MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

BUILDING CODE COMPLIANCE OFFICE
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CONTRACTOR ENFORCEMENT SECTION
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PRODUCT CONTROL DIVISION
(305) 375-2902 FAX (305) 372-6339

PRODUCT CONTROL NOTICE OF ACCEPTANCE

G S Roofing Products Company, Inc.
5525 MacArthur Blvd., Suite #900
Irving TX 75015

Your application for Product Approval of:
Modified Bitumen Roof Systems Over Existing Roof Systems (Recover)
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 approval shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at anytime 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 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.: 99-1213.06

Expires: 05/26/2003

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 Dade County, Florida under the conditions set forth above.

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

Approved: 05/26/2000

Internet mail address: postmaster@buildingcodeonline.com **Homepage: http://www.buildingcodeonline.com**

Category:	Roofing	Approval Date: May 26, 2000
Sub-Category:	Modified, APP/SBS	
		Expiration Date: May 26, 2003
Deck Type:	Recover	
Maximum Design Pressure:	-355 psf.	
Fire Classification:	See General Limitation #1	

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

Product	Dimensions	Test Specification	Product Description
All Weather/Empire Base Sheet	36" x 72'; Roll weight: 86 lbs. (2 squares)	ASTM D 2626 UL Type 15	Asphalt coated, organic base sheet.
Flex-I-Glas™ Base Sheet	36" x 108'; Roll weight: 90 lbs. (3 squares)	UL Type G2 ASTM D 4601, type II	Modified Bitumen, coated fiberglass base sheet.
Flex-I-Glas™ FR Base Sheet	39 $^3/_8$" x 50'; Roll weight: 90 lbs. (1.5 squares)	UL Type G2 ASTM D 4601, type II	Modified Bitumen, coated fiberglass base sheet.
Flintglas® Ply Sheet Type IV or VI	36" x 180'; Roll weight: 40/55 lbs. (5 squares)	ASTM D 2178 Type IV or VI UL Type G1	Fiberglass, asphalt impregnated ply sheet.
Flintlastic STA	39 $^3/_8$" x 33'; Roll weight: 90 lbs. (1 square)	ASTM D 5147	Smooth surfaced, APP Modified Bitumen membrane with non-woven polyester mat reinforcement for torch application.
Flintlastic STA Plus 5.0	39 $^3/_8$" x 33'; Roll weight: 95 lbs. (1 square)	ASTM D 5147	Smooth surfaced, APP Modified Bitumen membrane with non-woven polyester mat reinforcement for torch application.
Flintlastic GTA, GTA-FR or Flintlastic Diamond GTA	39 $^3/_8$" x 33' 3"; Roll weight: 105 lbs. (1 square)	ASTM D 5147	Granule surfaced, APP Modified Bitumen membrane with non-woven polyester mat reinforcement for toch application.
Flintlastic GTS	39 $^3/_8$" x 24'9"; Roll weight: 92 lbs. (¾ square)	ASTM D 5147	Granule surfaced, SBS Modified Bitumen membrane with non-woven polyester mat reinforcement for torch application.
Flintlastic GMS/GMS Premium	39 $^3/_8$" x 34' 2"; Roll weight: 100/105 lbs. (I square)	ASTM D 5147	Granule surfaced SBS Modified Bitumen membrane with non-woven polyester mat reinforcement for mop application.
Flintlastic FR/FR-P Premium	39 $^3/_8$" x 34' 2"; Roll weight: 105 lbs. (1 square)	ASTM D 5147	Fire resistant, granule surfaced SBS Modified Bitumen Membrane with non-woven polyester mat reinforcement for mop application.

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Product	Dimensions	Test Specification	Product Description
Flintlastic FR-PG	39 $^3/_8$" x 34' 2"; Roll weight: 105 lbs. (1 square)	ASTM D 5147	Fire resistant, granule surfaced SBS Modified Bitumen Membrane with a dual carrier reinforcement for mop application.
Flintlastic FR Cap	39 $^3/_8$" x 34' 2"; Roll weight: 90 lbs. (1 square)	ASTM D 5147	Fire resistant, granule surfaced SBS Modified Bitumen membrane with fiberglass mat reinforcement for mop applications.
GlasBase™ Base Sheet	36" x 108'; Roll weight: 69 lbs. (3 squares)	ASTM D 4601 UL Type G2	Asphalt coated, fiberglass base sheet.
PolySMS Base Sheet	39 $^3/_8$" x 64' 4"; Roll weight: 90 lbs. (2 squares)	ASTM D 5147	Modified Bitumen, coated polyester base sheet.
Yosemite® Mineral Surfaced Cap Sheet	36" x 36'; Roll weight: 90 lbs. (1 square)	ASTM D 249 UL Type 30	Mineral Surfaced organic cap and buffer sheet.
Stormshield	36" x 75'; Roll weight 75 lbs. (2.25 squares)	PA 103 ASTM D 1979	Slag surfaced SBS Modified Bitumen sheet with fiberglass reinforcement for peel and stick application.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

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 or PSI-25	various	PA 110	Polyisocyanurate foam insulation	NRG Barriers, Inc. (with current NOA)
ISORoc	various	PA 110	Polyisocyanurate foam and rockwool composite insulation	NRG Barriers, Inc. (with current NOA)
E'NRG'Y-2 Plus	various	PA 110	Polyisocyanurate foam / wood fiberboard composite insulation	NRG Barriers, Inc. (with current NOA)
Multi-Max	various	PA 110	Polyisocyanurate foam insulation.	RMAX (with current NOA)
Hy-Therm AP	various	PA 110	Polyisocyanurate foam insulation	Celotex Corp. (with current NOA)
UltraGard Gold	various	PA 110	Polyisocyanurate foam insulation	Johns Manville (with current NOA)
Pyrox	various	PA 110	Polyisocyanurate foam insulation	Apache (with current NOA)
ISO 95+	various	PA 110	Polyisocyanurate foam insulation	Firestone (with current NOA)
High Density Fiberboard	various	PA 100	Wood fiber insulation	Celotex Corp. (with current NOA)
High Density Wood Fiberboard	various	PA 110	Wood fiber insulation board	with current NOA

