



**BUILDING CODE COMPLIANCE OFFICE (BCCO)  
PRODUCT CONTROL DIVISION**

**MIAMI-DADE COUNTY, FLORIDA  
METRO-DADE FLAGLER BUILDING  
140 WEST FLAGLER STREET, SUITE 1603  
MIAMI, FLORIDA 33130-1563  
(305) 375-2901 FAX (305) 375-2908**

**NOTICE OF ACCEPTANCE (NOA)**

**Soprema, Inc.  
310 Quadral Drive  
Wadsworth, OH 44281**

**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 the BCCO and accepted by the Building Code and Product Review Committee 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 BCCO (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. BCCO reserves the right to revoke this acceptance, if it is determined by BCCO 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 High Velocity Hurricane Zone of the Florida Building Code.

**DESCRIPTION: Soprema Modified Bitumen Roofing Systems Over Lightweight Insulating 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 consists of pages 1 through 16.  
The submitted documentation was reviewed by Frank Zuloaga, RRC



**NOA No.: 01-0116.12  
Expiration Date: 02/22/06  
Approval Date: 04/24/03  
Page 1 of 16**

## ROOFING ASSEMBLY APPROVAL

**Category:** Roofing  
**Sub-Category:** 07525 Modified Bitumen  
**Materials** SBS  
**Deck Type:** Lightweight Insulating Concrete  
**Maximum Design Pressure** -112.5 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>
Sopra-G	39" x 99' (3 sq.)	ASTM D 4601	Fiberglass reinforced oxidized asphalt base sheet for bonding or mechanically attaching to substrate.
Modified Sopra-G	39" x 99' (3 sq.)	ASTM D 4601	Fiberglass reinforced oxidized asphalt base sheet for bonding or mechanically attaching to substrate.
Sopraglass 100	39" x 66' (2 sq.)	ASTM D 4601	Fiberglass reinforced oxidized asphalt base sheet for bonding or mechanically attaching to substrate.
Soprabase	39" x 99' (3 sq.)	ASTM D 6164	Oxidized asphalt, polyester reinforced base sheets. Primarily used as a mechanically attached anchor sheet. Applied in hot asphalt or cold adhesive.
Sopra 4897	39" x 33' (1 sq.)	ASTM D 4897	Asphalt coated, glass fiber venting base sheet.
Sopra IV	36" x 180' (5 sq.)	ASTM D 2178 type IV	Type IV, fiberglass reinforced, smooth surfaced plysheet. Sopra IV is used in multi-ply systems and complies with ASTM and UL standards. Applied in hot asphalt or cold adhesive.
Sopra VI	36" x 180' (5 sq.)	ASTM D 2178 type VI	Type VI, fiberglass reinforced, smooth surfaced plysheet. Sopra VI is used in multi-ply systems and complies with ASTM and UL standards. Applied in hot asphalt or cold adhesive.
Elastophene	39" x 49' (1½ sq.)	ASTM D 6163	Fiberglass reinforced SBS modified bitumen membrane sanded on both sides, used as a base and top ply. Applied in hot asphalt or cold adhesive.
Elastophene FR	39" x 49' (1½ sq.)	ASTM D 6163	Fiberglass reinforced SBS modified bitumen membrane sanded on both sides, used as a base sheet for U.L. Class 'A' systems. Applied in hot asphalt or cold adhesive.
Elastophene HR FR	39" x 49' (1½ sq.)	ASTM D 6163	Fiberglass scrim reinforced SBS modified bitumen membrane sanded on both sides, used as a base sheet for U.L. Class 'A' systems. Applied in hot asphalt or cold adhesive.
Elastophene PS	39" x 49' (1½ sq.)	ASTM D 6163	Glass reinforced SBS modified bitumen membrane with thermofusible plastic film for torch bonding to the top side; applied in hot asphalt or cold adhesive.
Elastophene Flam	39" x 33' (1 sq.)	ASTM D 6163	Fiberglass reinforced SBS modified bitumen membrane covered on both sides with a thermofusible plastic film. Applied by torch.



