MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

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

CONTRACTOR LICENSING SECTION
(305) 375-2527 FAX (305) 375-2558

CONTRACTOR ENFORCEMENT DIVISION
(305) 375-2966 FAX (305) 375-2908

PRODUCT CONTROL DIVISION
(305) 375-2902 FAX (305) 372-6339

PRODUCT CONTROL NOTICE OF ACCEPTANCE

Soprema Roofing and Waterproofing, Inc.
310 Quadral Drive
Wadsworth ,OH 44281

Your application for Notice of Acceptance (NOA) of:
Soprema Roof Systems Over Wood Deck
under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This NOA shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at any time from a jobsite or manufacturer's plant for quality control testing. If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined by BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

ACCEPTANCE NO.: 01-0116.01
EXPIRES: 03/01/2006

Raul Rodriguez
Chief Product Control Division

THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL CONDITIONS
BUILDING CODE & PRODUCT REVIEW COMMITTEE

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Miami-Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.
Director
Miami-Dade County
Building Code Compliance Office

APPROVED: 03/01/2001

ROOFING SYSTEM APPROVAL

Category:	Roofing	**Approval Date: March 1, 2001**
Sub-Category:	Modified Bitumen	
		Expiration Date: March 1, 2006
Material:	SBS	
Deck Type:	Wood	
Maximum Design Pressure	-45 psf	
Fire Classification:	See General Limitation #1	

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

Product	Dimensions	Test Specification	Product Description
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.
Elastobase	39" x 99' (3 sq.)	ASTM D 5147	Oxidized asphalt, polyester reinforced base sheets. Primarily used as a mechanically attached anchor sheet. Applied in hot asphalt or cold adhesive.
Sopra VI	36" x 180' (5 sq.)	ASTM D 4601 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 5147	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 5147	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 5147	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 5147	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 5147	Fiberglass reinfoced SBS modified bitumen membrane covered on both sides with a thermofusible plastic film. Applied by torch.
Elastophene 180	39" x 49' (1½ sq.)	ASTM D 5147	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 5147	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.

Frank Zuloaga, RRC
Roofing Product Control Examiner

Product	Dimensions	Test Specification	Product Description
Elastophene Granule	39" x 33' (1 sq.)	ASTM D 5147	Fiberglass reinforced SBS modified bitumen membrane surfaced with colored granules. Applied in hot asphalt or cold adhesive.
Elastophene FR Granule	39" x 33' (1 sq.)	ASTM D 5147	Fiberglass reinforced SBS modified bitumen membrane surfaced with colored granules. Top ply membrane forumulated for Class 'A'. Applied in hot asphalt or cold adhesive.
Elastophene Flam Granule	39" x 33' (1 sq.)	ASTM D 5147	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 5147	Non-woven polyester reinforced SBS modified bitumen membrane saned on both sides, used primarily as a base ply. Applied in hot asphalt or cold adhesive.
Soprafixx or Soprafixx-T	39" x 33' (1 sq.)	ASTM D 5147	Non-woven polyester reinforced SBS modified bitumen membrane saned on both sides, used primarily as a base ply. Applied by mechanical attachment, in hot asphalt or cold adhesive. Soprafixx-T has tapered lap edges.
Sopralene Flam 180 or 250	39" x 32' (1 sq.) 39" x 26' (¾ sq.)	ASTM D 5147	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 Granule	39" x 26' (¾ sq.)	ASTM D 5147	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 Granule	39" x 26' (¾ sq.)	ASTM D 5147	Non-woven polyester reinforced SBS modified bitumen membrane surfaced with colored granules. Applied by torch.
Sopralast	various	ASTM D 5147	Fiberglass reinforced modified bitumen waterproof sheeting faced with aluminum, copper or stainless steel foil.
Sopralene Flam Stick	39" x 33' (1 sq.)	ASTM D 5147	Self adhered, film surfaced, polyester 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 5147	Self adhered, non-reinforced waterproofing membranes ('Peel and Stick') used as a vapor barrier.
Colphene FR Granules	39" x 33' (1 sq.)	ASTM D 5147	Self adhered, granule surfaced, fiberglass reinforced waterproofing membranes ('Peel and Stick').
Colphene Granules HR FR	39" x 33' (1 sq.)	ASTM D 5147	Self adhered, granule surfaced, fiberglass scrim reinforced waterproofing membranes ('Peel and Stick').
Lastobond S or P	39" x 49' (1½ sq.)	ASTM D 5147	Self adhered underlayment membrane.
Soprema Fasteners	#12 or #14	PA 114	Fasteners for membrane or insulation attachment to wood, steel or concrete decks.
Soprema Plates	3" diameter	PA 114	Metal or plastic stess plates for use with Soprema Fasteners.
SopraFixx	2 in. round; .032 in. thick	PA 114	AZ-55 Galvalume steel plate for use with the Soprafixx system.
Sopradisc	2 in. round; .032 in. thick	PA 114	Galvanized metal bearing plate used for side lap attachment of Soprafixx system.
Soprema Isofast IF/IFT	2¾ in. diameter; .04 in. thick.	PA 114	AZ-50 Galvalume steel plate for use with the Soprafast System.