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Product	Dimensions	Test Specification	Product Description	Manufacturer
Fiberglas	various	PA 110	Fiber glass roof insulation	Johns Manville (with current NOA)
Paroc Cap Board	various	PA 110	Rockwool insulation	Partek, Inc. (with current NOA)
Perlite Insulation	various	PA 110	Perlite insulation board	generic
Dens Deck	various	PA 110	Gypsum core / fiberglass faced coverboard	Georgia Pacific (with current NOA)
N.T.B. Magnum		PA 114	Glass reinforced nylon fastener for use in gypsum and cementitious wood fiber decks.	Olympic (with current NOA)
N.T.B. Spin Weld Plate	2" round	PA 114	2" round amorphorus nylon locking plate for use with N.T.B. fasteners with 1" head	Olympic (with current NOA)
N.T.B. Plastic Plate	3" round	PA 114	3" round polypropylene stress plate for use with N.T.B. fasteners	Olympic (with current NOA)
N.T.B. Plate		PA 114	3" round galvalume AZ55 plate for use with N.T.B. fasteners	Olympic (with current NOA)
Lite-Deck Fastener and Plate		PA 114	Fastener and plate for insulation attachment to cementitious wood fiber or gypsum.	Olympic (with current NOA)
Rawlite		PA 114	Insulation fastener for cementitious and gypsum decks	The Rawlplug Company Inc. (with current NOA)
Rawlite 3" Plate	3" round	PA 114	3" round galvalume AZ55 steel plate for use with Rawlite fasteners	The Rawlplug Company Inc. (with current NOA)
Polymer Gyptec		PA 114	Nylon fastener for insulation attachment to cementitious wood fiber decks.	ITW Buildex (with current NOA)
TPR		PA 114	Rivet fastener for cementitious wood fiber decks.	SFS Stadler (with current NOA)
Asphalt Emulsion		PA 121	Asphalt emulsion	Gardner (with current NOA)
Gardner Cold Process Roof Cement	1, 5, 55 gallons	ASTM D 3019 Type III	Fibered asphaltic general purpose lap and ply cement.	Gardner (with current NOA)
Asphalt		ASTM D 312	Type III or IV hot asphalt bitumen adhesive	generic
Asphalt Primer		ASTM D 41	Asphalt Primer	generic
Chopped fiberglass emulsion		ASTM D 1227	Roof Coating	generic
Fiberglas		PA 110	Fiber glass roof insulation	with current NOA
Flashing Cement		ASTM D 4586 or ASTM D 2822	A trowel-grade, cutback bitumen cement mixture including inorganic fibers and mineral stabilizers.	generic
Modified Cold Process Cement		ASTM D 3019 Type III	Adhesive	generic
Modified Plastic Roof Cement		ASTM D4586 Type I	Flashing Cement	generic

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Product	Dimensions	Test Specification	Product Description	Manufacturer
Non Fibered Aluminum Coating		ASTM D 2824	Roof Coating	generic
Static Asphalt Fibered Emulsion		ASTM D 1227	Roof Coating	generic
al MB aluminum roof coating		PA 121	Aluminum roof coating	Grundy Industries (with current NOA)
Karnak 97, 97AF or 169		PA 121	Roof coating	Karnak (with current NOA)
Prograde Fibered Aluminum		PA 121	Fibrated aluminum roof coating.	Monsey Products Co. (with current NOA)
# 2100 - Modified All Weather Flashing Cement	1, 5, 55 gallons, or 10.5 ounce tubes.	ASTM D 3019 (Type III) and D 3409	Rubberized all-weather flashing cement, trowel grade, modified adhesive.	Tropical Asphalt Products Corporation (with current NOA)
Aluma-Brite No. 120		PA 121	Fibrated aluminum roof coating.	Tropical Asphalt Products Corp. (with current NOA)
APOC 212		PA 121	Aluminum roof coating.	APOC, Subsidiary of Gardner (with current NOA)
Sunbright 400		PA 121	Roof coating	APOC, Subsidiary of Gardner (with current NOA)
MBA		ASTM 3019 Type III	Asphalt based cold applied adhesive.	APOC, Subsidiary of Gardner (with current NOA)

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
Applied Research Laboratories	Physical Properties	28013	06/02/87
Factory Mutual Research Corporation	Current Insulation Fastening Requirements	FMRC 1994	01/01/95
Factory Mutual Research Corporation	PA 114 (FMRC 4470)	J.I. #3Y8A1.AM	03/23/96
Underwriters Laboratories, Inc.	Fire Classification Compliance	R11656	07/13/87
United States Testing Company, Inc.	ASTM D 5147	97457-4	06/03/88
United States Testing Company	ASTM D 5147	97-457-2R	12/02/87

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APPROVED ASSEMBLIES:

Membrane Type: APP MODIFIED

Deck Type 7I: Recover

Deck Description: Wood/Steel/Concrete/Lightweight Concrete/Gypsum

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

All General Limitations shall apply.

Insulation Base Layer	Fastener Type	Fastening Detail No. (see RAS 117)	Fasteners Per Board	Fastener Density
one or more layers of any of the following insulations under those listed as Top Layer:				
Approved Type(s): **HyTherm**				
Minimum: 1.3" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **ACFoam-II**				
Minimum: 1½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Apache Pyrox**				
Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **E'NRG'Y-2, PSI-25**				
Minimum: 1½" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **UltraGard Gold, UltraGard Premier, Isotherm R**				
Minimum: 1½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Fiberglas**				
Minimum: $^{15}/_{16}$" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens-Deck**				
Minimum: ¼" x 4' x 4'	N/A	N/A	N/A	N/A

Insulation Optional Top Layer	Fastener Type	Fastening Detail No. (see RAS 117)	Fasteners Per Board	Fastener Density
one or more layers of any of the following insulations				
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens Deck**				
Minimum: ¼" x 4' x 4'	N/A	N/A	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 Miami-Dade County Roofing Application Standard 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 side facing down.

Anchor Sheet: One ply of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base or GS PolySMS base mechanically attached to the deck as detailed below.

