



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

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

NOTICE OF ACCEPTANCE (NOA)

**CertainTeed Corporation
1400 Union Meeting Road
Blue Bell, PA 19422**

SCOPE:

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

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

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

DESCRIPTION: CertainTeed Modified Bitumen Roof System over Poured Gypsum Decks

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA No. 08-0513.01 and consists of pages 1 through 28.
The submitted documentation was reviewed by Jorge L. Acebo.



**NOA No.: 08-0514.01
Expiration Date: 04/28/13
Approval Date: 11/20/08
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ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Modified
Material: APP, SBS
Deck Type: Poured Gypsum
Maximum Design Pressure -67.5 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
All Weather/Empire Base Sheet	36" x 65'10"; Roll weight: 86 lbs. (2 squares)	ASTM D 4601 Type II UL Type 15	Asphalt coated, fiberglass reinforced base sheet.
Flex-I-Glas™ Base Sheet	36" x 98'9"; 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 164'7"; Roll weight: 40/55 lbs. (5 squares)	ASTM D 2178 Type IV or VI UL Type G1	Fiberglass, asphalt impregnated ply sheet.
Flintlastic STA STA Plus 5.0	39 3/8" x 33'; Roll weight: 90 lbs. (1 square)	ASTM D 6222, Grade S, Type II	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 6222, Grade G, Type II	Granule surfaced APP Modified Bitumen membrane with non-woven polyester mat reinforcement for torch application.
Flintlastic GTS	39 3/8" x 24'9"; Roll weight: 92 lbs. (3/4 square)	ASTM D 6164, Grade G, Type II	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. (1 square)	ASTM D 6164, Grade G, Type II	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 6164, Grade G, Type I	Fire resistant, granule surfaced SBS Modified Bitumen Membrane with non-woven polyester mat reinforcement for mop application.
Flintlastic FR Cap Sheet	39 3/8" x 34' 2"; Roll weight: 90 lbs. (1 square)	ASTM D 6163, Grade G, Type I	Fire resistant, granule surfaced SBS Modified Bitumen membrane with fiberglass mat reinforcement for mop applications.



NOA No.: 08-0514.01
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<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Flintlastic FR Cap T	39-3/8" x 34'2"; Roll weight: 81lbs. (1 square)	ASTM D6163	Granule surfaced SBS Modified Bitumen membrane with fiberglass mat reinforcement for torch application.
Flintlastic FR Base T	39-3/8" x 33'; Roll Weight: 81lbs. (1.0 squares)	ASTM D6163	Modified Bitumen, coated fiberglass base sheet for torch application.
Flintlastic FR Cap CoolStar	39 3/8" x 34' 2"; Roll weight: 90 lbs. (1 square)	ASTM D 6163	Fire resistant, granule surfaced SBS Modified Bitumen membrane with fiberglass mat reinforcement for mop applications. Covered with reflective CoolStar Coating.
Flintlastic FR Cap T CoolStar	39 3/8" x 34' 2"; Roll weight: 90 lbs. (1 square)	ASTM D 6163	Fire resistant, granule surfaced SBS Modified Bitumen membrane with fiberglass mat reinforcement for mop applications. Covered with reflective CoolStar Coating.
Flintlastic GTA, GTA-FR CoolStar or Flintlastic Diamond GTA CoolStar	39 3/8" x 33' 3"; Roll weight: 105 lbs. (1 square)	ASTM D 6222	Granule surfaced APP Modified Bitumen membrane with non-woven polyester mat reinforcement for torch application. Covered with reflective CoolStar Coating.
Flintlastic GTS CoolStar	39 3/8" x 24'9"; Roll weight: 92 lbs. (3/4 square)	ASTM D 6164	Granule surfaced SBS Modified Bitumen membrane with non-woven polyester mat reinforcement for torch application. Covered with reflective CoolStar Coating.
Flintlastic GMS/GMS Premium CoolStar	39 3/8" x 34' 2"; Roll weight: 100/105 lbs. (1 square)	ASTM D 6164	Granule surfaced SBS Modified Bitumen membrane with non-woven polyester mat reinforcement for mop application. Covered with reflective CoolStar Coating.
Flintlastic FR-P/FR-P Premium CoolStar	39 3/8" x 34' 2"; Roll weight: 105 lbs. (1 square)	ASTM D 6164	Fire resistant, granule surfaced SBS Modified Bitumen Membrane with non-woven polyester mat reinforcement for mop application. Covered with reflective CoolStar Coating. Covered with reflective CoolStar Coating.
Flexiglas Premium Cap 960 CoolStar	36" x 34'6" (1 square)	ASTM D 6163, Grade G, Type I	Granule surfaced SBS Modified Bitumen membrane with fiberglass mat reinforcement for mop application. Covered with reflective CoolStar Coating.
Flexiglas Premium Cap 960	36" x 34'6" (1 square)	ASTM D 6163, Grade G, Type I	Granule surfaced SBS Modified Bitumen membrane with fiberglass mat reinforcement for mop applications.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Ultra Poly SMS	36" x 64'4" (2 squares)	ASTM D 6164, Grade S, Type I	Smooth surfaced SBS Modified Bitumen Membrane with non-woven polyester mat reinforcement for mop applications.
GlasBase™ Base Sheet	36" x 98'9"; 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 6164	Modified Bitumen coated polyester base sheet.
Yosemite® Buffer Base Sheet	36" x 32'10"; Roll weight: 90 lbs. (1 square)	ASTM D 3909 ASTM D 4897 UL Type 30	Mineral Surfaced fiberglass reinforced buffer sheet.
Black Diamond™ Base Sheet	36" x 68'7"; Roll weight: 78 lbs. (2 squares)	ASTM D 1970	Self-adhering fiberglass reinforced modified bitumen base sheet