Frank Zuloaga, RRC
Roofing Product Control Examiner

Product	Dimensions	Test Specification	Product Description
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.
Sopracolle			Cold-applied adhesive used to bond membrane to prepared substrates or to other membranes.

TRADE NAMES OF PRODUCTS MANUFACTURED BY OTHERS

Product	Dimensions	Test Specification	Product Description	Manufacturer
ACFoam II	various	PA 110	Polyisocyanurate foam insulation	Atlas Energy Products (with current NOA)
E'NRG'Y-2	various	PA 110	Polyisocyanurate foam insulation	Johns Manville Corp. (with current NOA)
High Density Wood Fiberboard	various	PA 110	Wood fiber insulation board	see Approved Systems Listings
Perlite Insulation	various	PA 110	Perlite insulation board	see Approved Systems Listings
ACFoam Composite	various	PA 110	Composite polyisocyanurate insulation board	Atlas (with current NOA)
Fesco Foam	various	PA 110	Composite polyisocyanurate insulation board	Johns Manville Corp. (with current NOA)
E'NRG'Y-2 Composite	various	PA 110	Composite polyisocyanurate insulation board	Johns Manville Corp. (with current NOA)
E'NRG'Y-2 Plus	various	PA 110	Composite polyisocyanurate insulation board	Johns Manville Corp. (with current NOA)
Dens-Deck	various	PA 110	Gypsum insulation board	Georgia-Pacific (with current NOA)
GAFGLAS # 75	36" or 39" x 108'	ASTM D 4601	G2 Fiberglass base sheet	GAF Materials Corp. (with current NOA)
JM Glasbase	36" x 108'	ASTM D 4601	G2 Fiberglass base sheet	Johns Manville Corp. (with current NOA)
Vaporbar GB	36" x 108'	ASTM D 4601	G2 Fiberglass base sheet	Celotex Corp. (with current NOA)
Dekfast Fasteners	various	PA 114	Fastener for wood, steel and concrete decks	Construction Fasteners (with current NOA)
Dekfast Hex Plate	2 7/8" x 3 1/4"	PA 114	Galvalume hex stress plate.	Construction Fasteners (with current NOA)
Roofgrip Fasteners	various	PA 114	Fasteners for wood, steel or concrete decks	ITW Buildex (with current NOA)
Accutrac Fasteners	various	PA 114	Fasteners for wood or steel decks	ITW Buildex (with current NOA)
Hextra Fasteners	various	PA 114	Fasteners for wood or steel decks	ITW Buildex (with current NOA)
Accutrac Plate	3" square	PA 114	Galvalume square stress plate	ITW Buildex (with current NOA)
Gearlok Plate	3" round	PA 114	Polyolefin round stress plate	ITW Buildex (with current NOA)

Frank Zuloaga, RRC
Roofing Product Control Examiner

Product	Dimensions	Test Specification	Product Description	Manufacturer
Olympic Fasteners	various	PA 114	Fasteners for wood, steel or concrete decks	Olympic (with current NOA)
Olympic Standard	3" round	PA 114	Galvalume stress plate	Olympic (with current NOA)
HD Insul-Fixx Fastener	various	PA 114	Fastener for use in steel and concrete decks	SFS Stadler (with current NOA)
Insul-Fixx Fastener	various	PA 114	Insulation fastener for steel and wood decks	SFS Stadler (with current NOA)
Isofast Fasteners	various	PA 114	Insulation fastener for steel and wood decks	SFS Stadler (with current NOA)
Insul-Fixx S	3" round	PA 114	Galvalume AZ55 stress plate	SFS Stadler (with current NOA)
Insul-Fixx P	3" round	PA 114	Polyethylene stress plate	SFS Stadler (with current NOA)
Isofast Plate	various	PA 114	Square or oblong galvalume steel plates for use with Isofast fasteners	SFS Stadler (with current NOA)
Roofing Nails	Minimum 11 ga.	PA 114	Corrosion resistant annular ring shank nails	generic
Tin Caps	Min. 32 ga. x $1^5/_8$"	PA 114	Corrosion resistant circular discs.	generic
Red Rosin	various		Rosin paper for barrier layer on wood decks	generic
Asphalt	n/a	ASTM D 312	Type III or IV Hot asphalt bitumen adhesive	generic
Asphalt Primer	n/a	ASTM D 41	Asphalt Primer	generic
GEO #902	n/a		Cold Adhesive	GEO Industries, Inc. (with current NOA)
GEO #903	n/a		Aluminum Coating	GEO Industries, Inc. (with current NOA)
20 F-AF Emulsion	n/a	ASTM D 1227	Roof coating	Grundy (with current NOA)
Fibered Aluminum Roof Coating	n/a	ASTM D 2824	Fibrated aluminum coating.	Grundy (with current NOA)
Henry 520	n/a	PA 121	Aluminum roof coating	Henry Co. (with current NOA)
Karnak 97 AF	n/a	PA 121	Roof coating	Karnak (with current NOA)
Karnak 81	n/a		Cold adhesive	Karnak (with current NOA)
Asbestos Fibered Asphalt Emulsion	n/a	ASTM D 1227	Roof coating	Monsey Products (with current NOA)
Emulsion Roof Coating - Fibered	n/a	ASTM D 1227	Roof coating	Monsey Products (with current NOA)
Endure Emulsion Mastic	n/a	PA 121	Asphalt emulsion	Monsey Asphalt Products (with current NOA)
Endure Premium Aluminum	n/a	ASTM D 2824	Aluminum coating	Monsey Products (with current NOA)
Premium Long Life Aluminum Roof Coating Asbestos Free	n/a	PA 121	Aluminum roof coating	Monsey Asphalt Products (with current NOA)

