MIAMI-DADE

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
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MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

Polyglass USA, Inc.
150 Lyon Drive
Fernley, NV 89408

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Polyglass Modified Bitumen Roof System Over Lightweight 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 revises NOA No. 03-0915.04 and consists of pages 1 through 10.
The submitted documentation was reviewed by Jorge L. Acebo.

ROOFING ASSEMBLY APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Materials	SBS/APP/TPO
Deck Type:	Lightweight Insulating Concrete
Maximum Design Pressure	-60 psf
Fire Classification:	See General Limitation #1

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

Product	Dimensions	Test Specification	Product Description
Polyflex	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a smooth or sanded top surface.
Polyflex G	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a granule top surface.
Polyflex G FR	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a granule top surface and fire retardant chemistry.
Polybond	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a smooth or sanded top surface.
Polybond G	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a granule top surface.
Elastoflex S6	32' 10" x 3' 3-3/8"	ASTM D 6164	Torch, hot asphalt or cold adhesive applied, polyester reinforced, SBS modified bitumen membrane with a burn off polyethylene or sanded back face and a polyethylene or sanded top surface.
Elastoflex S6 G	32' 10" x 3' 3-3/8"	ASTM D 6164	Torch, hot asphalt or cold adhesive applied, polyester reinforced, SBS modified bitumen membrane with a burn off polyethylene or sanded back face and a granule top surface.
Elastoflex S6 G FR	32' 10" x 3' 3-3/8"	ASTM D 6164	Torch, hot asphalt or cold adhesive applied, polyester reinforced, SBS modified bitumen membrane with a burn off polyethylene or sanded back face and a granule top surface and fire retardant chemistry.
Elastoshield TS4	32' 10" x 3' 3-3/8"	ASTM D 6164	Torch, hot asphalt or cold adhesive applied, polyester reinforced, SBS modified bitumen membrane with a burn off polyethylene or sanded back face and a granule top surface.
Elastoshield TS4 FR	32' 10" x 3' 3-3/8"	ASTM D 6164	Torch, hot asphalt or cold adhesive applied, polyester reinforced, SBS modified bitumen membrane with a burn off polyethylene or sanded back face and a granule top surface and fire retardant chemistry.