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Fastening *(wood)*:	Anchor sheet shall be lapped 4" and fastened with approved roofing nails and tin caps 9" o.c. in the lap and two rows staggered in the center of the sheet 12" o.c. ***(-45 psf)***
Fastening *(steel)*:	Fastening #1: Olympic #12 or #14 Screws, Dekfast #12, #14 or #15, or Insulfixx #12 or #14 and metal plates at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet, 24" o.c. ***(-45 psf)*** Fastening #2: Olympic #12 or #14 Screws, Dekfast #12, #14 or #15, or Insulfixx #12 or #14 and metal plates at a 4" side lap 12" o.c. and one row in the center of the sheet, 18" o.c. ***(-45 psf)*** Fastening #3: (PolySMS Base Sheet Only) Olympic #12 or #14 Screws, Dekfast #12, #14 or #15, or Insulfixx #12 or #14 and metal plates at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet, 36" o.c. ***(-45 psf)*** Fastening #4: (PolySMS Base Sheet Only) Insulfixx screws and 2" round metal plates at a 4" side lap, 12" o.c. ***(-45 psf)***
Fastening *(concrete)*:	Fastening #1: Olympic #14 Screws, Dekfast #14 or #15, or Insulfixx #12 or #14 and metal plates at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet, 24" o.c. ***(-45 psf)*** Fastening #2: Olympic #14 Screws, Dekfast #14 or #15, or Insulfixx #14 and metal plates at a 4" side lap 12" o.c. and one row in the center of the sheet, 18" o.c. ***(-45 psf)*** Fastening #3: (PolySMS Base Sheet Only) Olympic #14 Screws, Dekfast #14 or #15, or Insulfixx #14 and metal plates at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet, 36" o.c. ***(-45 psf)*** Fastening #4: (PolySMS Base Sheet Only) Insulfixx #14 screws and 2" round metal plates at a 4" side lap, 12" o.c. ***(-45 psf)***
Fastening *(LWC)*:	(All Weather/Empire Base Sheet Only) ES Products FM-90 Base Ply Fasteners at a 7" o.c. in the 4" side lap and two evenly divided, staggered rows in the center of the sheet 7" o.c. ***(-45 psf)***
Fastening *(gypsum)*:	Fastening #1: (Poly SMS only) Simplex Tube-Lok fasteners with minimum 1-5/8" diameter plate spaced 9" o.c. in min. 2" side lap and two staggered rows in center of the sheet, 18" o.c. ***(-52.5 psf)***. Fastening #2: Simplex Tube-Lok fasteners with minimum 3" diameter plate spaced 9" o.c. in min. 2" side lap and two staggered rows in center of the sheet, 18" o.c. ***(-52.5 psf)***. Fastening #3: FM-90 Base Ply Fasteners or Simplex Tube-Lok fasteners with minimum 3" diameter plate spaced 7½" o.c. in min. 2" side lap and one row in center of the sheet, 7½" o.c. ***(-45.0 psf)***. Fastening #4: FM-90 Base Ply Fasteners or Simplex Tube-Lok fasteners with minimum 3" diameter plate spaced 9" o.c. in min. 2" side lap and two staggered rows in center of the sheet, 12" o.c. ***(-60.0 psf)***
Ply Sheet:	(Optional) One ply of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..
Membrane:	Flintlastic STA, Flintlastic Diamond GTA, Flintlastic GTA or GTA-FR torch adhered to base or ply sheet.
Surfacing:	(Optional) Install one of the following: 1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq.. 2. Karnak 97, APOC 212 Fibrated Aluminum, Henry 520 Aluminum or Grundy AL MB at an application rate of 1 ½ gal./sq..
Maximum Design Pressure:	see Fastening Requirements above.
Maximum Fire Classification:	See General Limitation #1.

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Membrane Type: SBS MODIFIED

Deck Type 7I: Recover

Deck Description: Wood/Steel/Concrete/Lightweight Concrete/Cementitious Wood Fiber/Gypsum

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

All General Limitations shall apply.

Insulation Base Layer	**Fastener Type**	**Fastening Detail No. (see RAS 117)**	**Fasteners Per Board**	**Fastener Density**
one or more layers of any of the following insulations under those listed as Top Layer:				
Approved Type(s): **HyTherm**				
Minimum: 1.3" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **ACFoam-II**				
Minimum: 1½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Apache Pyrox**				
Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **E'NRG'Y-2, PSI-25**				
Minimum: 1½" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **UltraGard Gold, UltraGard Premier, Isotherm R**				
Minimum: 1½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Fiberglas**				
Minimum: $^{15}/_{16}$" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens-Deck**				
Minimum: ¼" x 4' x 4'	N/A	N/A	N/A	N/A
Insulation Optional Top Layer	**Fastener Type**	**Fastening Detail No. (see RAS 117)**	**Fasteners Per Board**	**Fastener Density**
one or more layers of any of the following insulations				
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens Deck**				
Minimum: ¼" x 4' x 4'	N/A	N/A	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 Miami-Dade County Roofing Application Standard 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 side facing down.

Anchor Sheet: One ply of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base or GS Poly SMS base mechanically attached to the deck as detailed below.

Fastening *(wood)*: Anchor sheet shall be lapped 4" and fastened with approved roofing nails and tin caps 9" o.c. in the lap and two rows staggered in the center of the sheet 12" o.c. ***(-45 psf)***

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Fastening *(steel)*:	Fastening #1: Olympic #12 or #14 Screws, Dekfast #12, #14 or #15, or Insulfixx #12 or #14 and metal plates at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet, 24" o.c. ***(-45 psf)*** Fastening #2: Olympic #12 or #14 Screws, Dekfast #12, #14 or #15, or Insulfixx #12 or #14 and metal plates at a 4" side lap 12" o.c. and one row in the center of the sheet, 18" o.c. ***(-45 psf)*** Fastening #3: (PolySMS Base Sheet Only) Olympic #12 or #14 Screws, Dekfast #12, #14 or #15, or Insulfixx #12 or #14 and metal plates at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet, 36" o.c. ***(-45 psf)*** Fastening #4: (PolySMS Base Sheet Only) Insulfixx screws and 2" round metal plates at a 4" side lap, 12" o.c. ***(-45 psf)***
Fastening *(concrete)*:	Fastening #1: Olympic #14 Screws, Dekfast #14 or #15, or Insulfixx #12 or #14 and metal plates at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet, 24" o.c. ***(-45 psf)*** Fastening #2: Olympic #14 Screws, Dekfast #14 or #15, or Insulfixx #14 and metal plates at a 4" side lap 12" o.c. and one row in the center of the sheet, 18" o.c. ***(-45 psf)*** Fastening #3: (PolySMS Base Sheet Only) Olympic #14 Screws, Dekfast #14 or #15, or Insulfixx #14 and metal plates at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet, 36" o.c. ***(-45 psf)*** Fastening #4: (PolySMS Base Sheet Only) Insulfixx #14 screws and 2" round metal plates at a 4" side lap, 12" o.c. ***(-45 psf)***
Fastening *(LWC)*:	(All Weather/Empire Base Sheet Only) ES Products FM-90 Base Ply Fasteners at a 7" o.c. in the 4" side lap and two evenly divided, staggered rows in the center of the sheet 7" o.c. ***(-45 psf)***
Fastening *(gypsum)*:	Fastening #1: (Poly SMS only) Simplex Tube-Lok fasteners with minimum 1-5/8" diameter plate spaced 9" o.c. in min. 2" side lap and two staggered rows in center of the sheet, 18" o.c. ***(-52.5 psf)***. Fastening #2: Simplex Tube-Lok fasteners with minimum 3" diameter plate spaced 9" o.c. in min. 2" side lap and two staggered rows in center of the sheet, 18" o.c. ***(-52.5 psf)***. Fastening #3: FM-90 Base Ply Fasteners or Simplex Tube-Lok fasteners with minimum 3" diameter plate spaced 7½" o.c. in min. 2" side lap and one row in center of the sheet, 7½" o.c. ***(-45.0 psf)***. Fastening #4: FM-90 Base Ply Fasteners or Simplex Tube-Lok fasteners with minimum 3" diameter plate spaced 9" o.c. in min. 2" side lap and two staggered rows in center of the sheet, 12" o.c. ***(-60.0 psf)***
Ply Sheet:	(Optional) One ply of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Membrane:	One ply of Flintlastic GMS, Flintlastic Premium GMS, Flintlastic FR-P, Flintlastic Premium FR-P, Flintlastic FR-PG or Flintlastic FR Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq. or Flintlastic GTS torch adhered to base or ply sheet.
Surfacing:	(Optional) Install one of the following: 1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. 2. Karnak 97, APOC 212 Fibrated Aluminum, Henry 520 Aluminum or Grundy AL MB at an application rate of 1 ½ gal./sq.
Maximum Design Pressure:	see Fastening Requirements above
Maximum Fire Classification:	See General Limitation #1.