NOA No.: 01-0116.12  
 Expiration Date: 02/22/06  
 Approval Date: 04/24/03  
 Page 2 of 16

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Elastophene 180	39" x 49' (1½ sq.)	ASTM D 6164	Non-woven polyester reinforced SBS modified bitumen membrane sanded on both sides, used primarily as a base ply. Applied in hot asphalt or cold adhesive.
Elastophene 180 PS	39" x 48' (1½ sq.)	ASTM D 6164	Polyester reinforced SBS modified bitumen membrane with thermofusible plastic film for torch bonding to the topside, used as a base sheet. Applied in hot asphalt or cold adhesive.
Elastophene GR	39" x 33' (1 sq.)	ASTM D 6163	Fiberglass reinforced SBS modified bitumen membrane surfaced with colored granules. Applied in hot asphalt or cold adhesive.
Elastophene FR GR	39" x 33' (1 sq.)	ASTM D 6163	Fiberglass reinforced SBS modified bitumen membrane surfaced with colored granules. Top ply membrane formulated for Class 'A'. Applied in hot asphalt or cold adhesive.
Elastophene Flam GR, FR GR. FR+GR	39" x 33' (1 sq.)	ASTM D 6163	Fiberglass reinforced modified bitumen membrane surfaced with colored granules. Applied by torch.
Sopralene 180, 250 or 350	39" x 33' (1 sq.) 39" x 26' (¾ sq.)	ASTM D 6164	Non-woven polyester reinforced SBS modified bitumen membrane sanded on both sides, used primarily as a base ply. Applied in hot asphalt or cold adhesive.
Soprafix [S], [F] and [X]	39" x 33' (1 sq.)	ASTM D 6164	Non-woven polyester reinforced SBS modified bitumen membrane with plastic film on both sides, used primarily as a base ply. Applied by mechanical attachment. Designed for attachment of heat welded cap membranes.
Soprafix [H]	39" x 33' (1 sq.)	ASTM D 6164	Non-woven polyester reinforced SBS modified bitumen membrane with plastic film on both sides, used primarily as a base ply. Applied by mechanical attachment. Designed for attachment of self adhered cap membranes.
Sopralene Flam 180 or 250	39" x 32' (1 sq.) 39" x 26' (¾ sq.)	ASTM D 6164	Non-woven polyester reinforced SBS modified bitumen membrane, both sides covered with thermofusible plastic film, primarily used as a base ply. Applied by torch.
Sopralene 180, 250 or 350 GR	39" x 26' (¾ sq.)	ASTM D 6164	Non-woven polyester reinforced SBS modified bitumen membrane surfaced with colored granules. Applied in hot asphalt or cold applied adhesive.
Sopralene Flam 180, 250 or 350 GR, FR GR. FR+GR	39" x 26' (¾ sq.)	ASTM D 6164	Non-woven polyester reinforced SBS modified bitumen membrane surfaced with colored granules. Applied by torch.
Sopralast	various	ASTM D 6298	Fiberglass reinforced modified bitumen waterproof sheeting faced with aluminum, copper or stainless steel foil.
Sopralene Stick or Flam Stick	39" x 33' (1 sq.)	ASTM D 6164	Self adhered, film surfaced, polyester reinforced waterproofing membrane.
EPS Flam Stick	39" x 33' (1 sq.)	ASTM D 6163	Self adhered, film surfaced, glassmat/glass grid reinforced waterproofing membrane.
Colphene 1000 or 1500	39" x 33' (1 sq.) 39" x 132' (4 sq.) 39" x 66' (2.1 sq.)	ASTM D 1970	Self adhered, non-reinforced waterproofing membranes ('Peel and Stick') used as a vapor barrier.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Colphene FR GR	39" x 33' (1 sq.)	ASTM D 6163	Self adhered, granule surfaced, fiberglass reinforced waterproofing membranes ('Peel and Stick').
Colphene HR FR GR	39" x 33' (1 sq.)	ASTM D 6163	Self adhered, granule surfaced, fiberglass scrim reinforced waterproofing membranes ('Peel and Stick').
Sopratape 606	5" wide		Bituminous tape for sealing of side and head laps.
Sopramastic 200	17 oz. pouch or 10.4 oz cartridge		Caulking compound.
Elastocol 500 and 600		ASTM D 41	Asphalt primers.

