar pitch.
Garlastic KM Plus	60 lb. keg	TAS 121	SEBS modified, hot applied asphalt.
HPR All Temp Asphalt	100 lb. keg	TAS 121	Hot asphalt adhesive for modified bitumen and BUR roof systems.
Black-Knight CTP	200 lb. keg	Proprietary	Polymer modified coal tar pitch.
Black-Knight Cold	5, 55 gallon	Proprietary	Polymer modified coal tar pitch.
Pyramic	5, 55 gallon	Proprietary	White acrylic reflective roof coating.
Green-Lock Membrane Adhesive	5 gallon	Proprietary	Cold process roof coating and adhesive.
Solex	5, 55 gallon	Proprietary	White kynar reflective roof coating.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam-II	Polyisocyanurate foam insulation	Atlas Roofing Corporation
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, LLC.
ENRGY 3, ENRGY 3 Plus, ENRGY 3 25 PSI	Polyisocyanurate foam insulation	Johns Manville Corp.
Fesco Board	Expanded perlite, insulation	Johns Manville Corp.
ISO 95+ GL	Polyisocyanurate foam insulation	Firestone Building Products Company, LLC
Multi-Max 3	Polyisocyanurate foam insulation	RMax Operating, LLC
DensDeck	Water resistant gypsum board	Georgia Pacific Gypsum LLC
Structodek High Density Fiberboard Roof Insulation	High Density wood fiber insulation board	Blue Ridge Fiberboard, Inc.
High Density Wood Fiberboard	Wood fiber insulation board	Generic
SECUROCK Gypsum-Fiber Roof Board	Gypsum board	United States Gypsum Corporation



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast Fasteners #12, #14 & #15 HS	Insulation fastener for wood, steel and concrete decks	Various	SFS Intec, Inc.
2.	Dekfast Galvalume Steel Hex Plate	Galvalume hex stress plate.	2 7/8" x 3 1/4"	SFS Intec, Inc.
3.	Dekfast Dekflat Round Plastic Lock Plate	Polypropylene locking plate.	3" x 3 1/4"	SFS Intec, Inc.
4.	#12 Standard Roofgrip	Insulation fastener for wood and steel.	Various	OMG, Inc.
5.	ASAP Hex Head RoofGrip Pre-Assembled System	Pre-assembled Insulation fastener and plate		OMG, Inc.
6.	3 in. Round Metal Plate	Galvalume stress plate.	3" round	OMG, Inc.
7.	AccuTrac Plate	Galvalume stress plate.	3" square	OMG, Inc.
8.	#12 Standard Stainless Steel	Insulation fastener	Various	OMG, Inc.
9.	Trufast #12 DP Fastener	Insulation fastener for steel and wood decks	Various	Altenloh, Brinck & Co. U.S., Inc.
10.	Trufast 3" Metal Insulation Plates	3" round galvalume AZ50 steel plate	3" round	Altenloh, Brinck & Co. U.S., Inc.
11.	AccuTrac Hextra	Hex washer head, CR-10 coated, carbon steel fastener	Various	OMG, Inc.
12.	AccuTrac Flat Bottom Plate	A2-SS aluminized steel plate	3" square	OMG, Inc.
13.	OMG Heavy Duty	High thread fastener for steel, concrete and wood decks	Various	OMG, Inc.
14.	Trufast #15 EHD Fastener	Insulation fastener for steel and wood decks		Altenloh, Brinck & Co. U.S., Inc.



EVIDENCE SUBMITTED

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Dynatech Engineering Corporation	#4530.05.95-1	TAS 114	05/31/95
Factory Mutual Research Corporation	IVOA7.AM	FM 4470	02/21/95
	1B4A7.AM	FM 4470	12/15/97
	4B4A9.AM	FM 4470	12/31/97
	0Y5A6.AM	FM 4470	09/08/97
	3D3A5.AM	FM 4470	09/15/98
	3004392	FM 4470	09/21/99
	0D9A0.AM	FM 4470	05/02/00
	3004907	FM 4470	05/16/00
	3009117	FM 4470	12/21/00
PRI Construction Materials Technologies	GRD-052-02-01	ASTM D2178	10/31/11
	GRD-051-02-01	ASTM D2178	10/31/11
	GRD-054-02-01	ASTM D2626	11/17/11
Trinity ERD	4545.11.06	TAS 114-J	11/22/06
	4544.11.06	TAS 114-J	11/02/06
	G32700.09.11-1	ASTM D4601	09/16/11
	G37200.10.11-2	ASTM D5726	10/18/11
	#4533.05.98-1-R1	TAS 114-J	09/09/11
	G39620.07.12	ASTM D4990	07/02/12
	G37200.08.12-13-R2	ASTM D6162/D4798	09/26/13
Momentum Technologies, Inc.	EX11L5A	ASTM D2626/D4990	12/28/05



APPROVED ASSEMBLIES:

