



DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY  
 AFFAIRS (PERA)  
 BOARD AND CODE ADMINISTRATION DIVISION  
**NOTICE OF ACCEPTANCE (NOA)**

MIAMI-DADE COUNTY  
 PRODUCT CONTROL SECTION  
 11805 SW 26 Street, Room 208  
 Miami, Florida 33175-2474  
 T (786) 315-2590 F (786) 315-2599  
[www.miamidade.gov/pera](http://www.miamidade.gov/pera)

**The Garland Company, Inc.**  
**3800 East 91<sup>st</sup> 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 PERA – 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. PERA 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 Modified Bitumen Roof System Over Cementitious Wood Fiber Deck.**

**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 NOA No. 06-1120.03 and consists of pages 1 through 23.  
 The submitted documentation was reviewed by Jorge L. Acebo.



**NOA No.: 11-0621.14**  
**Expiration Date: 12/02/12**  
**Approval Date: 12/15/11**  
**Page 1 of 23**

## ROOFING ASSEMBLY NOTICE OF ACCEPTANCE

Category: Roofing  
Sub-Category: Modified Bitumen  
Material: SBS/SIS/SEBS  
Deck Type: Cementitious Wood Fiber  
Maximum Design Pressure -172.5 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 D 2626	Asphalt coated organic base sheet.
HPR Tri-Base Premium	36" x 72'	ASTM D 6162	Double asphalt coated, polyester/fiberglass/polyester scrim reinforced base sheet.
HPR Glasfelt	36" x 180'	ASTM D 2178, Type IV	Asphalt impregnated glass felt
HPR Premium Glasfelt	36" x 180'	ASTM D 2178, Type VI	Asphalt impregnated glass felt
HPR Glasbase	36" x 108'	ASTM D 4601, Type II	Asphalt coated fiberglass base sheet.
HPR Premium Glasbase	36" x 72'	ASTM D 4601, Type II	Asphalt coated fiberglass base sheet.
Millennium Base	39" x 51'5"	ASTM D 6162	Smooth surfaced, SBS modified coal tar, fiberglass/polyester reinforced base sheet.
HPR Torch Base Sheet	39" x 34'8"	ASTM D 6163	SBS modified, fiberglass reinforced, torch applied base sheet.
BK Glasfelt	36" x 180'	ASTM D 4990, Type I	Coal Tar impregnated glass felt
BK Premium Glasfelt	36" x 180'	ASTM D 4990, Type I	Coal Tar impregnated glass felt
HPR Polyscrim Plus	40" x 324'	ASTM D 5726	Polyester felt
Millennium Mineral	39" x 26'	ASTM D 6162	Mineral surfaced, SBS modified coal tar, fiberglass/polyester reinforced membrane.
Millennium FR Mineral	39" x 26'	ASTM D 6162	Mineral surfaced, SBS modified coal tar, fiberglass/polyester reinforced membrane.
StressPly EUV FR Mineral	39" x 26'2"	ASTM D 6162, Type III	Mineral surfaced, SBS/SIS modified, fiberglass/polyester reinforced membrane.
StressPly EUV	39" x 34'8"	ASTM D 6162, Type III	Smooth surfaced, SBS/SIS modified, fiberglass/polyester reinforced membrane.