### APPROVED INSULATIONS:

TABLE 2

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
ACFoam II	Polyisocyanurate foam insulation	Atlas Energy Products
ACFoam Composite	Composite polyisocyanurate insulation board	Atlas Energy Products
Gypsum	Gypsum board	generic
High Density Wood Fiberboard	Wood fiber insulation board	generic
Perlite Insulation	Perlite insulation board	generic
Dens Deck	Water resistant gypsum board	G-P Gypsum Corp.
ENRGY-2,	Polyisocyanurate foam insulation	Johns Manville
ENRGY-2 Plus, Composite, Fesco Foam	Composite Insulation board	Johns Manville

### APPROVED FASTENERS:

TABLE 3

<u>Fastener Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Dimensions</u>	<u>Manufacturer (With Current NOA)</u>
1.	Tri-Fix Fastening System	Fastening system for base sheet attachment to lightweight concrete, gypsum or cementitious wood fiber decks.	3" diameter plate with various length fasteners	Soprema, Inc.
2.	Soprafix [X]-EL #15	Fasteners for membrane attachment to steel or concrete decks.		Soprema, Inc.
3.	Soprema Plates	Metal or plastic stress plates for use with Soprema Fasteners.	3" diameter	Soprema, Inc.
4.	Twin Loc-Nails	Base ply fastening systems for lightweight concrete decks		ES Products, Inc.



**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>
5.	FM-30, FM-45, FM-60, FM-90 Fasteners	Base ply fastening systems for lightweight concrete decks		ES Products, Inc.
6.	Olympic CR Base Ply Fasteners	Base ply fastening assembly		Olympic Mfg. Group, Inc.
7.	Base-Lok Fasteners	Base sheet fastener for lightweight concrete, cwf and gypsum decks	1.75" long with 3" dia. head	Simplex Nails
8.	Turbo Tube-Lok Fasteners	Base sheet fastener for lightweight concrete, cwf and gypsum decks	1.75" long with 2" dia. head	Simplex Nails
9.	SFS Base-Lok Fasteners	Base sheet fastener for lightweight concrete, cwf and gypsum decks	1.75" long with 3" dia. head	SFS Stadler, Inc.

**EVIDENCE SUBMITTED:**

<b>Test Agency/Identifier</b>	<b>Name</b>	<b>Report</b>	<b>Date</b>
Factory Mutual Research Corporation	J.I. 0PA2.AM	Wind Uplift Classification	11.29.89
	J.I. 2P2A7.AM	Wind Uplift Classification	11.29.89
	J.I. 1W8A1.AM	Wind Uplift Classification	07.15.93
	J.I. 1Z3A6.AM	Wind Uplift Classification	04.27.95
	J.I. 152A1.AM	Wind Uplift Classification	11.28.84
	J.I. 2D0A0.AM	Wind Uplift Classification	08.15.97
	J.I. 3001334	Wind Uplift Classification	01.25.00
	J.I. 3009814	Class 4470	09.06.02
	10.94.27	Wind Uplift	10.27.94
	2491-04.95	Wind Uplift	01.04.95
Dynatech Engineering Corp.	2003.02.97-1	Wind Uplift	02.15.97
	2003-2.04.97-1	Wind Uplift	04.15.97
	2002.07.97-1	Wind Uplift	08.15.97
	2716.05.98-1	Wind Uplift	05.11.98
	2738.10.00-1	Wind Uplift	10.20.02
	2109.08.02	Wind Uplift	08.06.02
	ITS / Warnock Hersey	ASTM D 5147 Physical Property Testing	05.27.93
IRT of S. Florida, Inc.	990028	TAS 114	09.30.99



**APPROVED ASSEMBLIES:**

- Deck Type 4I:** Lightweight Concrete, Insulated, New Construction or Reroof
- Deck Description:** Cellular or Aggregate Lightweight Concrete, 300 psi. min
- System Type A:** Anchor sheet mechanically fastened; one or more layers of insulation adhered with approved asphalt.