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Membrane Type: APP Modified

Deck Type 7I: Recover

Deck Description: Wood/Steel/Concrete/Lightweight Concrete/Cementitious Wood Fiber/Gypsum

System Type A(2): Anchor sheet (optional), insulation adhered with approved asphalt.

All General and System Limitations apply.

Insulation Base Layer	**Fastener Type**	**Fastening Detail No. (see RAS 117)**	**Fasteners Per Board**	**Fastener Density**
one or more layers of any of the following insulations under those listed as Top Layer:				
Approved Type(s): **HyTherm**				
Minimum: 1.3" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **ACFoam-II, UltraGard Premier, Isotherm R**				
Minimum: 1½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Apache Pyrox**				
Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **E'NRG'Y-2, PSI-25**				
Minimum: 1½" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **UltraGard Gold**				
Minimum: 1½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Fiberglas**				
Minimum: $^{15}/_{16}$" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens-Deck**				
Minimum: ¼" x 4' x 4'	N/A	N/A	N/A	N/A

Insulation Optional Top Layer	**Fastener Type**	**Fastening Detail No. (see RAS 117)**	**Fasteners Per Board**	**Fastener Density**
Approved Type(s): **See Approved Insulations listed for Base Layer, above.**				
Minimum: see Base Layer	N/A	N/A	N/A	N/A

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full moppings of approved asphalt within the EVT range and at a rate of 20-40 lbs./s Please refer to Miami-Dade County Roofing Application Standard 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 used as a top layer shall be placed with the polyisocyanurate side facing down.

Anchor Sheet: (Optional) One ply of GS Glas Base, GS Flex-I Glas Base, Flexiglass FR Base, GS PolySMS, Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the primed concrete deck with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Base Sheet: One ply of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base, GS Poly SMS, Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..

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Ply Sheet:	(Optional) One ply of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..
Membrane:	Flintlastic STA, Flintlastic Diamond GTA, Flintlastic GTA or GTA-FR torch adhered to base or ply sheet.
Surfacing:	(Optional) Install one of the following: 1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq.. 2. Karnak 97, APOC 212 Fibrated Aluminum, Henry 520 Aluminum or Grundy AL MB at an application rate of 1½ gal./sq., or APOC Sunbrite at an application rate of 3 gal./sq..
Maximum Design Pressure:	-45 psf (for all deck types and insulations)
Maximum Fire Classification	See General Limitation #1.

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Membrane Type: SBS MODIFIED

Deck Type 7I: Recover

Deck Description: Wood/Steel/Concrete/Lightweight Concrete/Cementitious Wood Fiber/Gypsum

System Type A(2): Anchor sheet (optional), insulation adhered with approved asphalt.

All General and System Limitations apply.

Insulation Base Layer	**Fastener Type**	**Fastening Detail No. (see RAS 117)**	**Fasteners Per Board**	**Fastener Density**
one or more layers of any of the following insulations under those listed as Top Layer:				
Approved Type(s): **HyTherm**				
Minimum: 1.3" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **ACFoam-II, UltraGard Premier, Isotherm R**				
Minimum: 1½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Apache Pyrox**				
Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **E'NRG'Y-1, E'NRG'Y-2, PSI-25**				
Minimum: 1½" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **UltraGard Gold**				
Minimum: 1½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Fiberglas**				
Minimum: $^{15}/_{16}$" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens-Deck**				
Minimum: ¼" x 4' x 4'	N/A	N/A	N/A	N/A

Insulation Top Layer	**Fastener Type**	**Fastening Detail No. (see RAS 117)**	**Fasteners Per Board**	**Fastener Density**
Approved Type(s): **See Approved Insulations listed for Base Layer, above.**				
Minimum: see Base Layer	N/A	N/A	N/A	N/A

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full moppings of approved asphalt within the EVT range and at a rate of 20-40 lbs./s Please refer to Miami-Dade County Roofing Application Standard 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 used as a top layer shall be placed with the polyisocyanurate side facing down.

Anchor Sheet: (Optional) One ply of GS Glas Base, GS Flex-I Glas Base, Flexiglass FR Base or GS PolySMS Base adhered to the primed concrete deck with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Base Sheet: One ply of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base, GS Poly SMS, Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..

Ply Sheet: (Optional) One ply of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply

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Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..

Membrane: One ply of Flintlastic GMS, Flintlastic Premium GMS, Flintlastic FR-P, Flintlastic Premium FR-P, Flintlastic FR-PG or Flintlastic FR Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq. or Flintlastic GTS torch adhered to base or ply sheet.

Surfacing: (Optional) Install one of the following:

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq..
2. Karnak 97, APOC 212 Fibrated Aluminum, Henry 520 Aluminum or Grundy AL MB at an application rate of 1½ gal./sq., or APOC Sunbrite at an application rate of 3 gal./sq..

Maximum Design Pressure: -45 psf (for all deck types and insulations)

Maximum Fire Classification: See General Limitation #1.

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Membrane Type: APP MODIFIED

Deck Type 7I: Recover

Deck Description: Wood/Steel/Concrete/Cementitious Wood Fiber/Gypsum

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

All General and System Limitations apply.