Frank Zuloaga, RRC
Roofing Product Control Examiner

Product	Dimensions	Test Specification	Product Description	Manufacturer
Pro-Grade Aluminum	n/a	PA 121	Aluminum roof coating	Monsey Asphalt Products (with current NOA)
Weather-Chek Aluminum	n/a	ASTM D 2824	Aluminum roof coating	Monsey Asphalt Products (with current NOA)

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
Factory Mutual Research Corporation	J.I. 1Z3A6.AM	Wind Uplift Classification	04.27.95
	J.I. 1W8A1.AM	Wind Uplift Classification	07.15.93
	J.I. 2D0A0.AM	Wind Uplift Classification	08.15.97
	FM Approval Guide	Uplift Classifications	Published Annually
Underwriters Laboratories, Inc.	UL Roofing Materials and Systems Directory	File No. R11436 Fire Classification	Published Annually
Dynatech Engineering Corp.	10.94.27	Wind Uplift	10.27.94
	2491-04.95	Wind Uplift	01.04.95
Exterior Research & Design, LLC.	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
ITS / Warnock Hersey		ASTM D 5147 Physical Property Testing	05.27.93
Exterior Research & Design, LLC.	2738-10.00-1	Wind Uplift	10/20/2000
IRT of S. Florida	990028	Wind Uplift	9/30/99

Frank Zuloaga, RRC
Roofing Product Control Examiner

APPROVED ASSEMBLIES:

Deck Type 1I: Wood, Insulated, New Construction or Reroof

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type A: Anchor sheet mechanically fastened; all layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

Insulation Base Layer	**Fastener Type**	**Fastening Detail No.**	**Fasteners Per Board**	**Fastener Density**
One or more layers of the following:				
Approved Type(s): **AC Foam II** Minimum: 1.5" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **E'NRG'Y-2** Minimum: 1.4" x 4' x 4'	N/A	N/A	N/A	N/A

Insulation Base or Top Layer	**Fastener Type**	**Fastening Detail No.**	**Fasteners Per Board**	**Fastener Density**
One or more layers of the following:				
Approved Type(s): **Toprox** Minimum: 1" x 3' x 4'	N/A	N/A	N/A	N/A

Insulation Top Layer	**Fastener Type**	**Fastening Detail No.**	**Fasteners Per Board**	**Fastener Density**
Approved Type(s): **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" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Celotherm, Conperl, GAFTEMP Permalite, Fesco Board** Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens Deck** Minimum: ¼" x 4' x 8'	N/A	N/A	N/A	N/A
Approved Type(s): **Fireguard, type X gypsum** Minimum: 5/8" x 4' x 8'	N/A	N/A	N/A	N/A

Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. 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 may be used as a top layer placed with the polyisocyanurate side facing down.

Frank Zuloaga, RRC
Roofing Product Control Examiner

Anchor Sheet:	One ply of Sopra-G, Modified Sopra-G, Sopraglass 100, GAFGLAS #75, Celotex Vaporbar, or Johns Manville Glasbase fastened to the deck as described below:
Fastening:	Attach anchor sheet using approved roofing nails and tin caps spaced 9" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.
Base Sheet:	(Optional) One or two plies of Sopra-G, Modified Sopra-G, Sopraglass 100, Sopra-IV, Elastobase, GAFGLAS #75, Celotex Vaporbar, Johns Manville Glasbase, or Johns Manville Glasply IV adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..
Ply Sheet:	One ply of Elastophene Flam, Elastophene Flam 2.2, Sopralene (180, 250 or 350) Flam, or Sopralene (180, 250 or 350) SP torch applied 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 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 Granule FR, Sopralene (180, 250, 350) Flam Granule, Sopralene (180, 250, 350) Flam Granule FR, or Sopralast 50 TV Alu torch applied or Elastophene Sanded, Elastophene 180 Sanded, Sopralene (180, 250, 350) Sanded, Elastophene Granule FR, Elastophene Granule, Sopralene (180, 250, 350) Granule, or Sopralene (180, 250, 350) Granular FR 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 to an approved non-granule surfaced membrane. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. 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 #9)
Maximum Fire Classification:	See General Limitation #1
Maximum Slope:	See General Limitation #1

Frank Zuloaga, RRC
Roofing Product Control Examiner

Deck Type 1I: Wood, Insulated, New Construction or Reroof

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type B: Base layer of insulation mechanically attached, optional top layer adhered with approved asphalt.

All General and System Limitations apply.