**All General and System Limitations apply.**

One or more layers of any of the following insulations.

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>AC Foam II, ENRGY-2, PSI-25 Minimum 1.4" thick</b>	N/A	N/A
<b>Base or Top Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>Toprox Minimum 1" thick</b>	N/A	N/A
<b>Top Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>BP High Strength, FM-90 Traffic Top/High Density, GAFTEMP High Density, Roof Insulation Board, High Density Fiberboard, Fiber Base HD1, HD6, Structodek Minimum ½" thick</b>	N/A	N/A
<b>GAFTEMP Permalite, Fesco Board Minimum ¾" thick</b>	N/A	N/A
<b>Dens Deck Minimum ¼" thick</b>	N/A	N/A
<b>Fireguard, type X gypsum Minimum 5/8" thick</b>	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 boards used as a top layer shall be installed with the polyisocyanurate face down.**

**Anchor Sheet:** One ply of Sopra-G, Modified Sopra-G, Sopraglass 100, Sopravent, Sopra 4897, Soprabase, GAFGLAS #75 or GAFGLAS Stratavent fastened to the deck as described below:



- Fastening #1: Attach anchor sheet using Olympic CR Base Ply Fasteners or ES FM-90 spaced 7" o.c. in a 4" lap and 7" o.c. in two staggered rows in the center of the sheet.  
*(meets -52.5 psf - See General Limitation #7.)*
- Fastening #2: Attach anchor sheet using Simplex or SFS Stadler Base-Lok fasteners spaced 9" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.  
*(meets -52.5 psf - See General Limitation #7.)*
- Fastening #3: Attach anchor sheet using Simplex Turbo Tube-Lok fasteners spaced 9" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.  
*(meets -45 psf - See General Limitation #9.)*
- Base Sheet: (Optional) One or more plies of Sopra-G, Modified Sopra-G, Sopraglass 100, Sopra-IV, Sopra-VI, Soprabase, GAFGLAS #75 JM Glasbase, JM Glasply IV or Glasply Premier 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, required if no base sheet used) One ply of Elastophene Flam, Elastophene Flam 2.2, Sopralene (180, 250 or 350) Flam, or Sopralene (180, 250 or 350) SP heat welded  
or  
One ply of Elastophene Sanded, Elastophene 180 Sanded, Elastophene PS, Elastophene 180 PS, Sopralene (180, 250 or 350) PS, or Sopralene (180, 250 or 350) Sanded or one or more plies of ASTM D 2178 Type IV or VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Membrane: Elastophene Flam, Elastophene 180 Flam, Elastophene SP, Elastophene Flam GR, Elastophene Flam FR GR, FR+GR, Sopralene (180, 250, 350) Flam GR, Sopralene (180, 250, 350) Flam FR GR, FR+GR or Sopralast 50 TV Alu heat welded  
or  
Elastophene Sanded, Elastophene 180 Sanded, Sopralene (180, 250, 350) Sanded, Elastophene FR GR, Elastophene GR, Sopralene (180, 250, 350) GR, or Sopralene (180, 250, 350) FR GR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Surfacing: (Optional) Install one of the following:  
1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq.  
2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.
- Maximum Design Pressure: See Fastening Requirements above



**Deck Type 4:** Lightweight Concrete, New Construction or Reroof  
**Deck Description:** Cellular or Aggregate Lightweight Concrete, 250 psi. min.  
**System Type E(1):** Base sheet mechanically fastened.