Insulation Base Layer	Fastener Type	Fastening Detail No. (see RAS 117)	Fasteners Per Board	Fastener Density
one or more layers of any of the following insulations under those listed as Top Layer:				
Approved Type(s): **HyTherm**				
Minimum: 1.3" x 3' x 4'	Approved Fastener for Deck Type	[2]	6	1:2 ft²
Approved Type(s): **ACFoam-II**				
Minimum: 1½" x 4' x 4'	Approved Fastener for Deck Type	[3]	8	1:2 ft²
Approved Type(s): **Apache Pyrox**				
Minimum: 1.3" x 4' x 4'	Approved Fastener for Deck Type	[3]	8	1:2 ft²
Approved Type(s): **E'NRG'Y-2, PSI-25**				
Minimum: 1½" x 3' x 4'	Approved Fastener for Deck Type	[2]	6	1:2 ft²
Approved Type(s): **UltraGard Gold, UltraGard Premier, Isotherm R**				
Minimum: 1½" x 4' x 4'	Approved Fastener for Deck Type	[3]	8	1:2 ft²
Approved Type(s): **Fiberglas**				
Minimum: $^{15}/_{16}$" x 4' x 4'	Approved Fastener for Deck Type	[3]	8	1:2 ft²
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	Approved Fastener for Deck Type	[1]	4	1:2 ft²
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	Approved Fastener for Deck Type	[4]	16	1:2 ft²

Note: Base layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Miami-Dade County Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in Chapter 23 of the S.F.B.C. Please refer to Miami-Dade County Roofing Application Standard RAS 117 for insulation attachment.

Insulation Optional Top Layer	Fastener Type	Fastening Detail No. (see RAS 117)	Fasteners Per Board	Fastener Density
one or more layers of any of the following insulations				
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens Deck**				
Minimum: ¼" x 4' x 4'	N/A	N/A	N/A	N/A

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Note: Optional top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs./sq. Refer to Miami-Dade County Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	One ply of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base, GS Poly SMS, Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..
Ply Sheet:	(Optional) One ply of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Membrane:	Flintlastic STA, Flintlastic Diamond GTA, Flintlastic GTA or GTA-FR torch adhered to base or ply sheet.
Surfacing:	(Optional) Install one of the following: 1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq.. 2. Karnak 97, APOC 212 Fibrated Aluminum, Henry 520 Aluminum or Grundy AL MB at an application rate of 1½ gal./sq., or APOC Sunbrite at an application rate of 3 gal./sq..
Maximum Design Pressure:	-45.0 psf (wood, cementitious wood fiber and gypsum decks) -52.5 psf (steel and concrete decks)
Maximum Fire Classification	See General Limitation #1.

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Membrane Type: SBS MODIFIED

Deck Type 7I: Recover

Deck Description: Wood/Steel/Concrete/Cementitious Wood Fiber/Gypsum

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

All General and System Limitations apply.

Insulation Base Layer	Fastener Type	Fastening Detail No. (see RAS 117)	Fasteners Per Board	Fastener Density
one or more layers of any of the following insulations under those listed as Top Layer:				
Approved Type(s): **HyTherm**				
Minimum: 1.3" x 3' x 4'	Approved Fastener for Deck Type	[2]	6	1:2 ft²
Approved Type(s): **ACFoam-II**				
Minimum: 1½" x 4' x 4'	Approved Fastener for Deck Type	[3]	8	1:2 ft²
Approved Type(s): **Apache Pyrox**				
Minimum: 1.3" x 4' x 4'	Approved Fastener for Deck Type	[3]	8	1:2 ft²
Approved Type(s): **E'NRG'Y-2, PSI-25**				
Minimum: 1½" x 3' x 4'	Approved Fastener for Deck Type	[2]	6	1:2 ft²
Approved Type(s): **UltraGard Gold, UltraGard Premier, Isotherm R**				
Minimum: 1½" x 4' x 4'	Approved Fastener for Deck Type	[3]	8	1:2 ft²
Approved Type(s): **Fiberglas**				
Minimum: $^{15}/_{16}$" x 4' x 4'	Approved Fastener for Deck Type	[3]	8	1:2 ft²
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	Approved Fastener for Deck Type	[1]	4	1:2 ft²
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	Approved Fastener for Deck Type	[4]	16	1:2 ft²

Note: Base layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Miami-Dade County Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in Chapter 23 of the S.F.B.C. Please refer to Miami-Dade County Roofing Application Standard RAS 117 for insulation attachment.

Insulation Optional Top Layer	Fastener Type	Fastening Detail No. (see RAS 117)	Fasteners Per Board	Fastener Density
one or more layers of any of the following insulations				
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens Deck**				
Minimum: ¼" x 4' x 4'	N/A	N/A	N/A	N/A

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Note: Optional top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs./sq. Refer to Miami-Dade County Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	One ply of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base, GS Poly SMS, Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Ply Sheet:	(Optional) One ply of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..
Membrane:	One ply of Flintlastic GMS, Flintlastic Premium GMS, Flintlastic FR-P, Flintlastic Premium FR-P, Flintlastic FR-PG or Flintlastic FR Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq. or Flintlastic GTS torch adhered to base or ply sheet.
Surfacing:	(Optional) Install one of the following: 1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq.. 2. Karnak 97, APOC 212 Fibrated Aluminum or Grundy AL MB at an application rate of 1½ gal./sq., or APOC Sunbrite at an application rate of 3 gal./sq..
Maximum Design Pressure:	-45.0 psf (wood, cementitious wood fiber and gypsum decks) -52.5 psf (steel and concrete decks)
Maximum Fire Classification	See General Limitation #1.

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Membrane Type: APP MODIFIED

Deck Type 7I: Recover

Deck Description: Wood/Steel/Concrete/Cementitious Wood Fiber/Gypsum

System Type C: All layers of insulation simultaneously attached.

All General and System Limitations apply.