**NOA No.: 11-0621.14**  
**Expiration Date: 12/02/12**  
**Approval Date: 12/15/11**  
**Page 2 of 23**

<b><u>Product</u></b>	<b><u>Dimensions</u></b>	<b><u>Test Specification</u></b>	<b><u>Product Description</u></b>
StressPly Plus	39" x 34'8"	ASTM D 6162, Type III	Smooth surfaced, SBS modified, fiberglass/polyester scrim membrane.
StressPly Plus FR Mineral	39" x 26'2"	ASTM D 6162, Type III	Mineral surfaced, SBS modified, fire retardant, UV resistant, fiberglass/polyester scrim membrane.
StressPly E	39" x 34'8"	ASTM D 6162, Type III	Smooth surfaced, SBS/SIS modified, fiberglass/polyester reinforced membrane.
StressPly E FR Mineral	39" x 26'2"	ASTM D 6162, Type III	Mineral surfaced, SBS/SIS modified, fire retardant, fiberglass/polyester reinforced membrane.
StressPly	39" x 34'8"	ASTM D 6163, Type III	Smooth surfaced, SBS modified, fiberglass scrim reinforced roofing membrane.
StressPly FR Mineral	39" x 26'2"	ASTM D 6163, Type III	Mineral surfaced, SBS modified, fire retardant, fiberglass scrim membrane.
VersiPly 60	39" x 34'8"	ASTM D 6163, Type III	Smooth surfaced, SBS modified, fiberglass scrim reinforced roofing membrane.
VersiPly 80	39" x 34'8"	ASTM D 6163, Type III	Smooth surfaced, SBS modified, fiberglass scrim reinforced roofing membrane.
VersiPly Mineral	39" x 26'2"	ASTM D 6163, Type III	Mineral surfaced, SBS modified, fiberglass scrim reinforced roofing membrane.
StressPly IV	39" x 26'2"	ASTM D 6163, Type III	Smooth surfaced, SBS modified, fiberglass reinforced, torch applied cap sheet.
StressPly IV Mineral	39" x 26'2"	ASTM D 6163, Type III	Mineral surfaced, SBS modified, fiberglass reinforced, torch applied cap sheet.
StressPly IV UV Mineral	39" x 26'2"	ASTM D 6163, Type III	Mineral surfaced, SBS modified, fiberglass reinforced, torch applied cap sheet.
Garla-Prime	5, 55 gallon	ASTM D 41	Non-fibered, quick drying asphalt roof primer
Garla-Prime WB	5, 55 gallon	ASTM D 41	Non-fibered, quick drying asphalt roof primer
Insul-Lock II	3 gallon	Proprietary	Polyurethane low rise insulation adhesive
Black-Knight	70 lb. keg	Proprietary	Polymer modified coal tar pitch.
Black-Knight LV Flood Coat	70 lb. keg	Proprietary	Polymer modified coal tar pitch.
Black-Knight CTP	200 lb. keg	Proprietary	Polymer modified coal tar pitch.
Black-Knight Cold	5, 55 gallon	Proprietary	Polymer modified coal tar pitch.
Green-Lock Membrane Adhesive	5 gallon	Proprietary	Cold process roof coating and adhesive.
Weatherking	5, 55 gallon	ASTM D 3019, Type III	Cold process roof coating and adhesive.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Weatherking Plus WC	5, 55 gallon	ASTM D 3019, Type III	Cold process roof coating and adhesive.
Weatherking Flashing Adhesive	5, 55 gallon	ASTM D 3019, Type III	Cold process roof flashing adhesive.
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.
GarMesh	6" x 150'	ASTM D 1668	SBR coated woven fiberglass reinforcing membrane.
Grip Polyester Firm	10 sq.	ASTM D 1682	Polyester reinforcing fabric for use in cold applied systems.
Grip Polyester Soft	10 sq.	ASTM D 1682	Polyester reinforcing fabric, for use in cold applied systems.
Pyramic	5, 55 gallon	Proprietary	White acrylic reflective roof coating
Solex	5, 55 gallon	Proprietary	White kynar Reflective roof coating
White-Knight	5, 55 gallon	Proprietary	White urethane reflective roof coating.
Garla-Shield	5, 55 gallon	ASTM D 1227, Type IV	Asphalt emulsion roof coating.
Silver-Shield	5, 55 gallon	ASTM D 2824, Type III	High solids, aluminized roof coating.
WeatherScreen	5, 55 gallon	ASTM D 4479, Type I	Asbestos-free, heavy-bodied, fiber-reinforced, fire-rated asphalt roof coating.
Garla-Brite	5, 55 gallon	ASTM D 4479, Type I	Asbestos-free, heavy-bodied, fiber-reinforced, fire-rated asphalt roof coating.
Energizer K Plus FR	5, 55 gallon	ASTM D 4479, Type I	Multipurpose, rubberized, liquid waterproofing membrane.
Green-Lock Flashing Adhesive	3.5 gallon	Proprietary	Trowel grade, roofing mastic for use in repair and patching against leaks in built-up roofs.
Black-Knight Mastic	5 gallon	Proprietary	Trowel grade, tar based roofing mastic for use in repair and patching.
Flashing Bond	5 gallon	ASTM D 4586	Trowel grade, asphalt based roofing mastic for use in repair and patching against leaks in built-up asphalt roofs.
Silver-Flash	5 gallon	ASTM D 4586	Trowel grade, asphalt based roofing mastic for use in repair and patching against leaks in built-up asphalt roofs.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Garla-Flex	2, 5 gallon pail	ASTM D 4586	Elastomeric, asphaltic compound formulated from a special weather and ozone-resistant thermoplastic rubber, plasticizing oils and bitumen. Asbestos free.