Insulation Base Layer	Fastener Type	Fastening Detail No.	Fasteners Per Board	Fastener Density
One or more layers of the following:				
Approved Type(s): **AC Foam II**				
Minimum: 1.5" x 4' x 4'	CF Dekfast S/P CF Omega S/P	[3]	8	1:2 ft²
Minimum: 1.5" x 4' x 4'	SFS Insulfixx S/P SFS Isofast S SFS System ES-1	[3]	8	1:2 ft²
Minimum: 1.5" x 4' x 4'	Buildex Accutrac S Buildex Hextra S/P Buildex Roofgrip S/P	[3]	8	1:2 ft²
Minimum: 1.5" x 4' x 4'	Olympic S/P	[3]	8	1:2 ft²
Minimum: 1.5" x 4' x 4'	SOPREMA S/P	[3]	8	1:2 ft²
Minimum: 1.5" x 4' x 4'	Tru-Fast S/P	[3]	8	1:2 ft²
Approved Type(s): **E'NRG'Y-2, PSI-25**				
Minimum: 1.4" x 4' x 4'	CF Dekfast S/P CF Omega S/P	[3]	6	1:2.67 ft²
Minimum: 1.4" x 4' x 4'	SFS Insulfixx S/P SFS Isofast S SFS System ES-1	[3]	6	1:2.67 ft²
Minimum: 1.4" x 4' x 4'	Buildex Accutrac S Buildex Hextra S/P Buildex Roofgrip S/P	[3]	6	1:2.67 ft²
Minimum: 1.4" x 4' x 4'	Olympic S/P	[3]	6	1:2.67 ft²
Minimum: 1.4" x 4' x 4'	SOPREMA S/P	[3]	6	1:2.67 ft²
Minimum: 1.4" x 4' x 4'	Tru-Fast S/P	[3]	6	1:2.67 ft²
Approved Type(s): **ACFoam II, E'NRG'Y-2, PSI-25**				
Minimum: 2.0" x 4' x 4'	CF Dekfast S/P CF Omega S/P	[3]	4	1:4 ft²
Minimum: 2.0" x 4' x 4'	SFS Insulfixx S/P SFS Isofast S SFS System ES-1	[3]	4	1:4 ft²
Minimum: 2.0" x 4' x 4'	Buildex Accutrac S Buildex Hextra S/P Buildex Roofgrip S/P	[3]	4	1:4 ft²

Frank Zuloaga, RRC
Roofing Product Control Examiner

Minimum: 2.0" x 4' x 4'	Olympic S/P	[3]	4	1:4 ft²
Minimum: 2.0" x 4' x 4'	SOPREMA S/P	[3]	4	1:4 ft²
Minimum: 2.0" x 4' x 4'	Tru-Fast S	[3]	4	1:4 ft²

Approved Type(s): **ACFoam Composite, E'NRG'Y-2 Composite, E'NRG'Y-2 Plus**

Minimum: 1.5" x 4' x 4'	CF Dekfast S/P CF Omega S/P	[3]	4	1:4 ft²
Minimum: 1.5" x 4' x 4'	SFS Insulfixx S/P SFS Isofast S SFS System ES-1	[3]	4	1:4 ft²
Minimum: 1.5" x 4' x 4'	Buildex Accutrac S Buildex Hextra S/P Buildex Roofgrip S/P	[3]	4	1:4 ft²
Minimum: 1.5" x 4' x 4'	Olympic S/P	[3]	4	1:4 ft²
Minimum: 1.5" x 4' x 4'	SOPREMA S/P	[3]	4	1:4 ft²
Minimum: 1.5" x 4' x 4'	Tru-Fast S/P	[3]	4	1:4 ft²

Approved Type(s): **Toprox**

Minimum: 1" x 3' x 4'	Olympic S	[2]	5	1:2.4 ft²
Minimum: 1" x 3' x 4'	SOPREMA S	[2]	5	1:2.4 ft²

Approved Type(s): **Dens Deck**

Minimum: ¼" x 4' x 8'	CF Dekfast S	[4]	8	1:4 ft²
Minimum: ¼" x 4' x 8'	SFS Insulfixx S	[4]	8	1:4 ft²
Minimum: ¼" x 4' x 8'	Olympic S	[4]	8	1:4 ft²
Minimum: ¼" x 4' x 8'	SOPREMA S	[4]	8	1:4 ft²

Approved Type(s): **Fireguard**

Minimum: 5/8" x 4' x 8'	CF Dekfast S	[4]	8	1:4 ft²
Minimum: 5/8" x 4' x 8'	SFS Insulfixx S	[4]	8	1:4 ft²
Minimum: 5/8" x 4' x 8'	Olympic S	[4]	8	1:4 ft²
Minimum: ¼" x 4' x 8'	SOPREMA S	[4]	8	1:4 ft²

Approved Type(s): **Celotherm, Conperl, GAFTEMP Permalite, Fesco Board**

Minimum: ¾" x 2' x 4'	CF Dekfast S/P CF Omega S/P	[1]	4	1:2 ft²

Note: Base layer shall be mechanically attached with fasteners and density described above. 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.