Insulation (Optional) Base Layer	Fastener Type	Fastening Detail No. (see RAS 117)	Fasteners Per Board	Fastener Density
one or more layers of any of the following insulations under those listed as Top Layer:				
Approved Type(s): **HyTherm**				
Minimum: 1.3" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **ACFoam-II, UltraGard Gold, UltraGard Premier, Isotherm R**				
Minimum: 1½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Apache Pyrox**				
Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **E'NRG'Y-2, PSI-25**				
Minimum: 1½" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Fiberglas**				
Minimum: $^{15}/_{16}$" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens-Deck**				
Minimum: ¼" x 4' x 4'	N/A	N/A	N/A	N/A

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

Insulation Top Layer	Fastener Type	Fastening Detail No. (see RAS 117)	Fasteners Per Board	Fastener Density
one or more layers of any of the following insulations				
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	Approved Fastener for Deck Type	[1]	4	1:2 ft²
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	Approved Fastener for Deck Type	[4]	16	1:2 ft²
Approved Type(s): **Dens-Deck**				
Minimum: ¼" x 4' x 4'	Approved Fastener for Deck Type	[4]	16	1:2 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. Insulation fasteners shall be tested for withdrawal resistance in compliance with Miami-Dade County Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in Chapter 23 of the S.F.B.C. Please refer to Miami-Dade County Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base, GS Poly SMS, Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

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Ply Sheet:	(Optional) One ply of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..
Membrane:	Flintlastic STA, Flintlastic Diamond GTA, Flintlastic GTA or GTA-FR torch adhered to base or ply sheet.
Surfacing:	(Optional) Install one of the following: 1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq.. 2. Karnak 97, APOC 212 Fibrated Aluminum, Henry 520 Aluminum or Grundy AL MB at an application rate of 1½ gal./sq., or APOC Sunbrite at an application rate of 3 gal./sq...
Maximum Design Pressure:	-45.0 psf (wood, cementitious wood fiber and gypsum decks) -52.5 psf (steel and concrete decks)
Maximum Fire Classification	See General Limitation #1.

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Membrane Type: SBS MODIFIED

Deck Type 7I: Recover

Deck Description: Wood/Steel/Concrete/Cementitious Wood Fiber/Gypsum

System Type C: All layers of insulation simultaneously attached.

All General and System Limitations apply.

Insulation (Optional) Base Layer	Fastener Type	Fastening Detail No. (see RAS 117)	Fasteners Per Board	Fastener Density
one or more layers of any of the following insulations under those listed as Top Layer:				
Approved Type(s): **HyTherm**				
Minimum: 1.3" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **ACFoam-II, UltraGard Gold, UltraGard Premier, Isotherm R**				
Minimum: 1½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Apache Pyrox**				
Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **E'NRG'Y-2, PSI-25**				
Minimum: 1½" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Fiberglas**				
Minimum: $^{15}/_{16}$" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens-Deck**				
Minimum: ¼" x 4' x 4'	N/A	N/A	N/A	N/A

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

Insulation Top Layer	Fastener Type	Fastening Detail No. (see RAS 117)	Fasteners Per Board	Fastener Density
one or more layers of any of the following insulations				
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	Approved Fastener for Deck Type	[1]	4	1:2 ft²
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	Approved Fastener for Deck Type	[4]	16	1:2 ft²
Approved Type(s): **Dens-Deck**				
Minimum: ¼" x 4' x 4'	Approved Fastener for Deck Type	[4]	16	1:2 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. Insulation fasteners shall be tested for withdrawal resistance in compliance with Miami-Dade County Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in Chapter 23 of the S.F.B.C. Please refer to Miami-Dade County Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base, GS Poly SMS, Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

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Ply Sheet:	(Optional) One ply of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..
Membrane:	One ply of Flintlastic GMS, Flintlastic Premium GMS, Flintlastic FR-P, Flintlastic Premium FR-P, Flintlastic FR-PG or Flintlastic FR Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq. or Flintlastic GTS torch adhered to base or ply sheet.
Surfacing:	(Optional) Install one of the following: 1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq.. 2. Karnak 97, APOC 212 Fibrated Aluminum or Grundy AL MB at an application rate of 1½ gal./sq., or APOC Sunbrite at an application rate of 3 gal./sq.
Maximum Design Pressure:	-45.0 psf (wood, cementitious wood fiber and gypsum decks) -52.5 psf (steel and concrete decks)
Maximum Fire Classification	See General Limitation #1.

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Membrane Type: APP MODIFIED

Deck Type 7I: Recover

Deck Description: Wood/Steel/Concrete

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

All General and System Limitations apply.

Insulation **Base Layer (Optional)**	**Fastener Type**	**Fastening Detail No. (see RAS 117)**	**Fasteners Per Board**	**Fastener Density**
one or more layers of any of the following insulations:				
Approved Type(s): **HyTherm**				
Minimum: 1.3" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **ACFoam-II, UltraGard Gold, UltraGard Premier, Isotherm R**				
Minimum: 1½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Apache Pyrox**				
Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **E'NRG'Y-1, E'NRG'Y-2, PSI-25**				
Minimum: 1½" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Fiberglas**				
Minimum: $^{15}/_{16}$" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **High Density Wood Fiber**				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens-Deck**				
Minimum: ¼" x 4' x 4'	N/A	N/A	N/A	N/A

Insulation **Top Layer**	**Fastener Type**	**Fastening Detail No. (see RAS 117)**	**Fasteners Per Board**	**Fastener Density**
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens-Deck**				
Minimum: ¼" x 4' x 4'	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 an 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.

Base Sheet: One ply of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base or GS Poly SMS mechanically attached as detailed below.

Fastening (wood & steel):

Fastening #1: Olympic Screws #12 or #14 and metal plates, Dekfast #14 or #15 and metal plates or SFS Insulfixx #12 or #14 and metal plates spaced 4" o.c. at a 4" side lap and two staggered rows in the center of the sheet, 24" o.c.

Fastening #2: (Poly SMS only) Olympic Screws #12 or #14 and metal plates, Dekfast #14 or #15 and metal plates or SFS Insulfixx #12 or #14 and metal plates spaced 12" o.c. at a 4" side lap and two staggered rows in the center of the sheet, 36" o.c.

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	Fastening #3: (Poly SMS only) SFS Insulfixx screws and 2" round metal plates at a 4" side lap, 12" o.c. Fastening #4: (Poly SMS only) Insulfixx screws and 2" round metal plates at a 4" side lap, 12" o.c.
Fastening (concrete):	See #1 through #4 above using #14 or #15 fasteners only.
Ply Sheet:	(Optional) One ply of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..
Membrane:	Flintlastic STA, Flintlastic Diamond GTA, Flintlastic GTA or GTA-FR torch adhered to base or ply sheet.
Surfacing:	(Optional) Install one of the following: 1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq.. 2. Karnak 97, APOC 212 Fibrated Aluminum, Henry 520 Aluminum or Grundy AL MB at an application rate of 1½ gal./sq., or APOC Sunbrite at an application rate of 3 gal./sq..
Maximum Design Pressure:	-45 psf
Maximum Fire Classification	See General Limitation #1.