**APPROVED INSULATIONS:**

**TABLE 2**

<b>Product Name</b>	<b>Product Description</b>	<b>Manufacturer (With Current NOA)</b>
ACFoam II, ACFoam III	Polyisocyanurate foam insulation	Atlas Energy Products
ACFoam Composite	Composite polyisocyanurate insulation board	Atlas Energy Products
ISO 95+GL	Polyisocyanurate foam insulation	Firestone Building Products
High Density Wood Fiberboard	Wood fiber insulation board	Generic
Perlite Insulation	Perlite insulation board	Generic
DensDeck, DensDeck Prime	Water resistant gypsum board	G-P Gypsum Corp.
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, Inc.
ENRGY-3, ENRGY-3 PSI 25	Polyisocyanurate foam insulation	Johns Manville
Retrofit Board	Perlite insulation board	Johns Manville
Fesco Board	Expanded mineral fiber insulation	Johns Manville
FiberGlass Roof Insulation	Glass fiber/Mineral fiber insulation	Generic
Multi-Max FA-3	Polyisocyanurate foam insulation	Rmax
Structodek High Density Fiberboard Roof Insulation	High Density wood fiber insulation board	Blue Ridge Fiberboard



**APPROVED FASTENERS:**

**TABLE 3**

<b>Fastener Number</b>	<b>Product Name</b>	<b>Product Description</b>	<b>Dimensions</b>	<b>Manufacturer (With Current NOA)</b>
1.	OMG Lite-Deck	Carbon Steel CR-10 coating insulation fastener for gypsum & CWF decks.		OMG, Inc.
2.	Lite-Deck Plate	3" round galvalume AZ55 steel plate	3" round	OMG, Inc.
3.	Insuldeck Loc-Nail Assembled Base Ply Fasteners	Pre-assembled galvalume	2.7" x 1-7/8"	ES Products, Inc.
4.	Twin Loc-Nails	Pre-assembled galvalume steel fastener/plate unit.	Various	ES Products, Inc.
5.	Base-Lok Fastener	Nylon base sheet fastener.	Various	Simplex Nails & Fasteners

**EVIDENCE SUBMITTED:**

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Dynatech Engineering Corporation	#4530.05.95-1	Wind Uplift Classification	5/31/95
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
	3000637	FM 4470	4/26/00
	0D9A0.AM	FM 4470	05/02/00
	3004907	FM 4470	05/16/00
	3009117	FM 4470	12/21/00
	3010113	FM 4470	11/18/02
	3019046	FM 4470	03/04/05
	3021718	FM 4470	04/11/05
	3023724	FM 4470	07/20/05
PRI Asphalt Technologies, Inc.	GRD-03-02-01	Physical Properties	01/07/98
	GRD-05-02-01	ASTM D 5147	12/18/97
	GRD-06-02-01		01/09/98
PRI Construction Materials Technologies	GRD-054-02-01	ASTM D 2626	11/17/11
	GRD-051-02-01	ASTM D 2178	10/28/11
	GRD-052-02-01	ASTM D 2178	10/28/11
Trinity   ERD	4533.05.98-1-R1	TAS 114(J)	09/09/11
	4544.11.06	TAS 114	11/02/06
	G32950.06.10	ASTM D4601	06/11/10
	G32700.09.11-1	ASTM D4601	09/16/11