Insulation (Optional) Middle Layer	**Fastener Type**	**Fastening Detail No.**	**Fasteners Per Board**	**Fastener Density**

Approved Type(s): **EPS Board - For use between Dens Deck or Fireguard base layer and Approved wood fiber top layer only.**

Minimum: 1" x 4' x 4'	N/A	N/A	N/A	N/A

Frank Zuloaga, RRC
Roofing Product Control Examiner

Insulation Top Layer	Fastener Type	Fastening Detail No.	Fasteners Per Board	Fastener Density
Approved Type(s): **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" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Celotherm, Conperl, GAFTEMP Permalite, Fesco Board**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens Deck**				
Minimum: ¼" x 4' x 8'	N/A	N/A	N/A	N/A
Approved Type(s): **Fireguard, type X gypsum**				
Minimum: 5/8" x 4' x 8'	N/A	N/A	N/A	N/A
Approved Type(s): **Toprox**				
Minimum: 1" x 3' x 4'	N/A	N/A	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^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side face down.

Base Sheet: (Optional) One or two plies of Sopra-G, Modified Sopra-G, Sopraglass 100, Sopra-IV, Elastobase, GAFGLAS #75, Celotex Vaporbar, Johns Manville Glasbase, or Johns Manville Glasply IV adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..

Ply Sheet: One ply of Elastophene Flam, Elastophene Flam 2.2, Sopralene (180, 250 or 350) Flam, or Sopralene (180, 250 or 350) SP torch applied
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 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 Granule FR, Sopralene (180, 250, 350) Flam Granule, Sopralene (180, 250, 350) Flam Granule FR, or Sopralast 50 TV Alu torch applied
or
Elastophene Sanded, Elastophene 180 Sanded, Sopralene (180, 250, 350) Sanded, Elastophene Granule FR, Elastophene Granule, Sopralene (180, 250, 350) Granule, or Sopralene (180, 250, 350) Granular FR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Frank Zuloaga, RRC
Roofing Product Control Examiner

Surfacing:	(Optional) Install one of the following to an approved non-granule surfaced membrane. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. 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 #9)
Maximum Fire Classification:	See General Limitation #1
Maximum Slope:	See General Limitation #1

Frank Zuloaga, RRC
Roofing Product Control Examiner

Deck Type 1I: Wood, Insulated, New Construction or Reroof

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type C: All layers of insulation simultaneously attached.

All General and System Limitations apply.

Insulation Base Layer	Fastener Type	Fastening Detail No.	Fasteners Per Board	Fastener Density
One or more layers of the following:				
Approved Type(s): **AC Foam II, E'NRG'Y-2, PSI-25**				
Minimum: 1.0" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens Deck**				
Minimum: ¼" x 4' x 8'	N/A	N/A	N/A	N/A
Approved Type(s): **Fireguard, type X gypsum**				
Minimum: 5/8" x 4' x 8'	N/A	N/A	N/A	N/A
Approved Type(s): **Toprox**				
Minimum: 1" x 3' x 4'	N/A	N/A	N/A	N/A

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

Insulation Top Layer	Fastener Type	Fastening Detail No.	Fasteners Per Board	Fastener Density
Approved Type(s): **AC Foam II**				
Minimum: 1.5" x 4' x 4'	CF Dekfast S/P CF Omega S/P	[3]	8	1:2 ft²
Minimum: 1.5" x 4' x 4'	SFS Insulfixx S/P SFS Isofast S SFS System ES-1	[3]	8	1:2 ft²
Minimum: 1.5" x 4' x 4'	Buildex Accutrac S Buildex Hextra S/P Buildex Roofgrip S/P	[3]	8	1:2 ft²
Minimum: 1.5" x 4' x 4'	Olympic S/P	[3]	8	1:2 ft²
Minimum: 1.5" x 4' x 4'	SOPREMA S/P	[3]	8	1:2 ft²
Minimum: 1.5" x 4' x 4'	Tru-Fast S/P	[3]	8	1:2 ft²
Approved Type(s): **E'NRG'Y-2, PSI-25**				
Minimum: 1.4" x 4' x 4'	CF Dekfast S/P CF Omega S/P	[3]	6	1:2.67 ft²
Minimum: 1.4" x 4' x 4'	SFS Insulfixx S/P SFS Isofast S SFS System ES-1	[3]	6	1:2.67 ft²

Frank Zuloaga, RRC
Roofing Product Control Examiner

Minimum: 1.4" x 4' x 4'	Buildex Accutrac S Buildex Hextra S Buildex Roofgrip S/P	[3]	6	1:2.67 ft²
Minimum: 1.4" x 4' x 4'	Olympic S/P	[3]	6	1:2.67 ft²
Minimum: 1.4" x 4' x 4'	SOPREMA S/P	[3]	6	1:2.67 ft²
Minimum: 1.4" x 4' x 4'	Tru-Fast S/P	[3]	6	1:2.67 ft²

Approved Type(s): **ACFoam II, E'NRG'Y-2, PSI-25**

Minimum: 2.0" x 4' x 4'	CF Dekfast S/P CF Omega S/P	[3]	4	1:4 ft²
Minimum: 2.0" x 4' x 4'	SFS Insulfixx S/P SFS Isofast S SFS System ES-1	[3]	4	1:4 ft²
Minimum: 2.0" x 4' x 4'	Buildex Accutrac S Buildex Hextra S/P Buildex Roofgrip S/P	[3]	4	1:4 ft²
Minimum: 2.0" x 4' x 4'	Olympic S/P	[3]	4	1:4 ft²
Minimum: 2.0" x 4' x 4'	SOPREMA S/P	[3]	4	1:4 ft²
Minimum: 2.0" x 4' x 4'	Tru-Fast S/P	[3]	4	1:4 ft²