Membrane Type: BUR

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

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

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 2)	Fastener Density/ft²
ACFoam-II Minimum 1.3" thick	1, 4, 8, & 9	1:2.67 ft²
ENRGY 3 Minimum 1.4" thick	1, 4, 5, 8 & 9	1:3 ft²
ENRGY 3 Plus Minimum 1.5" thick	1, 4, 5 & 9	1:3 ft²
ISO 95+ GL Minimum 1.4" thick	1, 4, 5 & 8	1:4 ft²
Fesco Board Minimum 3/4" thick	1, 8 & 9	1:2 ft²
Approved High Density Wood Fiberboard, Structodek High Density Fiberboard Roof Insulation Minimum 3/4" thick	1, 4, 5, 8 & 9	1:4 ft²

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 2)	Fastener Density/ft²
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Any of the insulations with applicable thickness listed for Base Layer, above.

Note: Apply optional top layer of insulation shall be adhered with approved hot asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs/100 ft² or in Insta-Stik Roofing Adhesive applied in continuous 3/4 to 1 inch wide beads spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer 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 face down.



Base Sheet: (Optional) HPR Glasbase or HPR Premium Glasbase adhered directly over the top layer of insulation with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Glasfelt, HPR Premium Glasfelt or approved ASTM D 2178 type IV or VI ply sheet adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required) Install one of the following:

1. 400 lbs./sq. gravel or 300 lbs./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lbs./sq. or in Black Knight Flood Coat or Black Knight LV Flood Coat at 70 lb/sq.
2. Garla-Brite applied at 1 gal. per 150 ft².

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



Membrane Type: BUR

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., type B, Grade C steel deck attached 6" o.c. (every flute) using ¾" puddle welds to steel supports spaced 5 ft. o.c.

System Type B(2): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 2)	Fastener Density/ft²
ACFoam-II Minimum 1.5" thick	8	1:1.33 ft²

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).

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 2)	Fastener Density/ft²
ACFoam-II Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 2)	Fastener Density/ft²
Approved High Density Wood Fiberboard Minimum ½" thick	N/A	N/A
DensDeck Minimum ¼" thick	N/A	N/A

Any of the insulations with applicable thickness listed for Base Layer, above.

Note: Apply optional middle and/or top layer of insulation shall be adhered with approved hot asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs/100 ft² or in Insta-Stik Roofing Adhesive applied in continuous ¾ to 1 inch wide beads spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer 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 face down.

Base Sheet: (Optional) HPR Glasbase or HPR Premium Glasbase adhered directly over the top layer of insulation with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.



Surfacing:

(Required) Install one of the following:

1. 400 lbs./sq. gravel or 300 lbs./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lbs./sq. or in Black Knight Flood Coat or Black Knight LV Flood Coat at 70 lb/sq.
2. Garla-Brite applied at 1 gal. per 150 ft².

Maximum Design

Pressure: -82.5 psf. (See General Limitation #7.)



Membrane Type: BUR
Deck Type 2I: Steel, Insulated
Deck Description: 18-22 ga Grade C steel deck attached 6" o.c. (every flute) using 3/4" puddle welds to steel supports spaced 5 ft. o.c.
System Type C(1): All layers of insulation simultaneously attached.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 2)	Fastener Density/ft²
ACFoam-II, ENRGY 3, ENRGY 3 Plus, Multi-Max 3 Minimum 1" thick	N/A	N/A
Approved High Density Wood Fiberboard, Structodek High Density Fiberboard Roof Insulation Minimum 1/2" thick	N/A	N/A
Fesco Board Minimum 3/4" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer	Insulation Fasteners (Table 2)	Fastener Density/ft²
ACFoam-II Minimum 1.3" thick	1, 4, 8, & 9	1:2.67 ft ²
ENRGY 3 Minimum 1.4" thick	1, 4, 5, 8 & 9	1:3 ft ²
ENRGY 3 Plus Minimum 1.5" thick	1, 4, 5 & 9	1:3 ft ²
ISO 95+ GL Minimum 1.4" thick	1, 4, 5 & 8	1:4 ft ²
Fesco Board Minimum 3/4" thick	1, 8 & 9	1:2 ft ²
Approved High Density Wood Fiberboard, Structodek High Density Fiberboard Roof Insulation Minimum 3/4" thick	1, 4, 5, 8 & 9	1:4 ft ²

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. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: (Optional) HPR Glasbase or HPR Premium Glasbase adhered directly over the top layer of insulation with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.



Ply Sheet: Two or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required) Install one of the following:

1. 400 lbs./sq. gravel or 300 lbs./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lbs./sq. or in Black Knight Flood Coat or Black Knight LV Flood Coat at 70 lb/sq.
2. Garla-Brite applied at 1 gal. per 150 ft².

Maximum Design

Pressure: -45 psf. (for all other applications) (See General Limitation #9.)
-60 psf. (for coverboard of 1" thick High Density Wood Fiberboard mechanically attached at 1 per 2 ft² over polyisocyanurate base layer with asphalt applied membranes.) (See General Limitation #7.)