**NOA No.: 11-0621.14**  
**Expiration Date: 12/02/12**  
**Approval Date: 12/15/11**  
**Page 6 of 23**

**APPROVED ASSEMBLIES:**

**Deck Type 5I:** Cementitious Wood Fiber, Insulated

**Deck Description:** Cementitious Wood Fiber

**System Type A(1):** Anchor sheet mechanically fastened; all layers of insulation fully adhered with approved asphalt or adhesive.

**All General and System Limitations apply.**

**Anchor Sheet:** One ply of Garland HPR Glasbase, Garland HPR Premium Glasbase or HPR Tri-Base Premium mechanically attached as noted below.

**Fastening:** ES Products Insuldeck Loc-Nail Assembled Base Ply Fasteners spaced 7½” o.c. in a min. 4” side lap and 7½” o.c. in two equally spaced center rows in the field of the sheet.

Or

ES Products Twin Loc-Nails, Simplex Base-Lok Fasteners or OMG Lite Deck fasteners and plates spaced 9” o.c. in a min. 2” side lap and 18” o.c. in two equally spaced center rows in the field of the sheet

One or more layers of any of the following insulations.

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 2)</u>	<u>Fastener Density/ft<sup>2</sup></u>
<b>ACFoam II, ENRGY 3, ENRGY 3 PSI-25, ISO-95+GL</b> Minimum 1” thick	N/A	N/A
<b>Approved High Density Fiberboard, Structodek High Density Fiberboard Roof Insulation, Retrofit Board, Fesco Board</b> Minimum ½” thick	N/A	N/A
<b>Approved Fiber Glass Roof Insulation (Standard or Wide Flute) (Hot Asphalt only)</b> Minimum 15/16” thick	N/A	N/A
<b>DensDeck, DensDeck Prime</b> Minimum ¼” thick	N/A	N/A

**Note:** All insulation shall be adhered to the vapor barrier or deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft<sup>2</sup> or Insta-Stik Roofing Adhesive applied in continuous ¾” to 1” wide beads, 12” o.c. 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 used as a top layer shall be placed with the polyisocyanurate side facing down.



**Base/Ply Sheet:** One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt, HPR Polyscrim Plus or other Approved ASTM D 2178, type IV or VI ply sheet or other approved ASTM D 4601 Type II base 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. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)

**Membrane:** One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StressPly EUV FR Mineral, VersiPly 60, VersiPly 80 or VersiPly Mineral 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:** Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coatings:

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb./sq. or BlackKnight Cold at 5 gal./sq. (asphalt applied systems only, Not compatible with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
3. Energizer K Plus FR applied at 3.5 gal/sq with minimum two coats of Garla-Brite applied at min 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat .
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

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



**Deck Type 5I:** Cementitious Wood Fiber, Insulated  
**Deck Description:** Cementitious Wood Fiber  
**System Type A(2):** Anchor sheet mechanically fastened; all layers of insulation adhered with approved adhesive.

**All General and System Limitations apply.**

**Anchor Sheet:** One ply of HPR Glasbase, HPR Premium Glasbase or HPR Tri-Base Premium fastened to the deck as described below:  
**Fastening:** Attach anchor sheet using ES Products Twin Loc-Nail spaced 6” o.c. within 4” wide lap and 6” o.c. within three equally spaced staggered rows in the field.