**All General and System Limitations apply.**

**Base Sheet:** One ply of Sopra-G, Modified Sopra-G, Sopraglass 100, Sopravent, Sopra 4897, Soprabase, GAFGLAS #75 or GAFGLAS Stratavent fastened to the deck as described below:

**Fastening #1:** Attach anchor sheet using Olympic CR Base Ply Fasteners or ES FM-90 spaced 7" o.c. in a 4" lap and 7" o.c. in two staggered rows in the center of the sheet.  
*(meets -52.5 psf - See General Limitation #7.)*

**Fastening #2:** Attach anchor sheet using Simplex or SFS Stadler Base-Lok fasteners spaced 9" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.  
*(meets -52.5 psf - See General Limitation #7.)*

**Fastening #3:** Attach anchor sheet using Simplex Turbo Tube-Lok fasteners spaced 9" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.  
*(meets -45 psf - See General Limitation #9.)*

**Ply Sheet:** One ply of Elastophene Sanded, Elastophene 180 Sanded, Elastophene PS, Elastophene 180 PS, Sopralene (180, 250 or 350) PS, or Sopralene (180, 250 or 350) Sanded one or more plies of ASTM D 2178 Type IV or VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Membrane:** Elastophene Flam, Elastophene 180 Flam, Elastophene SP, Elastophene Flam GR, Elastophene Flam FR GR, FR+GR, Sopralene (180, 250, 350) Flam GR, Sopralene (180, 250, 350) Flam FR GR, FR+GR, or Sopralast 50 TV Alu heat welded  
or  
Elastophene Sanded, Elastophene 180 Sanded, Sopralene (180, 250, 350) Sanded, Elastophene FR GR, Elastophene GR, Sopralene (180, 250, 350) GR, or Sopralene (180, 250, 350) FR GR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Surfacing:** (Optional) Install one of the following:  
1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq.  
2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.

**Maximum Design Pressure:** See Fastening Requirements above



**Deck Type 4:** Lightweight Concrete, New Construction or Reroof  
**Deck Description:** Cellular Concrete, LLC. Lightweight Insulating Concrete, 300 psi. min  
**System Type E(2):** Base sheet mechanically fastened.

**All General and System Limitations apply.**

**Deck:** Minimum 22 ga., type BV steel decking attached to support spaced at 5' o.c. maximum using 3/8" puddle welds with washer (every bottom flute). Steel deck side laps are attached three Traxx 1 #10 evenly spaced between supports or structural concrete deck.

**Base Sheet:** One ply of Soprafix [S], Soprafix [F], Soprafix [X] or Soprafix [H] fastened to the deck as described below:  
Note: Soprafix [H] is for use with a self-adhered cap membrane.

**Fastening #1:** Attach base sheet using Tri-Fixx Fasteners spaced 9" o.c. in a 5" lap. The side lap fastener row is encapsulated in the heat welded lap.  
*(meets -45 psf - See General Limitation #7.)*

**Fastening #2:** Attach base sheet using Tri-Fixx Fasteners spaced 8" o.c. in a 5" lap and 8" o.c. in one center rows. The side lap fastener row is encapsulated in the heat welded lap and the center row is stripped-in with a 8" wide strip of torch applied membrane.  
*(meets -75 psf - See General Limitation #7.)*

**Ply Sheet:** (Optional) One ply of Elastophene Flam, Elastophene Flam 2.2, Sopralene (180, 250 or 350) Flam, or Sopralene (180, 250 or 350) SP heat welded.

**Membrane:** Elastophene Flam, Elastophene 180 Flam, Elastophene SP, Elastophene Flam GR, Elastophene Flam FR GR, FR+GR, Sopralene (180, 250, 350) Flam GR, Sopralene (180, 250, 350) Flam FR GR, FR+GR, or Sopralast 50 TV Alu heat welded or Colphene FR GR or Colphene HR FR GR self adhered.

**Surfacing:** (Optional) Install one of the following:  
1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq.  
2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.