Product	Dimensions	Test Specification	Product Description
Elastoflex V	32' 10" x 3' 3-3/8"	ASTM D 6163	Torch, hot asphalt or cold adhesive applied, fiberglass reinforced, SBS modified bitumen membrane with a burn off polyethylene or sanded back face and a sanded top surface.
Elastoflex VG	32' 10" x 3' 3-3/8"	ASTM D 6163	Torch, hot asphalt or cold adhesive applied, fiberglass reinforced, SBS modified bitumen membrane with a burn off polyethylene or sanded back face and a granule top surface.
Elastoflex VG FR	32' 10" x 3' 3-3/8"	ASTM D 6163	Torch, hot asphalt or cold adhesive applied, fiberglass reinforced, SBS modified bitumen membrane with a burn off polyethylene or sanded back face and a granule top surface and fire retardant chemistry.
Xtraflex	32' 10" x 3' 6"	ASTM D 6222	Torch applied, polyester reinforced, TPO modified bitumen membrane with a burn off polyethylene back face and a smooth top surface.
Xtraflex G	32' 10" x 3' 6"	ASTM D 6222	Torch applied, polyester reinforced, TPO modified bitumen membrane with a burn off polyethylene back face and a granule top surface.
Xtraflex G FR	32' 10" x 3' 6"	ASTM D 6222	Torch applied, polyester reinforced, TPO modified bitumen membrane with a burn off polyethylene back face and a granule top surface and fire retardant chemistry.
Elastoflex SA P FR	32' 6" x 3' 3-3/8"	ASTM D 6164	Self-adhered, polyester reinforced, SBS modified bitumen membrane with a self-adhering back face and a granule top surface.
Elastoflex SA V FR Base	32' 6" x 3' 3-3/8"	ASTM D 6163	Self-adhered, fiberglass reinforced, SBS modified bitumen membrane with a self-adhering back face and a smooth top surface.
Elastoflex SA V FR	32' 6" x 3' 3-3/8"	ASTM D 6163	Self-adhered, fiberglass reinforced, SBS modified bitumen membrane with a self-adhering back face and a granule top surface.
Elastoflex SA V	32' 6" x 3' 3-$^{3}/_{8}$"	ASTM D 6163	Self-adhered, fiberglass reinforced, SBS modified bitumen membrane with a self-adhering back face and a smooth top surface.
Elastoflex SA V G	32' 6" x 3' 3-3/8"	ASTM D 6163	Self-adhered, fiberglass reinforced, SBS modified bitumen membrane with a self-adhering back face and a granule top surface.
Elastoflex SA V G FR	32' 6" x 3' 3-3/8"	ASTM D 6163	Self-adhered, fiberglass reinforced, SBS modified bitumen membrane with a self-adhering back face and a granule top surface.
Elastoflex SA P	32' 6" x 3' 3-3/8"	ASTM D 6164	Self-adhered, fiberglass reinforced, SBS modified bitumen membrane with a self-adhering back face and a granule top surface.
Elastobase	65' 2" x 3' 3-3/8"	ASTM D 4601	SBS modified asphalt coated fiberglass reinforced base sheet.
Polyflex SA P	32' 6" x 3' 3-$^{3}/_{8}$"	ASTM D 6222	Self-adhered, polyester reinforced, APP modified bitumen membrane with a self-adhering back face and a granule top surface.
Polyflex SA P G FR	32' 6" x 3' 3-$^{3}/_{8}$"	ASTM D 6222	Self-adhered, polyester reinforced, APP modified bitumen membrane with a self-adhering back face and a granule top surface.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
Polytherm, POLYTHERM A1	Polyisocyanurate foam insulation	Polyglass USA, Inc.
Polytherm Composite	Polyisocyanurate/perlite composite insulation.	Polyglass USA, Inc.
ACFoam II	Polyisocyanurate foam insulation	Atlas Energy Products
ConPearl	Expanded perlite mineral fiber	Conglas
Esgard Fiberboard	Wood fiber board	EMCO Ltd.
GAF Permalite	Expanded mineral fiber	GAF Materials. Corp.
GAF Fiberboard	Wood fiber board	GAF Materials. Corp.
GAF High Density Wood Fiberboard	High Density Wood Fiberboard	GAF Materials. Corp.
Wood Fiberboard	Wood fiber insulation board	Generic
High Density Wood Fiberboard	Wood fiber insulation board	Generic
Perlite Insulation	Perlite insulation board	Generic
Dens-Deck	Gypsum insulation board	Georgia-Pacific
Armor Board Regular Fiberboard	Wood fiber board	Honeywell Int'l. Inc.
Armor Board High Density Wood Fiberboard	Wood fiber insulation board	Honeywell Int'l. Inc.
Hubert Fiberboard	Wood fiber board	Huebert Fiberboard, Inc.
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, LLC
H-Shield P	Polyisocyanurate/perlite composite insulation	Hunter Panels, LLC
Fesco Board	Expanded mineral fiber	Johns Manville Corp.
Kop-R Wood Fiber	Polyisocyanurate foam insulation	Koppers Industries, Inc.
Structodek, Structodek FS	Wood fiber board	Masonitec
Standard or Wide Flute Fiberglas Roof Insulation	Glass fiber insulation board	Owens-Corning
Multi-Max FA	Polyisocyanurate foam insulation	RMax, Inc.
Thermaroof Composite	Polyisocyanurate/perlite composite insulation.	RMax, Inc.
Fiber Base HD1, Fiber Base HD6	Wood fiber board	Temple Inland
Fiberbond	Type-x Gypsum	United States Gypsum Co.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast Fasteners #15	Insulation fastener for wood, steel and concrete decks		Construction Fasteners Inc.
2.	Dekfast 2 ½" HS membrane Plate	Galvalume stress plate.	2.5" round	Construction Fasteners Inc.
3.	Lite Weight Concrete Fasteners	Insulation fastener for wood, steel and concrete decks.		ITW Buildex Corp.
4.	Lite Weight Concrete Plate	Galvalume stress plate.	2.7" round	ITW Buildex Corp.
5.	Twin Loc-Nails	Pre-assembled Galvalume Base Sheet Fastener and stress plate.	Various	ES Products, Inc.
6.	FM-260 Base Ply Fastener	Pre-assembled Galvalume Base Sheet Fastener and stress plate.	Various	ES Products, Inc.
7.	FM-245 Base Ply Fastener	Pre-assembled Galvalume Base Sheet Fastener and stress plate.	Various	ES Products, Inc.