Membrane Type: BUR

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel Type B Grade 33 steel deck attached with Traxx/5 fasteners and 3/4" diameter washers spaced 6" o.c. (every flute) to steel supports spaced 6' o.c

System Type C(2): All layers of insulation are simultaneously fastened

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
ENRGY 3, H-Shield, ENRGY 3 25 PSI, ACFoam-II Minimum 1.5" thick	N/A	N/A
Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.		
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum 0.5" thick	10 & 14	1:1.33 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. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

System 1: Base/Ply Sheet: Three to five plies BK Glasfelt, BK Premium Glasfelt or HPR Polyscrim Plus, adhered in full mopping of Black-Knight or approved Type I or Type III Coal Tar Pitch at a rate of 30 lbs./sq.

System2: Base/Ply Sheet: One ply HPR Organic Base, HPR Glasbase, HPR Premium Glasbase, adhered in full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus at a rate of 25 lbs./sq.

Or

One ply Millennium Base, adhered in full mopping of Black-Knight or approved Type I or Type III Coal Tar Pitch at a rate of 30 lbs./sq.

Cap Sheet: Two to four plies BK Glasfelt, BK Premium Glasfelt or HPR Polyscrim Plus, adhered in full mopping of Black-Knight or approved Type I or Type III Coal Tar Pitch at a rate of 30 lbs./sq.



Surfacing:

(Required) Install one of the following:

1. 400 lbs./sq. gravel or 300 lbs./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lbs./sq. or in Black-Knight flood coat or Black-Knight LV Flood Coat at 70 lbs./sq. or Black-Knight Cold at 5 gal./sq.
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat, minimum two coats of Pyramic applied at min. 1.0 gal./sq./coat or minimum one coat of Pyramic applied at a min. 1.0 gal./sq. and a minimum one coat of Solex applied at a min. 0.50 gal./sq.
3. Green-Lock Membrane Adhesive applied at min 3-5 gal./sq. with roofing gravel applied at 400 lbs./sq.

Maximum Design

Pressure: -112.5 psf. (See General Limitation # 7)



Membrane Type: BUR

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel 1.5" Type B Grade 90 steel deck attached to steel channel-framing joists. Steel supports spaced 6' o.c. Deck fastened 5/8" puddle welds, 6" o.c.

System Type C(3): All layers of insulation are simultaneously fastened

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
ENRGY 3		
Minimum 1.5" thick	N/A	N/A
Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.		
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.5" thick	10 & 14	1:1ft ²

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. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: Prime SECUROCK Gypsum-Fiber Roof Board insulation board with ASTM D-41 asphalt primer at 1 gallon per square

Base/Ply Sheet: Three or more plies of BK Glasfelt, BK Premium Glasfelt or HPR Polyscrim Plus, adhered in full mopping of Black-Knight Coal Tar Pitch at a rate of 30 lbs./sq.

Surfacing: (Required) Install one of the following:

1. 400 lbs./sq. gravel or 300 lbs./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lbs./sq. or in Black-Knight flood coat or Black-Knight LV Flood Coat at 70 lbs./sq. or Black-Knight Cold at 5 gal./sq.
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat, minimum two coats of Pyramic applied at min. 1.0 gal./sq./coat or minimum one coat of Pyramic applied at a min. 1.0 gal./sq. and a minimum one coat of Solex applied at a min. 0.50 gal./sq.
3. Green-Lock Membrane Adhesive applied at min 3-5 gal./sq. with roofing gravel applied at 400 lbs./sq.

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



Membrane Type: BUR
Deck Type 2I: Steel, Insulated
Deck Description: 18-22 ga., type B, Grade C steel deck attached 6' o.c. (every flute) using ¾" puddle welds to steel supports spaced 5 ft. o.c.
System Type D: All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 2)	Fastener Density/ft ²
ACFoam-II, ENRGY 3, ENRGY 3 Plus, Multi-Max 3 Minimum 1" thick	N/A	N/A
Approved High Density Wood Fiberboard, Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A
Fesco Board Minimum ¾" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: *(Option #1)* One ply of HPR GlasBase fastened to the deck using OMG Accutrac Hextra fasteners and Plates spaced 12" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.
(Option #2) One ply of HPR GlasBase fastened to the deck using SFS Dekfast #12 fasteners with plates, OMG #12 Standard Roofgrip or OMG Heavy Duty fasteners with OMG 3 in. Round Metal Plates, or OMG Accutrac Hextra fasteners and Plates spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.

Intermediate Coverboard: (Optional) ½" thick High Density Wood Fiberboard adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq. onto the base sheet.

Ply Sheet: Two or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required) Install one of the following:
 1. 400 lbs./sq. gravel or 300 lbs./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lbs./sq. or in Black Knight Flood Coat or Black Knight LV Flood Coat at 70 lb/sq.
 2. Garla-Brite applied at 1 gal. per 150 ft².

Maximum Design Pressure: -60 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 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 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 9N-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE

