



**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  
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[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 Built-Up Roofing Systems Over Concrete 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. 06-1018.09 and consists of pages 1 through 8.  
The submitted documentation was reviewed by Jorge L. Acebo.



**NOA No.: 11-0628.03  
Expiration Date: 12/03/16  
Approval Date: 01/12/12  
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## ROOFING SYSTEM NOTICE OF ACCEPTANCE

Category: Roofing  
Sub-Category: Built-Up Roofing  
Material: Fiberglass/Asphalt  
Deck Type: Concrete  
Maximum Design Pressure -375 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 Glasbase	36" x 108' 75 lbs.	ASTM D 4601, Type II	Type II, asphalt coated fiberglass base sheet.
HPR Premium Glasbase	36" x 72' 75 lbs.	ASTM D 4601, Type II	Type II, asphalt coated fiberglass base sheet.
HPR Glasfelt	36" x 180'; roll weight: 95 lbs.	ASTM D 2178	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 D 2178	Type VI asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
Garland 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.
Garla-Flex V.O.C.	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.
Garla-Shield	5, 55 gallon	ASTM D 1227, type IV	Asphalt emulsion roof coating.
Garla-Brite	5 gallon	ASTM D 2824, type I	Aluminum roof coating.
GarlaPrime VOC	5, 55 gallon	ASTM D 41	Non-fibered, quick drying asphalt roof primer
Silver-Shield	5, 55 gallon	ASTM D 2824, type III	High solids, aluminized roof coating.
Black Knight or Black Knight LV Flood Coat	70 lb. keg	Proprietary	Polymer modified coal tar pitch.



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**APPROVED INSULATIONS:**

**TABLE 2**

<b>Product Name</b>	<b>Product Description</b>	<b>Manufacturer (With Current NOA)</b>
ACFoam II	Polyisocyanurate foam insulation	Atlas Energy Products
ENRGY-3, ENRGY 3 Plus	Polyisocyanurate foam insulation	Johns Manville
Fesco Board	Expanded perlite, insulation	Johns Manville
Retrofit Board	Perlite insulation board	Johns Manville
Multi-Max 3	Polyisocyanurate foam insulation	RMax
DensDeck	Water resistant gypsum board	G-P Gypsum Corp.
Structodek High Density Fiberboard Roof Insulation	High Density wood fiber insulation board	Blue Ridge Fiberboard
FiberGlass Roof Insulation	Glass fiber/Mineral fiber insulation	Generic
High Density Fiberboard	Wood fiber insulation board	Generic

**EVIDENCE SUBMITTED**

<b><u>Test Agency</u></b>	<b><u>Test Identifier</u></b>	<b><u>Description</u></b>	<b><u>Date</u></b>
Dynatech Engineering Corporation	#4530.05.95-1	TAS 114	5/31/95
Factory Mutual Research Corporation	IVOA7.AM	FM 4470	02/21/95
	1B4A7.AM		12/15/97
	4B4A9.AM		12/31/97
	0Y5A6.AM		09/08/97
	3D3A5.AM		09/15/98
	3004392		09/21/99
	0D9A0.AM		05/02/00
	3004907		05/16/00
	3009117		12/21/00
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-052-02-01	ASTM D 2178	10/31/11
	GRD-051-02-01	ASTM D 2178	10/31/11
Trinity   ERD	G32700.09.11-1	ASTM D4601	09/16/11
	G37200.10.11-2	ASTM D 5726	10/18/11
	#4533.05.98-1-R1	TAS 114(J)	09/09/11



**APPROVED ASSEMBLIES:**

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete or concrete plank

**System Type A(1):** All layers of insulation adhered with approved asphalt or adhesive.

**All General and System Limitations apply.**

One or more layers of any of the following insulations.