EVIDENCE SUBMITTED:

Test Agency/Identifier	Report No.	Date
Factory Mutual Research Corporation	J.I. 2W7A7.AM	08.04.94
	J.I. 3001334	02.15.00
	J.I. 3000857	01.12.00
	J.I. 3004091	01.12.00
Exterior Research & Design, LLC.	#11752.09.99-1	02.08.00
Underwriters Laboratory	00NK20869	06.08.00
Exterior Research & Design, LLC	#11776.06.02	06.13.02
	#11758.08.03	08.11.03

APPROVED ASSEMBLIES:

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: Approved Cellular Lightweight Concrete

System Type A: Anchor sheet mechanically fastened; one or more layers of insulation fully adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam II, Multi-Max FA, Polytherm A1, H-Shield, Tapered H-Shield **Minimum 1.5" thick**	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Thermaroof Composite, Polytherm Composite **Minimum 1.5" thick**	**N/A**	**N/A**
Fiberbond **Minimum 5/8" thick**	**N/A**	**N/A**
Armor Board Regular Fiberboard, Armor Board High Density Fiberboard, Esgard Fiberboard Roof Insulator, High Density Wood Fiberboard, GAFTEMP Fiberboard, GAFTEMP High Density Fiberboard, Huebert Fiberboard, Kop-R Wood Fiber, Fiber Base HD1, Fiber Base HD6, Structodek **Minimum ½" thick**	**N/A**	**N/A**
ConPerl, GAFTEMP Permalite, Permalite or Fesco Board **Minimum ¾" thick**	**N/A**	**N/A**

Note: All insulation shall be adhered to the anchor sheet in full moppings of approved hot asphalt within the EVT range and at a rate of 20-40 lbs. Please refer to RAS 117 for insulation attachment. Insulations 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 face down.

Anchor Sheet: One ply of GAFGLAS #75 fastened to the deck as described below:

Fastening: Attach anchor sheet using ITW Buildex Lite Weight Concrete Fasteners spaced 7" o.c. in a 4" lap and 7" o.c. in two equally spaced staggered rows in the center of the sheet.

Base Sheet: (Optional if using 1 to 3 plies of ply sheet or self-adhered membranes noted below) One ply of Elastobase, Modibase, Perma Ply No. 28 or GAFGLAS #75 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet:	(Optional) One ply of Elastobase, Modibase or Perma Ply 28 or one or more plies of Type IV or VI ply sheet adhered to the coverboad in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq or Elastoflex SA V or Elastoflex SA V FR self adhered to a listed polyisocyanurate layer (no coverboard).
Membrane:	One ply of Polyflex, Polyflex G, Polyflex G FR, Polybond, Polybond G, Xtraflex, Xtraflex G or Xtraflex G FR torch applied or one ply of Elastoflex S6, Elastoflex S6 G, Elastoflex S6 G FR, Elastoshield TS4 or Elastoshield TS4 FR torch or hot asphalt applied or one ply of Polyflex SA P FR, Polyflex SA P, Elastoflex SA P, Elastoflex SA P FR, Elastoflex SA V G or Elastoflex SA-V FR self-adhered.
Surfacing:	(Optional) Install one of the following to obtain required fire classification. 1. Gravel or slag at 400 lbs/sq or 300 lbs/sq, respectively, in a flood coat of approved asphalt at 60 lbs/sq. 2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal/sq. 3. Kokem Products Sunguard Acrylic Roof Coating at 1 gal/sq. 4. Monsey Endure Aluminum Roof Coating, Weather Check or Pro-Grade Aluminum Roof Coating at 1½ gal/sq. 5. Grundy al MB Aluminum Roof Coating at 1-2 gal/sq. 6. Fields F350 Heat Shield Aluminum Coating or F630 Heat Shield Fibered Aluminum Coating at 1½ gal/sq.
Maximum Design Pressure:	-45 psf; (See general limitation #7.)