**Maximum Design Pressure:** See Fastening Requirements above



**Deck Type 4:** Lightweight Concrete, New Construction or Reroof

**Deck Description:** Cellular Concrete, LLC. Lightweight Insulating Concrete, 300 psi. min

**System Type E(3):** Base sheet mechanically fastened.

**All General and System Limitations apply.**

- Deck:** Lightweight Concrete shall be cast over the following substrate:  
Minimum 18 ga., type 3N steel decking attached to minimum ½" thick, W14 x 43 purlins with an 8" wide top flange spaced maximum 9 ft. o.c. using ¾" puddle welds or Buildex Traxx 5 fasteners spaced 8" o.c. (every bottom flute). Two welds or screws per attachment point, spaced 4" apart. Steel deck side laps are attached 24" o.c. or Structural Concrete deck.
- Base Sheet:** One ply of Soprafix [X] membrane or Sopralene 250 Flam fastened through the lightweight concrete to the deck using SFS Stadler #15 Extra Load Fasteners HD and 70 mm round plates spaced 16" o.c. in a 5" wide lap and 16" o.c. in one center row. The side lap fastener row is encapsulated in the torched/heat fused lap and the center row is stripped-in with and 8" wide strip of heat welded membrane.
- Ply Sheet:** (Optional) One ply of Elastophene Flam, Elastophene Flam 2.2, Sopralene (180, 250 or 350) Flam, or Sopralene (180, 250 or 350) SP heat welded.
- Membrane:** Elastophene Flam, Elastophene 180 Flam, Elastophene SP, Elastophene Flam GR, Elastophene Flam FR GR, FR+GR, Sopralene (180, 250, 350) Flam GR, Sopralene (180, 250, 350) Flam FR GR, FR+GR, or Sopralast 50 TV Alu heat welded.
- Surfacing:** (Optional) Install one of the following:  
1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq.  
2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.
- Maximum Design Pressure:** -112.5 psf (See General Limitation #7)



**Deck Type 4:** Lightweight Concrete, New Construction or Reroof  
**Deck Description:** Elastizel Range II lightweight Insulating Concrete, 300 psi. min  
**System Type E(4):** Base sheet mechanically fastened.

**All General and System Limitations apply.**

**Deck :** Structural Concrete deck or Min. 22 ga., Type B steel decking over ¼” thick steel supports spaced max. 5 ft o.c. attached 6” o.c. using min. 5/8” diameter puddle welds with washers or Traxx/5 fasteners. Deck side laps are attached 15” o.c. using Traxx/1 fasteners. Deck is covered with a Elastizel Range II lightweight concrete pour consisting of a 1/8” slurry coat, minimum 2” thick Holey Board and a minimum 3” thick top coat.

**Base Sheet:** One ply of Soprafix [S], Soprafix [F], Soprafix [X] or Soprafix [H] fastened to the deck as described below:  
Note: Soprafix [H] is for use with a self-adhered cap membrane.

**Fastening:** Attach base sheet using Tri-Fixx Fasteners spaced 8” o.c. in a 5” lap and 8” o.c. in one center row. The side lap fastener row is encapsulated in the heat welded lap and the center row is stripped-in with a 6” wide strip of heat welded membrane.

**Ply Sheet:** (Optional) One ply of Elastophene Flam, Elastophene Flam 2.2, Sopralene (180, 250 or 350) Flam, or Sopralene (180, 250 or 350) SP heat welded.

**Membrane:** Elastophene Flam, Elastophene 180 Flam, Elastophene SP, Elastophene Flam GR, Elastophene Flam FR GR, FR+GR, Sopralene (180, 250, 350) Flam GR, Sopralene (180, 250, 350) Flam FR GR, FR+GR or Sopralast 50 TV Alu torch applied or Colphene FR GR or Colphene HR FR GR self adhered.

**Surfacing:** (Optional) Install one of the following:  
1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq.  
2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.

**Maximum Design Pressure:** -112.5 psf (See General Limitation #7)



**Deck Type 4:** Lightweight Concrete, New Construction or Reroof  
**Deck Description:** Cellular or Aggregate Lightweight Concrete, 300 psi. min.  
**System Type E(5):** Base sheet mechanically fastened.

**All General and System Limitations apply.**

**Base Sheet:** One ply of Soprafix [S], Soprafix [F], Soprafix [X] or Soprafix [H] fastened to the deck as described below:  
Note: Soprafix [H] is for use with a self-adhered cap membrane.

**Fastening:** Attach base sheet using Tri-Fixx Fasteners spaced 10" o.c. in a 5" lap. The side lap fastener row is encapsulated in the heat welded lap.