Approved Type(s): **ACFoam Composite, E'NRG'Y-2 Composite, E'NRG'Y-2 Plus**

Minimum: 1.5" x 4' x 4'	CF Dekfast S/P CF Omega S/P	[3]	4	1:4 ft²
Minimum: 1.5" x 4' x 4'	SFS Insulfixx S/P SFS Isofast S SFS System ES-1	[3]	6	1:4 ft²
Minimum: 1.5" x 4' x 4'	Buildex Accutrac S Buildex Hextra S/P Buildex Roofgrip S/P	[3]	6	1:4 ft²
Minimum: 1.5" x 4' x 4'	Olympic S/P	[3]	6	1:4 ft²
Minimum: 1.5" x 4' x 4'	SOPREMA S/P	[3]	6	1:4 ft²
Minimum: 1.5" x 4' x 4'	Tru-Fast S/P	[3]	6	1:4 ft²

Approved Type(s): **Toprox**

Minimum: 1" x 3' x 4'	Olympic S	[2]	5	1:2.4 ft²
Minimum: 1" x 3' x 4'	SOPREMA S	[2]	5	1:2.4 ft²

Approved Type(s): **Celotherm, Conperl, GAFTEMP Permalite, Fesco Board**

Minimum: ¾" x 2' x 4'	CF Dekfast S/P CF Omega S/P	[1]	4	1:2 ft²
Minimum: ¾" x 2' x 4'	SFS Insulfixx S/P SFS Isofast S SFS System ES-1	[1]	4	1:2 ft²
Minimum: ¾" x 2' x 4'	Buildex Accutrac S Buildex Hextra S/P Buildex Roofgrip S/P	[1]	4	1:2 ft²
Minimum: ¾" x 2' x 4'	Olympic S/P	[1]	4	1:2 ft²
Minimum: ¾" x 2' x 4'	SOPREMA S/P	[1]	4	1:2 ft²
Minimum: ¾" x 2' x 4'	Tru-Fast S/P	[1]	4	1:2 ft²

Frank Zuloaga, RRC
Roofing Product Control Examiner

Approved Type(s): **Esgard, High Density Fiberboard, GAFTEMP Fiberboard, Huebert Fiberboard**

Minimum: 1" x 4' x 4'	CF Dekfast S/P CF Omega S/P	[3]	4	1:4 ft²
Minimum: 1" x 4' x 4'	SFS Insulfixx S/P SFS Isofast S SFS System ES-1	[3]	4	1:4 ft²
Minimum: 1" x 4' x 4'	Buildex Accutrac S Buildex Hextra S/P Buildex Roofgrip S/P	[3]	4	1:4 ft²
Minimum: 1" x 4' x 4'	Olympic S/P	[3]	4	1:4 ft²
Minimum: 1" x 4' x 4'	SOPREMA S/P	[3]	4	1:4 ft²
Minimum: 1" x 4' x 4'	Tru-Fast S/P	[3]	4	1:4 ft²

Approved Type(s): **Dens Deck**

Minimum: ¼" x 4' x 8'	CF Dekfast S	[4]	8	1:4 ft²
Minimum: ¼" x 4' x 8'	SFS Insulfixx S	[4]	8	1:4 ft²
Minimum: ¼" x 4' x 8'	Olympic S	[4]	8	1:4 ft²
Minimum: ¼" x 4' x 8'	SOPREMA S	[4]	8	1:4 ft²

Approved Type(s): **Fireguard**

Minimum: 5/8" x 4' x 8'	CF Dekfast S	[4]	8	1:4 ft²
Minimum: 5/8" x 4' x 8'	SFS Insulfixx S	[4]	8	1:4 ft²
Minimum: 5/8" x 4' x 8'	Olympic S	[4]	8	1:4 ft²
Minimum: ¼" x 4' x 8'	SOPREMA S	[4]	8	1:4 ft²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. (See Roofing Application Standard RAS 117 for fastening details.)

Base Sheet: (Optional) One or two plies of Sopra-G, Modified Sopra-G, Sopraglass 100, Sopra-IV, Elastobase, GAFGLAS #75, Celotex Vaporbar, Johns Manville Glasbase, or Johns Manville Glasply IV adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..