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Membrane Type: SBS MODIFIED

Deck Type 7I: Recover

Deck Description: Wood/Steel/Concrete

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

All General and System Limitations apply.

Insulation Base Layer (Optional)	Fastener Type	Fastening Detail No. (see RAS 117)	Fasteners Per Board	Fastener Density
one or more layers of any of the following insulations:				
Approved Type(s): **HyTherm**				
Minimum: 1.3" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **ACFoam-II, UltraGard Gold, UltraGard Premier, Isotherm R**				
Minimum: 1½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Apache Pyrox**				
Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **E'NRG'Y-1, E'NRG'Y-2, PSI-25**				
Minimum: 1½" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Fiberglas**				
Minimum: $^{15}/_{16}$" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **High Density Wood Fiber**				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens-Deck**				
Minimum: ¼" x 4' x 4'	N/A	N/A	N/A	N/A

Insulation Top Layer	Fastener Type	Fastening Detail No. (see RAS 117)	Fasteners Per Board	Fastener Density
Approved Type(s): **Perlite**				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **High Density Wood Fiberboard**				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Dens-Deck**				
Minimum: ¼" x 4' x 4'	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 an 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.

Base Sheet: One ply of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base or GS Poly SMS mechanically attached as detailed below.

Fastening (wood & steel):

Fastening #1: Olympic Screws #12 or #14 and metal plates, Dekfast #14 or #15 and metal plates or SFS Insulfixx #12 or #14 and metal plates spaced 4" o.c. at a 4" side lap and two staggered rows in the center of the sheet, 24" o.c.

Fastening #2: (Poly SMS only) Olympic Screws #12 or #14 and metal plates, Dekfast #14 or #15 and metal plates or SFS Insulfixx #12 or #14 and metal plates spaced 12" o.c. at a 4" side lap and two staggered rows in the center of the sheet, 36" o.c.

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Fastening #3: (Poly SMS only) SFS Insulfixx screws and 2" round metal plates at a 4" side lap, 12" o.c.
Fastening #4: (Poly SMS only) Insulfixx screws and 2" round metal plates at a 4" side lap, 12" o.c.

Fastening (concrete): See #1 through #4 above using #14 or #15 fasteners only.

Ply Sheet: (Optional) One ply of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..

Membrane: One ply of Flintlastic GMS, Flintlastic Premium GMS, Flintlastic FR-P, Flintlastic Premium FR-P, Flintlastic FR-PG or Flintlastic FR Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq. or Flintlastic GTS torch adhered to base or ply sheet

Surfacing: (Optional) Install one of the following:
1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq..
2. Karnak 97, APOC 212 Fibrated Aluminum or Grundy AL MB at an application rate of 1½ gal./sq., or APOC Sunbrite at an application rate of 3 gal./sq..

Maximum Design Pressure: -45 psf

Maximum Fire Classification See General Limitation #1.

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Membrane Type: APP MODIFIED

Deck Type 7: Recover

Deck Description: Wood/Steel/Concrete/Lightweight Concrete/Gypsum

System Type E: Base sheet mechanically fastened, over smooth surface roof system only.

All General and System Limitations apply.

Base Sheet: One ply of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base or GS Poly SMS base fastened to the deck as detailed below.

Fastening ***(wood & steel)***:

Fastening #1: (wood only) Base sheet shall be lapped 4" and fastened with approved roofing nails and tin caps 9" o.c. in the lap and two rows staggered in the center of the sheet 12" o.c ***(-45 psf)*** .

Fastening #2: Olympic Screws #12 or #14 and metal plates, Dekfast #14 or #15 and metal plates or SFS Insulfixx #12 or #14 and metal plates spaced 4" o.c. at a 4" side lap and two staggered rows in the center of the sheet, 24" o.c. ***(-45 psf)***

Fastening #3: (Poly SMS only) Olympic Screws #12 or #14 and metal plates, Dekfast #14 or #15 and metal plates or SFS Insulfixx #12 or #14 and metal plates spaced 12" o.c. at a 4" side lap and two staggered rows in the center of the sheet, 36" o.c. ***(-45 psf)***

Fastening #4: (Poly SMS only) SFS Insulfixx screws and 2" round metal plates at a 4" side lap, 12" o.c. ***(-45 psf)***

Fastening #5: (Poly SMS only) Insulfixx screws and 2" round metal plates at a 4" side lap, 12" o.c. ***(-45 psf)***

Fastening ***(concrete)***: See #2 through #5 above using #14 or #15 fasteners only.

Fastening ***(LWC)***: (All Weather/Empire Base Sheet Only) ES Products FM-90 Base Ply Fasteners at a 7" o.c. in the 4" side lap and two evenly divided, staggered rows in the center of the sheet 7" o.c. ***(-45 psf)***

Fastening ***(gypsum)***:

Fastening #1: (Poly SMS only) Simplex Tube-Lok fasteners with minimum 1-5/8" diameter plate spaced 9" o.c. in min. 2" side lap and two staggered rows in center of the sheet, 18" o.c. ***(-52.5 psf)***.

Fastening #2: Simplex Tube-Lok fasteners with minimum 3" diameter plate spaced 9" o.c. in min. 2" side lap and two staggered rows in center of the sheet, 18" o.c. ***(-52.5 psf)***.

Fastening #3: FM-90 Base Ply Fasteners or Simplex Tube-Lok fasteners with minimum 3" diameter plate spaced 7½" o.c. in min. 2" side lap and one row in center of the sheet, 7½" o.c. ***(-45.0 psf)***.

Fastening #4: FM-90 Base Ply Fasteners or Simplex Tube-Lok fasteners with minimum 3" diameter plate spaced 9" o.c. in min. 2" side lap and two staggered rows in center of the sheet, 12" o.c. ***(-60.0 psf)***

Ply Sheet: (Optional) One ply of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40.

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Membrane:	Flintlastic STA, Flintlastic Diamond GTA, Flintlastic GTA or GTA-FR torch adhered to base or ply sheet.
Surfacing:	(Optional) Install one of the following: 1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq.. 2. Karnak 97, APOC 212 Fibrated Aluminum, Henry 520 Aluminum or Grundy AL MB at an application rate of 1½ gal./sq., or APOC Sunbrite at an application rate of 3 gal./sq..
Maximum Design Pressure:	-45 psf
Maximum Fire Classification:	See General Limitation #1.

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Membrane Type: SBS MODIFIED

Deck Type 7: Recover

Deck Description: Wood/Steel/Concrete/Lightweight Concrete/Gypsum

System Type E: Base sheet mechanically fastened, over smooth surface roof system only.