<u>Base Insulation Layer (Optional)</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft<sup>2</sup></u>
ACFoam II, ENRGY 3, H-Shield, Multi-Max FA-3 Minimum 1.5” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft<sup>2</sup></u>
DensDeck Prime Minimum ¼” thick	N/A	N/A

**Note:** All insulation shall be adhered to the anchor sheet in Insul-Lock II or Millennium Pourable Foam Insulation Adhesive applied in ¾”- 1” wide ribbons atop the anchor sheet fastener rows (approximately 8.8” o.c.) . 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/Ply Sheet:** One ore more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt or other approved ASTM D 2178 Type IV or VI ply sheet or other approved ASTM D 4601 Type II base 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 25 lbs./sq. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)

Or

One ply of HPR Torch Base Sheet, torch applied to coverboard

**Membrane:** One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StressPly EUV FR Mineral, VersiPly 60, VersiPly 80 or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.

or

One ply of StressPly IV, StressPly IV UV Mineral or StressPly IV Mineral, torch applied.



**Surfacing:**

Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coatings:

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb/sq. or BlackKnight Cold at 5 gal/sq. (asphalt applied systems only, Not compatible with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
3. Energizer K Plus FR applied at 3.5 gal/sq with minimum two coats of Garla-Brite applied at min 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat .
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

**Maximum Design Pressure:**

-52.5 psf (See General Limitation #7.)



**Deck Type 5I:** Cementitious Wood Fiber, Insulated  
**Deck Description:** Cementitious Wood Fiber  
**System Type A(3):** Anchor sheet mechanically fastened; all layers of insulation adhered with approved asphalt.

**All General and System Limitations apply.**

**Anchor Sheet:** One ply of HPR Glasbase, HPR Premium Glasbase or HPR Tri-Base Premium fastened to the deck as described below:  
**Fastening:** Attach anchor sheet using ES Products Twin Loc-Nail spaced 6” o.c. within 4” wide lap and 6” o.c. within three equally spaced staggered rows in the field.

<u>Base Insulation Layer (Optional)</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft<sup>2</sup></u>
ACFoam II, ENRGY 3, H-Shield, Multi-Max FA-3 Minimum 1.5” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft<sup>2</sup></u>
DensDeck Prime Minimum ¼” thick	N/A	N/A

**Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 25 lbs/100 ft<sup>2</sup>. 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/Ply Sheet:** One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt or other approved ASTM D 2178 Type IV or VI ply sheet or other approved ASTM D 4601 Type II base 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 25 lbs./sq. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)

Or

One ply of HPR Torch Base Sheet, torch applied to coverboard

**Membrane:** One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StressPly EUV FR Mineral, VersiPly 60, VersiPly 80 or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.

Or

One ply of StressPly IV, StressPly IV UV Mineral or StressPly IV Mineral, torch applied.



**Surfacing:**

Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coatings:

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb/sq. or BlackKnight Cold at 5 gal/sq. (asphalt applied systems only, Not compatible with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
3. Energizer K Plus FR applied at 3.5 gal/sq with minimum two coats of Garla-Brite applied at min 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat .
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

**Maximum Design**

**Pressure:**

-135.0 psf (See General Limitation #7.)



**Deck Type 5I:** Cementitious Wood Fiber, Insulated

**Deck Description:** Cementitious Wood Fiber

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

**All General and System Limitations apply.**

<b><u>Base Insulation Layer</u></b>	<b><u>Insulation Fasteners (Table 2)</u></b>	<b><u>Fastener Density/ft<sup>2</sup></u></b>
<b>ACFoam II, ENRGY 3</b> Minimum 1.5" thick	1	1:2 ft <sup>2</sup>
<b>Fesco Board</b> Minimum 3/4" thick	1	1:2 ft <sup>2</sup>
<b>Approved Fiber Glass Roof Insulation (Standard or Wide Flute)</b> Minimum 15/16" thick	1	1:2 ft <sup>2</sup>
<b>Approved High Density Fiberboard, Structodek High Density Fiberboard Roof Insulation, DensDeck, DensDeck Prime</b> Minimum 1/2" thick	1	1:2 ft <sup>2</sup>