Ply Sheet: One ply of Elastophene Flam, Elastophene Flam 2.2, Sopralene (180, 250 or 350) Flam, or Sopralene (180, 250 or 350) SP torch applied
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 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 Granule FR, Sopralene (180, 250, 350) Flam Granule, Sopralene (180, 250, 350) Flam Granule FR, or Sopralast 50 TV Alu torch applied
or
Elastophene Sanded, Elastophene 180 Sanded, Sopralene (180, 250, 350) Sanded, Elastophene Granule FR, Elastophene Granule, Sopralene (180, 250, 350) Granule,

Frank Zuloaga, RRC
Roofing Product Control Examiner

	or Sopralene (180, 250, 350) Granular FR 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 to an approved non-granule surfaced membrane. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. 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 #9)
Maximum Fire Classification:	See General Limitation #1
Maximum Slope:	See General Limitation #1

Frank Zuloaga, RRC
Roofing Product Control Examiner

Deck Type 1I: Wood, Insulated, New Construction or Reroof

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type D(1): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

Insulation Base Layer	**Fastener Type**	**Fastening Detail No.**	**Fasteners Per Board**	**Fastener Density**
One or more layers of the following:				
Approved Type(s): **AC Foam II, E'NRG'Y-2** Minimum: 1.5" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **E'NRG'Y-2** Minimum: 1.4" x 4' x 4'	N/A	N/A	N/A	N/A

Insulation Base or Top Layer	**Fastener Type**	**Fastening Detail No.**	**Fasteners Per Board**	**Fastener Density**
One or more layers of the following:				
Approved Type(s): **Toprox** Minimum: 1" x 3' x 4'	N/A	N/A	N/A	N/A

Insulation (Optional) Top Layer	**Fastener Type**	**Fastening Detail No.**	**Fasteners Per Board**	**Fastener Density**
Approved Type(s): **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" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Celotherm, Conperl, GAFTEMP Permalite, Fesco Board** Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens Deck** Minimum: ¼" x 4' x 8'	N/A	N/A	N/A	N/A
Approved Type(s): **Fireguard, type X gypsum** Minimum: 5/8" x 4' x 8'	N/A	N/A	N/A	N/A

Note: Top insulation layer shall have preliminary attachment at a density of two Approved insulation fasteners per board for insulation boards having any one dimension no greater than 4 ft. and a minimum of four Approved insulation fasteners per board for insulation boards having any one dimension greater than 4 ft. Composite insulation panels shall be placed with the polyisocyanurate side down.

Frank Zuloaga, RRC
Roofing Product Control Examiner

Base Sheet:	One ply of Sopra-G, Modified Sopra-G, Sopraglass 100, GAFGLAS #75, Celotex Vaporbar, or Johns Manville Glasbase fastened to the deck as described below:
Fastening:	Attach base sheet using CF #14 Dekfast with Hex Plates or SFS Insulfixx S or HD Insulfixx S spaced 9" o.c. in a 4" lap and 12" 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 torch applied 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 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 Granule FR, Sopralene (180, 250, 350) Flam Granule, Sopralene (180, 250, 350) Flam Granule FR, or Sopralast 50 TV Alu torch applied or Elastophene Sanded, Elastophene 180 Sanded, Sopralene (180, 250, 350) Sanded, Elastophene Granule FR, Elastophene Granule, Sopralene (180, 250, 350) Granule, or Sopralene (180, 250, 350) Granular FR 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 to an approved non-granule surfaced membrane. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. 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 #9)
Maximum Fire Classification:	See General Limitation #1
Maximum Slope:	See General Limitation #1

Frank Zuloaga, RRC
Roofing Product Control Examiner

Deck Type 1I: Wood, Insulated, New Construction or Reroof

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type D(2): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

Insulation Base Layer	**Fastener Type**	**Fastening Detail No.**	**Fasteners Per Board**	**Fastener Density**
One or more layers of the following:				
Approved Type(s): **AC Foam II, E'NRG'Y-2** Minimum: 1.4" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Toprox** Minimum: 2.0" x 3' x 4'	N/A	N/A	N/A	N/A

Insulation (Optional) Top Layer	**Fastener Type**	**Fastening Detail No.**	**Fasteners Per Board**	**Fastener Density**
Approved Type(s): **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" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Celotherm, Conperl, GAFTEMP Permalite, Fesco Board** Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens Deck** Minimum: ¼" x 4' x 8'	N/A	N/A	N/A	N/A
Approved Type(s): **Fireguard, type X gypsum** Minimum: 5/8" x 4' x 8'	N/A	N/A	N/A	N/A

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

Base Sheet: One ply of Soprafix Membrane, Soprafix-T Membrane or Sopralene 180 Flam fastened to the deck as described below:

Fastening #1: Attach base sheet using Insulfixx fasteners with Soprafix 2" Round Barbed Plates spaced 18" o.c. in a 4" wide heat welded or bituminous taped seam.

Frank Zuloaga, RRC
Roofing Product Control Examiner

Fastening #2:	Attach base sheet using Insulfixx or Isofast fasteners and Insulfixx or Isofast plates spaced 24" o.c. in the center of the sheet. Laps are heat fused: Fastener rows are stripped in with a 7" wide section of torch applied base sheet 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 torch applied
Membrane:	Elastophene Flam, Elastophene 180 Flam, Elastophene SP, Elastophene Flam Granule, Elastophene Flam Granule FR, Sopralene (180, 250, 350) Flam Granule, Sopralene (180, 250, 350) Flam Granule FR, or Sopralast 50 TV Alu torch applied or Colphene FR Granule or Colphene HR FR Granule self adhered to base sheet or to Flam or SP ply sheets.
Surfacing:	(Optional) Install one of the following to an approved non-granule surfaced membrane. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. 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 #9.)
Maximum Fire Classification:	See General Limitation #1
Maximum Slope:	See General Limitation #1

Frank Zuloaga, RRC
Roofing Product Control Examiner

Deck Type 1: Wood, Non-insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank decks

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

All General and System Limitations apply.