All General and System Limitations apply.

Base Sheet: One ply of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base or GS Poly SMS base fastened to the deck as detailed below.

Fastening ***(wood & steel)***:

Fastening #1: (wood only) Base sheet shall be lapped 4" and fastened with approved roofing nails and tin caps 9" o.c. in the lap and two rows staggered in the center of the sheet 12" o.c ***(-45 psf)*** .

Fastening #2: Olympic Screws #12 or #14 and metal plates, Dekfast #14 or #15 and metal plates or SFS Insulfixx #12 or #14 and metal plates spaced 4" o.c. at a 4" side lap and two staggered rows in the center of the sheet, 24" o.c. ***(-45 psf)***

Fastening #3: (Poly SMS only) Olympic Screws #12 or #14 and metal plates, Dekfast #14 or #15 and metal plates or SFS Insulfixx #12 or #14 and metal plates spaced 12" o.c. at a 4" side lap and two staggered rows in the center of the sheet, 36" o.c. ***(-45 psf)***

Fastening #4: (Poly SMS only) SFS Insulfixx screws and 2" round metal plates at a 4" side lap, 12" o.c. ***(-45 psf)***

Fastening #5: (Poly SMS only) Insulfixx screws and 2" round metal plates at a 4" side lap, 12" o.c. ***(-45 psf)***

Fastening ***(concrete)***: See #2 through #5 above using #14 or #15 fasteners only.

Fastening ***(LWC)***: (All Weather/Empire Base Sheet Only) ES Products FM-90 Base Ply Fasteners at a 7" o.c. in the 4" side lap and two evenly divided, staggered rows in the center of the sheet 7" o.c. ***(-45 psf)***

Fastening ***(gypsum)***:

Fastening #1: (Poly SMS only) Simplex Tube-Lok fasteners with minimum 1-5/8" diameter plate spaced 9" o.c. in min. 2" side lap and two staggered rows in center of the sheet, 18" o.c. ***(-52.5 psf)***.

Fastening #2: Simplex Tube-Lok fasteners with minimum 3" diameter plate spaced 9" o.c. in min. 2" side lap and two staggered rows in center of the sheet, 18" o.c. ***(-52.5 psf)***.

Fastening #3: FM-90 Base Ply Fasteners or Simplex Tube-Lok fasteners with minimum 3" diameter plate spaced 7½" o.c. in min. 2" side lap and one row in center of the sheet, 7½" o.c. ***(-45.0 psf)***.

Fastening #4: FM-90 Base Ply Fasteners or Simplex Tube-Lok fasteners with minimum 3" diameter plate spaced 9" o.c. in min. 2" side lap and two staggered rows in center of the sheet, 12" o.c. ***(-60.0 psf)***

Ply Sheet: (Optional) One ply of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40.

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Membrane:	One ply of Flintlastic GMS, Flintlastic Premium GMS, Flintlastic FR-P, Flintlastic Premium FR-P, Flintlastic FR-PG or Flintlastic FR Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq. or Flintlastic GTS torch adhered to base or ply sheet.
Surfacing:	(Optional) Install one of the following: 1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq.. 2. Karnak 97, APOC 212 Fibrated Aluminum or Grundy AL MB at 1½ gal./sq., or APOC Sunbrite at an application rate of 3 gal./sq..
Maximum Design Pressure:	-45 psf
Maximum Fire Classification:	See General Limitation #1.

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Membrane Type: APP MODIFIED

Deck Type 7: Recover

Deck Description: Wood/Steel/Concrete/Lightweight Concrete/Cementitious Wood Fiber/Gypsum

System Type F: Base sheet adhered with approved asphalt.

All General and System Limitations apply.

Base Sheet: One ply of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base, GS Poly SMS, Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) base spot mopped to the primed smooth surface roof with approved mopping asphalt applied in 24" dia. spots 30" o.c. at an application rate of 12 lb./sq. ± 15%.

Ply Sheet: (Optional) One ply of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40.

Membrane: Flintlastic STA, Flintlastic Diamond GTA, Flintlastic GTA or GTA-FR torch adhered to base or ply sheet.

Surfacing: (Optional) Install one of the following:
1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq..
2. Karnak 97, APOC 212 Fibrated Aluminum, Henry 520 Aluminum or Grundy AL MB at an application rate of 1½ gal./sq., or APOC Sunbrite at an application rate of 3 gal./sq..

Maximum Design Pressure: -45 psf

Maximum Fire Classification: See General Limitation #1.

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Membrane Type: SBS MODIFIED

Deck Type 7: Recover

Deck Description: Wood/Steel/Concrete/Lightweight Concrete/Cementitious Wood Fiber/Gypsum

System Type F: Base sheet adhered with approved asphalt.

All General and System Limitations apply.

Base Sheet: One ply of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base, GS Poly SMS, Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) base spot mopped to the primed smooth surface roof with approved mopping asphalt applied in 24" dia. spots 30" o.c. at an application rate of 12 lb./sq. ± 15%.

Ply Sheet: (Optional) One ply of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40.

Membrane: One ply of Flintlastic GMS, Flintlastic Premium GMS, Flintlastic FR-P, Flintlastic Premium FR-P, Flintlastic FR-PG or Flintlastic FR Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq. or Flintlastic GTS torch adhered to base or ply sheet.

Surfacing: (Optional) Install one of the following:
1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq..
2. Karnak 97, APOC 212 Fibrated Aluminum or Grundy AL MB at 1½ gal./sq., or APOC Sunbrite at an application rate of 3 gal./sq..

Maximum Design Pressure: -45 psf

Maximum Fire Classification: See General Limitation #1.

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RECOVER SYSTEM LIMITATIONS:

1 Existing roof surfaces used as a bonding substrate shall be tested for uplift resistance, in compliance with Miami-Dade County Protocol PA 124 to the calculated design pressures of the field, perimeter and corner areas, determined in compliance with Chapter 23 of the South Florida Building Code.

2 All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

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 Engineer or Architect may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Miami-Dade County Testing Application Standards TAS 105 and calculations in compliance with Miami-Dade Roofing Application Standard RAS 117.

7 Perimeter and corner areas shall comply with the enhanced uplift pressure of these areas, as calculated in compliance with Chapter 23 of the South Florida Building Code. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Miami-Dade County 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 with Miami-Dade County Roofing Application Standard RAS 111 and the wind load requirements of Chapter 23 of the South Florida Building Code.

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.)**

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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 33

END OF THIS ACCEPTANCE

Frank Zuloaga, RRC Product Control Examiner