Deck Type 4: Lightweight Concrete, Non-insulated

Deck Description: Approved Cellular Lightweight Concrete

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

All General and System limitations apply.

Base Sheet: One ply of GAFGLAS #75 fastened to the deck as described below:

Fastening: Attach base sheet using ITW Buildex Lite Weight Concrete Fasteners spaced 7" o.c. in a 4" lap and 7" o.c. in two equally spaced staggered rows in the center of the sheet.

Ply Sheet: (Optional) One ply of Elastobase, Modibase or Perma Ply 28 or one to more plies of Type IV or VI ply sheet adhered to the coverboad in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq or Elastoflex SA V or Elastoflex SA V FR self adhered to a listed polyisocyanurate layer (no coverboard).

Membrane: One ply of Polyflex, Polyflex G, Polyflex G FR, Polybond, Polybond G, Xtraflex, Xtraflex G or Xtraflex G FR torch applied or one ply of Elastoflex S6, Elastoflex S6 G, Elastoflex S6 G FR, Elastoshield TS4 or Elastoshield TS4 FR torch or hot asphalt applied or one ply of Polyflex SA P FR, Polyflex SA P, Elastoflex SA P, Elastoflex SA P FR, Elastoflex SA V G or Elastoflex SA-V FR self-adhered.

Surfacing: (Optional) Install one of the following to obtain required fire classification.

1. Gravel or slag at 400 lbs/sq or 300 lbs/sq, respectively, in a flood coat of approved asphalt at 60 lbs/sq.
2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal/sq.
3. Kokem Products Sunguard Acrylic Roof Coating at 1 gal/sq.
4. Monsey Endure Aluminum Roof Coating, Weather Check or Pro-Grade Aluminum Roof Coating at 1½ gal/sq.
5. Grundy al MB Aluminum Roof Coating at 1-2 gal/sq.
6. Fields F350 Heat Shield Aluminum Coating or F630 Heat Shield Fibered Aluminum Coating at 1½ gal/sq.

Maximum Design Pressure: -45 psf; (See general limitation #7.)

Deck Type 4: Lightweight Concrete, Non-insulated

Deck Description: Approved Cellular or Aggregate Lightweight Concrete

System Type E(2): Membrane mechanically fastened.

All General and System limitations apply.

Base Sheet: none.

Ply Sheet: none.

Membrane: One ply of Xtraflex G or Xtraflex G FR mechanically fastened with Dekfast #15 Heavy Fasteners and Dekfast 2.5 in. Seam Plates installed through the lightweight concrete to the underlying steel or structural concrete deck spaced 12" o.c. in the 6 inch wide heat welded side lap.

Surfacing: (Optional) Install one of the following to obtain required fire classification.

1. Gravel or slag at 400 lbs/sq or 300 lbs/sq, respectively, in a flood coat of approved asphalt at 60 lbs/sq.
2. Karnak 97 Fibrated Aluminum Asphalt Roof Coating or Asbestos Free Aluminum Roof Coating at 1½ gal/sq.
3. Kokem Products Sunguard Acrylic Roof Coating at 1 gal/sq.
4. Monsey Endure Aluminum Roof Coating, Weather Check or Pro-Grade Aluminum Roof Coating at 1½ gal/sq.
5. Grundy al MB Aluminum Roof Coating at 1-2 gal/sq.
6. Fields F350 Heat Shield Aluminum Coating or F630 Heat Shield Fibered Aluminum Coating at 1½ gal/sq.

Maximum Design Pressure: -60 psf; (See General Limitation #7.)

LIGHTWEIGHT INSULATING CONCRETE 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.
3. For systems where specific lightweight insulating concrete is not referenced, the minimum design mix shall be a minimum of 300 psi.

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 side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to 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