Barrier: (Optional) Roctex Rocroof, loose laid

Base Sheet: One or two plies of Sopra-G, Modified Sopra-G, Sopraglass 100, GAFGLAS #75, Celotex Vaporbar, or Johns Manville Glasbase fastened to the deck using approved roofing nails and tin caps spaced 9" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: One ply of Elastophene Flam, Elastophene Flam 2.2, Sopralene (180, 250 or 350) Flam, or Sopralene (180, 250 or 350) SP torch applied
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 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 Granule FR, Sopralene (180, 250, 350) Flam Granule, Sopralene (180, 250, 350) Flam Granule FR, or Sopralast 50 TV Alu torch applied
or
Elastophene Sanded, Elastophene 180 Sanded, Sopralene (180, 250, 350) Sanded, Elastophene Granule FR, Elastophene Granule, Sopralene (180, 250, 350) Granule, or Sopralene (180, 250, 350) Granular FR 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 to an approved non-granule surfaced membrane. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.

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 #9.)

Maximum Fire Classification: See General Limitation #1

Maximum Slope: See General Limitation #1

Frank Zuloaga, RRC
Roofing Product Control Examiner

Deck Type 1: Wood, Non-insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank decks

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

All General and System Limitations apply.

Barrier: (Optional) Roctex Rocroof, loose laid

Base Sheet: One ply of Soprafix Membrane, Soprafix-T Membrane or Sopralene 180 Flam fastened to the deck as described below:

Fastening #1: Attach base sheet using Insulfixx fasteners with Soprafix 2" Round Barbed Plates spaced 18" o.c. in a 4" wide heat welded or bituminous taped seam.

Fastening #2: Attach base sheet using Insulfixx or Isofast fasteners and Insulfixx or Isofast plates spaced 24" o.c. in the center of the sheet. Laps are heat fused. Fastener rows are stripped in with a 7" wide section of torch applied base sheet 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 torch applied

Membrane: Elastophene Flam, Elastophene 180 Flam, Elastophene SP, Elastophene Flam Granule, Elastophene Flam Granule FR, Sopralene (180, 250, 350) Flam Granule, Sopralene (180, 250, 350) Flam Granule FR, or Sopralast 50 TV Alu torch applied
or
Colphene FR Granule or Colphene HR FR Granule self adhered to base sheet or to Flam or SP ply sheets.

Surfacing: (Optional) Install one of the following to an approved non-granule surfaced membrane. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.

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 #9.)

Maximum Fire Classification: See General Limitation #1

Maximum Slope: See General Limitation #1

Frank Zuloaga, RRC
Roofing Product Control Examiner

Deck Type 1: Wood

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type G: System applied as tile underlayment.

All General and System Limitations apply.

Base Sheet: One ply of Sopra-G, Modified Sopra-G, Sopraglass 100 applied parallel to the slope of the roof. Base sheet shall be mechanically fastened with approved annular ring shank roofing nails and corrosion resistant tin-caps spaced 6" o.c. at the 2" side laps with two additional rows spaced 12' o.c. in the center of the sheet.

Ply Sheet: None.

Membrane: Elastophene Flam, Elastophene SP, Elastophene Flam Granule or Elastophene Flam Granule FR torch applied
or
Elastophene Sanded, Elastophene Granule FR or Elastophene Granule adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
or

Surfacing: None.

Maximum Design Pressure: Must comply with PA 115 (See Roof Tile Manufacturer's NOA)

Maximum Fire Classification: See General Limitation #1

Maximum Slope: Must comply with RAS 118, 119, & 120

Frank Zuloaga, RRC
Roofing Product Control Examiner

WOOD DECK SYSTEM LIMITATIONS:

1. A slip sheet is required with Ply 4 and Ply 6 when used as a mechanically fastened base or anchor sheet.

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.)**

Frank Zuloaga, RRC
Roofing Product Control Examiner

NOTICE OF ACCEPTANCE STANDARD CONDITIONS

1 Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documentation, including test supporting data, engineering documents, are no older than eight (8) years.

2 Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approved", or as specifically stated in the specific conditions of this Acceptance.

3 Renewals of Acceptance will not be considered if:

a) There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes;

b) The product is no longer the same product (identical) as the one originally approved;

c) If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product;

d) The engineer who originally prepared, signed and sealed the required documentation initially submitted, is no longer practicing the engineering profession.

4 Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.

5 Any of the following shall also be grounds for removal of this Acceptance:

a) Unsatisfactory performance of this product or process;

b) Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purposes.

6 The Notice of Acceptance 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 Notice of Acceptance is displayed, then it shall be done in its entirety.

7 A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all times. The copies need not be resealed by the engineer.

8 Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.

9 This Acceptance contains pages 1 through 25.

END OF THIS ACCEPTANCE

Frank Zuloaga, RRC
Roofing Product Control Examiner