**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).**

<b><u>Top Insulation Layer (Optional)</u></b>	<b><u>Insulation Fasteners (Table 2)</u></b>	<b><u>Fastener Density/ft<sup>2</sup></u></b>
<b>Fesco Board</b> Minimum 3/4" thick	N/A	N/A
<b>Approved Fiber Glass Roof Insulation (Standard or Wide Flute)</b> Minimum 15/16" thick	N/A	N/A
<b>Approved High Density Fiberboard, Structodek High Density Fiberboard Roof Insulation, DensDeck, DensDeck Prime</b> Minimum 1/2" thick	N/A	N/A

**Note: Apply optional top layer of insulation shall be adhered with approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft<sup>2</sup>. 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/Ply Sheet:** One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt, HPR Polyscrist Plus, or other Approved ASTM D 2178, type IV or VI ply sheet or other approved ASTM D 4601 Type II base 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. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)

**Membrane:** One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StressPly EUV FR Mineral, VersiPly 60, VersiPly 80 or VersiPly Mineral 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:** Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coatings:

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb/sq. or BlackKnight Cold at 5 gal/sq. (asphalt applied systems only, Not compatible with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
3. Energizer K Plus FR applied at 3.5 gal/sq with minimum two coats of Garla-Brite applied at min 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat .
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

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



**Deck Type 5I:** Cementitious Wood Fiber, Insulated  
**Deck Description:** Cementitious Wood Fiber  
**System Type B(2):** Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.  
**All General and System Limitations apply.**

<b><u>Base Insulation Layer</u></b>	<b><u>Insulation Fasteners (Table 2)</u></b>	<b><u>Fastener Density/ft<sup>2</sup></u></b>
<b>ENRGY 3, ENRGY 3 PSI-25, H-Shield</b> Minimum 1.5" thick	1	1:4 ft <sup>2</sup>
<b>ENRGY 3, ENRGY 3 PSI-25</b> Minimum 1.5" thick	1	1:2 ft <sup>2</sup>
<b>ACFoam Composite</b> Minimum 1.5" thick	1	1:4 ft <sup>2</sup>
<b>Structodek High Density Fiberboard Roof Insulation</b> Minimum 0.5" thick	1	1:4 ft <sup>2</sup>
<b>Fesco Board</b> Minimum 0.75" thick	1	1:2 ft <sup>2</sup>
<b>Approved Fiberglass Roof Insulation (Standard or Wide Flute)</b> Minimum 0.5" thick	1	1:2 ft <sup>2</sup>

**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).

<b><u>Top Insulation Layer</u></b>	<b><u>Insulation Fasteners (Table 2)</u></b>	<b><u>Fastener Density/ft<sup>2</sup></u></b>
<b>Approved High Density Roof Insulating Board</b> Minimum 0.5" thick	N/A	N/A
<b>Structodek Structodek High Density Fiberboard Roof Insulation</b> Minimum 1.0" thick	N/A	N/A
<b>Retro-Fit</b> Minimum 0.5" thick	N/A	N/A
<b>Fesco Board</b> Minimum 0.75" thick	N/A	N/A
<b>DensDeck, DensDeck Prime</b> Minimum 0.25" thick	N/A	N/A

**Note:** Apply 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 ft<sup>2</sup> or Type I or Type III Coal Tar at a rate of 30 lbs/100 ft<sup>2</sup>. 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.