**Ply Sheet:** (Optional) One ply of Elastophene Flam, Elastophene Flam 2.2, Sopralene (180, 250 or 350) Flam, or Sopralene (180, 250 or 350) SP heat welded.

**Membrane:** Elastophene Flam, Elastophene 180 Flam, Elastophene SP, Elastophene Flam GR, Elastophene Flam FR GR, FR+GR, Sopralene (180, 250, 350) Flam GR, Sopralene (180, 250, 350) Flam FR GR, FR+GR, or Sopralast 50 TV Alu torch applied or Colphene FR GR or Colphene HR FR GR self adhered.

**Surfacing:** (Optional) Install one of the following:  
1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq.  
2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.

**Maximum Design Pressure:** -45 psf (See General Limitation #7)



**Deck Type 4:** Lightweight Concrete, New Construction or Reroof  
**Deck Description:** Cellular or Aggregate Lightweight Concrete, 300 psi. min.  
**System Type E(6):** Base sheet mechanically fastened.

**All General and System Limitations apply.**

**Base Sheet:** One ply of Sopra-G, Soprabase, GAFGLAS #75 or GAFGLAS Stratavent, Flex-I-Glas Base, All weather/Empire, Parabase Plus or Vapor Chan fastened to the deck as described below:

**Fastening:** Attach base sheet using ES Products Twin Loc-Nails spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.

**Ply Sheet:** (Optional) One ply of Elastophene Flam, Elastophene Flam 2.2, Sopralene (180, 250 or 350) Flam, or Sopralene (180, 250 or 350) SP heat welded.  
Or  
One ply of Elastophene Sanded, Elastophene 180 Sanded, Elastophene PS, Elastophene 180 PS, Sopralene (180, 250 or 350) PS, or Sopralene (180, 250 or 350) Sanded one or more plies of ASTM D 2178 Type IV or VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Membrane:** Elastophene Flam, Elastophene 180 Flam, Elastophene SP, Elastophene Flam Granule, Elastophene Flam FR GR, FR+GR, Sopralene (180, 250, 350) Flam GR, Sopralene (180, 250, 350) Flam FR GR, FR+GR, or Sopralast 50 TV Alu heat welded  
or  
Elastophene Sanded, Elastophene 180 Sanded, Sopralene (180, 250, 350) Sanded, Elastophene FR GR, Elastophene GR, Sopralene (180, 250, 350) GR, or Sopralene (180, 250, 350) FR GR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Surfacing:** (Optional) Install one of the following:  
1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq.  
2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.

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



**Deck Type 4:** Lightweight Concrete, New Construction or Reroof

**Deck Description:** Cellular or Aggregate Lightweight Concrete, 300 psi. min.

**System Type E(7):** Base sheet mechanically fastened.

**All General and System Limitations apply.**

**Base Sheet:** One ply of Soprabase or Vapor Chan fastened to the deck as described below:

**Fastening:** Attach base sheet using ES Products Twin Loc-nails spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.

**Ply Sheet:** One ply of Elastophene Sanded, Elastophene 180 Sanded, Elastophene PS, Elastophene 180 PS, Sopralene (180, 250 or 350) PS, or Sopralene (180, 250 or 350) Sanded one or more plies of ASTM D 2178 Type IV or VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Membrane:** Elastophene Sanded, Elastophene 180 Sanded, Sopralene (180, 250, 350) Sanded, Elastophene FR GR, Elastophene GR, Sopralene (180, 250, 350) GR, or Sopralene (180, 250, 350) FR GR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Surfacing:** (Optional) Install one of the following:  
1. Gravel or slag at 400 lbs. or 300 lbs./sq., respectively, adhered with approved asphalt at an application rate of 60 lbs./sq.  
2. Karnak 97 aluminum roof coating applied at an application rate of 1½ gal./sq.

**Maximum Design Pressure:** -75 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 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 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.: 01-0116.12  
Expiration Date: 02/22/06  
Approval Date: 04/24/03  
Page 16 of 16