<b>Insulation Layer</b>	<b>Insulation Fasteners</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>ACFoam II, ENRGY 3 (Insta-Stick or Hot Asphalt)</b> Minimum 1” thick	N/A	N/A
<b>ENRGY 3 Plus, Multi-Max-3 (Hot Asphalt only)</b> Minimum 1” thick	N/A	N/A
<b>Approved High Density Fiberboard, Structodek High Density Fiberboard Roof Insulation (Hot Asphalt only)</b> Minimum ½” thick	N/A	N/A
<b>Structodeck, Retrofit Board (Insta-Stick or Hot Asphalt)</b> Minimum ½” thick	N/A	N/A
<b>Fesco Board (Hot Asphalt only)</b> Minimum ¾” thick	N/A	N/A
<b>Approved FiberGlass Roof Insulation (Hot Asphalt only)</b> Minimum 1 <sup>5</sup> / <sub>16</sub> ” thick	N/A	N/A
<b>DensDeck (Insta-Stick or Hot Asphalt)</b> Minimum ¼” thick	N/A	N/A

**Note:** Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or deck in full mopping of approved asphalt, HPR All Temp, Garlastic KM, or Garlastic KM Plus 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. (primer optional). 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 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, Garlastic KM, 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, Garlastic KM, 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 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.
2. GarlaBrite applied at 1 gal. per 150 ft<sup>2</sup>.

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

-90 psf (for all Insta-Stick applications with asphalt applied membranes) (See General Limitation #9)

-145 psf (for minimum 1.5" thick ENRGY 3 followed by an approved perlite insulation board, minimum 3/4" thick, applied in hot asphalt with asphalt applied membranes) (See General Limitation #9)

-237.5 psf (for minimum 1.5" thick ENRGY 3 followed by minimum 1/4" DensDeck or minimum 1/2" HD Fiberboard applied in hot asphalt with asphalt applied membranes.) (See General Limitation #9)



**Deck Type 3I:** Concrete Decks, Insulated  
**Deck Description:** 2500 psi structural concrete or concrete plank  
**System Type A(2):** One or more layers of insulation adhered to spot mopped anchor sheet with approved asphalt.

**All General and System Limitations apply.**

**Deck Primer:** Deck is primed with ASTM D 41 primer.  
**Anchor Sheet:** (Optional) Install one ply of approved ASTM D 4897, Type II base sheet in a spot mopping of ASTM D 312, type III or type IV asphalt; 12" dia. circles, 24" o.c. at an application rate of 12 lbs./sq..

One or more layers of any of the following insulations.

<b>Insulation Layer</b>	<b>Insulation Fasteners</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>ACFoam II, ENRGY 3, ENRGY 3 Plus, Multi-Max-3</b> Minimum 1" thick	N/A	N/A
<b>Approved High Density Fiberboard, Structodek High Density Fiberboard Roof Insulation, Retrofit Board</b> Minimum ½" thick	N/A	N/A
<b>Fesco Board</b> Minimum ¾" thick	N/A	N/A
<b>Approved FiberGlass Roof Insulation</b> Minimum 1 <sup>5</sup> / <sub>16</sub> " thick	N/A	N/A
<b>DensDeck</b> Minimum ¼" thick	N/A	N/A

**Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or deck in full mopping of approved asphalt, HPR All Temp, Garlastic KM, or Garlastic KM Plus 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. 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 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, Garlastic KM, 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, Garlastic KM, 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 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.  
 2. GarlaBrite applied at 1 gal. per 150 ft<sup>2</sup>.  
**Maximum Design Pressure:** -60 psf(See General Limitation #9.)



**Deck Type 3:** Concrete Decks, Non-Insulated

**Deck Description:** 2500 psi concrete plank

**System Type F(1):** Roof cover adhered with approved asphalt or adhesive.

**All General and System Limitations apply.**

**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, Garlastic KM, 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, Garlastic KM, 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 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.  
2. GarlaBrite applied at 1 gal. per 150 ft<sup>2</sup>.

**Maximum Design Pressure:** -375 psf (See General Limitation #9.)

**Deck Type 3:** Concrete Decks, Non-Insulated

**Deck Description:** 2500 psi structural concrete or concrete plank

**System Type F(2)** Roof cover adhered to spot mopped base sheet with approved asphalt or adhesive.

**All General and System Limitations apply.**

**Base Sheet:** Install one ply of approved ASTM D 4897, Type II base sheet over the primed concrete deck in a spot mopping of ASTM D 312, type III or type IV asphalt; 12" dia. circles, 24" o.c. at an application rate of 12 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, Garlastic KM, 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 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.  
2. GarlaBrite applied at 1 gal. per 150 ft<sup>2</sup>.

**Maximum Design Pressure:** -60 psf (See General Limitation #9.)



## CONCRETE 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.

## 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**



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