- System 1:** **Base/Ply 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.
- Cap Sheet:** One ply of Millennium Mineral or Millennium FR Mineral, adhered in full mopping of Black Knight or approved Type I or Type III Coal Tar Pitch at a rate of 30 lbs/sq.
- System 2:** **Base 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.
- Ply Sheet:** Two to three 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.
- Cap Sheet:** One ply of Millennium Mineral or Millennium FR Mineral, adhered in full mopping of Black Knight or approved Type I or Type III Coal Tar Pitch at a rate of 30 lbs/sq.
- System 3:** **Base 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. or adhered in Black Knight Cold applied at 1.5-2 gal/sq.
- Ply Sheet:** 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.
- or
- One ply Millennium Base adhered in Black Knight Cold applied at 1.5-2 gal/sq. (to base layer of Millennium Base only)
- Cap Sheet:** One ply of Millennium Mineral or Millennium FR Mineral, adhered in full mopping of Black Knight or approved Type I or Type III Coal Tar Pitch at a rate of 30 lbs/sq.
- or
- One ply of Millennium Mineral or Millennium FR Mineral adhered in Black Knight Cold applied at 1.5-2 gal/sq. (to Millennium Base only)



- System 4: 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.
- System 5: 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. or adhered in Black Knight Cold applied at 1.5-2 gal/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 if no mineral cap sheet is used) Install one of the following:
1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black Knight Flood Coat or Black Knight LV Flood Coat at 70 lb/sq. or Black Knight Cold at 5 gal/sq.
  2. Minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
- Maximum Design Pressure:** -45.0 psf (See General Limitation # 9)



**Deck Type 5I:** Cementitious Wood Fiber, Insulated  
**Deck Description:** Cementitious Wood Fiber  
**System Type B(3):** Base layer of insulation mechanically fastened, top layer adhered with approved asphalt or adhesive.

All General and System Limitations apply.

<u>Base Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft<sup>2</sup></u>
ACFoam II, ACFoam III, ENRGY 3, ENRGY 3 PSI 25, ISO 95+GL, Minimum 1.8" thick	Any fastener from Table 3	1:3 ft <sup>2</sup>

**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).

<u>Top Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft<sup>2</sup></u>
<b>Approved High Density Wood Fiber</b> Minimum 1/2" thick	N/A	N/A
<b>Approved Perlite</b> Minimum 3/4" thick	N/A	N/A
<b>DensDeck, DensDeck Prime</b> Minimum 1/4" thick	N/A	N/A

**Note:** 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 ft<sup>2</sup> 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/Ply Sheet:** Minimum Two plies of HPR Glasbase, HPR Premium Glasbase Sheet, HPR Tri-Base Premium Sheet, HPR Polyscrim Plus or other approved ASTM D 4601 Type II base 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.

**Membrane:** One ply of HPR Polyscrim Plus 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. or with Weatherking or Weatherking Plus WC applied at 2 1/2 gal./sq.

**Surfacing:**

- 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 40 lb./sq. or in BlackKnight Flood Coat or BlackKnight LV Flood Coat at 70 lb/sq.

**Maximum Design Pressure:** -45.0 psf. (See General Limitation #9.)



**Deck Type 5I:** Cementitious Wood Fiber, Insulated

**Deck Description:** Cementitious Wood Fiber

**System Type C:** All layers of insulation simultaneously attached.

**All General and System Limitations apply.**

<b><u>Base Insulation Layer</u></b>	<b><u>Insulation Fasteners (Table 2)</u></b>	<b><u>Fastener Density/ft<sup>2</sup></u></b>
<b>ACFoam II</b> Minimum 1.5" thick	N/A	N/A
<b>ENRGY 3</b> Minimum 1.4" thick	N/A	N/A
<b>Fesco Board</b> Minimum 3/4" thick	N/A	N/A
<b>Approved Fiber Glass Roof Insulation (Standard or Wide Flute)</b> Minimum 15/16" thick	N/A	N/A
<b>Approved High Density Fiberboard, Structodek High Density Fiberboard Roof Insulation, DensDeck, DensDeck Prime</b> 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.**

<b><u>Top Insulation Layer</u></b>	<b><u>Insulation Fasteners (Table 2)</u></b>	<b><u>Fastener Density/ft<sup>2</sup></u></b>
<b>Fesco Board</b> Minimum 3/4" thick	1	1:2 ft <sup>2</sup>
<b>Approved Fiber Glass Roof Insulation (Standard or Wide Flute)</b> Minimum 15/16" thick	1	1:2 ft <sup>2</sup>
<b>Approved High Density Fiberboard, Structodek High Density Fiberboard Roof Insulation, DensDeck, DensDeck Prime</b> Minimum 1/2" thick	1	1:2 ft <sup>2</sup>

**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/Ply Sheet:** One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt, HPR Polyscric Plus, or other Approved ASTM D 2178, type IV or VI ply sheet or other approved ASTM D 4601 Type II base 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. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)
- Membrane:** One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StressPly EUV FR Mineral, , VersiPly 60, VersiPly 80 or VersiPly Mineral 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:** Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coatings:
1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb./sq. or BlackKnight Cold at 5 gal/sq. (asphalt applied systems only, Not compatible with Weatherking and Weatherking Plus WC applied systems)
  2. Minimum two coats of Garla-Brite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
  3. Energizer K Plus FR applied at 3.5 gal/sq with minimum two coats of Garla-Brite applied at min 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
  4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat .
  5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
  6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.
- Maximum Design Pressure:** -45 psf. (See General Limitation #9.)



**Deck Type 5I:** Cementitious Wood Fiber, Non-Insulated

**Deck Description:** Cementitious Wood Fiber

**System Type E(1):** Base sheet mechanically fastened.

**All General and System Limitations apply.**

**Base Sheet:** One ply of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium mechanically attached as noted below.

**Fastening:** ES Products Insuldeck Loc-Nails Assembled Base Ply Fasteners spaced 7½” o.c. in a min. 4” side lap and 7½” o.c. in two equally spaced center rows in the field of the sheet.

Or

ES Products Twin Loc-Nails, Simplex Base-Lok Fasteners or OMG Lite Deck fasteners and plates spaced 9” o.c. in a min. 2” side lap and 18” o.c. in two equally spaced center rows in the field of the sheet

**Ply Sheet:** One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt, HPR Polyscrim Plus, or other Approved ASTM D 2178, type IV or VI ply sheet or other approved ASTM D 4601 Type II base 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. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)

**Membrane:** One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StressPly EUV FR Mineral, VersiPly 60, VersiPly 80 or VersiPly Mineral 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:** Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coatings:

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb/sq. or BlackKnight Cold at 5 gal/sq. (asphalt applied systems only, Not compatible with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
3. Energizer K Plus FR applied at 3.5 gal/sq with minimum two coats of Garla-Brite applied at min 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat .
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

**Maximum Design**

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



**NOA No.:** 11-0621.14  
**Expiration Date:** 12/02/12  
**Approval Date:** 12/15/11  
**Page 21 of 23**

**Deck Type 5:** Cementitious Wood Fiber, Non-Insulated

**Deck Description:** Cementitious Wood Fiber

**System Type E(2):** Base sheet mechanically fastened

**All General and System Limitations apply.**

**Base Sheet:** One ply of HPR Glasbase, HPR Premium Glasbase or HPR Tri-Base Premium fastened to the deck as described below:

**Fastening:** Attach anchor sheet using ES Products Twin Loc-Nail spaced 6” o.c. within 4” wide lap and 6” o.c. within three equally spaced staggered rows in the field.

**Ply Sheet:** One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt or other approved ASTM D 2178 Type IV or VI ply sheet or other approved ASTM D 4601 Type II base 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 25 lbs./sq. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)

**Membrane:** One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StressPly EUV FR Mineral, VersiPly 60, VersiPly 80 or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.

**Surfacing:** Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coatings:

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb/sq. or BlackKnight Cold at 5 gal/sq. (asphalt applied systems only, Not compatible with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
3. Energizer K Plus FR applied at 3.5 gal/sq with minimum two coats of Garla-Brite applied at min 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat .
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

**Maximum Design**

**Pressure:** -172.5 psf (See General Limitation #7)



## 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.)**

**END OF THIS ACCEPTANCE**



NOA No.: 11-0621.14  
Expiration Date: 12/02/12  
Approval Date: 12/15/11  
Page 23 of 23