APPROVED INSULATIONS:

TABLE 2

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
FlintBoard ISO	Polyisocyanurate foam insulation	CertainTeed Corp.
White Line	Polyisocyanurate foam insulation	Apache Products Co.
ACFoam II	Polyisocyanurate foam insulation	Atlas Energy Products
ISO 95+	Polyisocyanurate foam insulation	Firestone
High Density Wood Fiberboard	Wood fiber insulation board	generic
Perlite Insulation	Perlite insulation board	generic
H-Shield	Polyisocyanurate foam insulation	Hunter Panels
Dens Deck, Dens-Deck Prime	Water resistant gypsum board	G-P Gypsum Corp.
ENRGY-3	Polyisocyanurate foam / wood fiberboard composite insulation	Johns Manville
Multi-Max & FA	Polyisocyanurate roof insulation	RMax, Inc.



APPROVED FASTENERS:

TABLE 3

<u>Fastener Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Dimensions</u>	<u>Manufacturer (With Current NOA)</u>
1.	FM-30, FM-45, FM-60, FM-90 Fasteners	Base ply fastening systems for lightweight concrete decks.		ES Products, Inc.
2.	Nail-Tite Type 'A', Type 'R'	Galvanized steel base ply fastener for gypsum decks		ES Products, Inc.
3.	Polymer Gyptec	Glass reinforced Nylon insulation fastener for gypsum & CWF decks.		OMG
4.	Polymer Gyptec Metal Plate	Galvalume stress plate	3" round	OMG
5.	NTB Magnum	Glass reinforced Nylon insulation fastener for gypsum & CWF decks with barbs.		OMG
6.	NTB Plate	Galvalume stress plate	3" round	OMG
7.	Lite-Deck	Insulation fastener for CWF and Gypsum decks.		OMG
8.	Lite-Deck Plate	Galvalume stress plate	3" round	OMG
9.	Powerlite	Insulation fastener for CWF and Gypsum decks.		Powers Fasteners, Inc.
10.	Powerlite Plates	Galvalume AZ55 steel plate	3" round	Powers Fasteners, Inc.
11.	Powerlite Lap Plates	Galvalume AZ55 steel plate	2" round	Powers Fasteners, Inc.
12.	Base-Lok Fastener	Nylon base sheet fastener.		Simplex Nails & Fasteners
13.	Twin Loc-Nails	Galvanized stress plate and tube with integrated locking staple	2.7" round x various lengths	ES Products, Inc.



EVIDENCE SUBMITTED:

<u>Test Agency/Identifier</u>	<u>Name</u>	<u>Report</u>	<u>Date</u>
Applied Research Laboratories	Physical Properties	28013	06/02/87
Factory Mutual Research Corp.	FMRC 4470	J.I. 3Y8A1.AM	03/23/96
	FMRC 4470	J.I. 0D3A3.AM	04/04/97
	FMRC 4470	J.I. 2D0A0.AM	12/23/98
	FMRC 4470	J.I. 1D7A4.AM	11/09/98
Underwriters Laboratories, Inc.	UL 790	R11656	07/13/87
United States Testing Company	ASTM D 5147	97457-4	06/03/88
	ASTM D 5147	97-457-2R	12/02/87
Momentum Technologies, Inc.	ASTM D 4601	AX31G8D	09/05/08
	ASTM D 3909/ D 4897	AX31G8C	09/05/08
Trinity ERD	FM 4470, TAS 114	3521.07.04	07/29/04
	TAS 117 (B)	3503.10.06	10/10/06
	TAS 117	3515.07.03	07/22/03
	TAS 117 (B)	O6490.04.07-R1	06/27/07
	TAS 114 (H)	Letter	04/05/06
	FM 4470, TAS 114	3533.01.06	01/06/06
	TAS 117 (B)/ ASTM D 6862	C8500SC.11.07	11/30/07
	FM 4470, TAS 114	C8370.08.08	08/19/08
ASTM Physical Properties	C10080.09.08	09/04/08	

APPROVED ASSEMBLIES

- Membrane Type:** APP MODIFIED
- Deck Type 6I:** Poured Gypsum, Insulated
- Deck Description:** Poured Gypsum Concrete
- System Type A(1):** Anchor sheet mechanically fastened; all insulation layers adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners	Fastener Density/ft²
AC-Foam II, ENRGY 3, PSI-25, UltraGard Gold, H-Shield Minimum 1.5" thick	N/A	N/A
High Density Wood Fiber Minimum ½" thick	N/A	N/A
Perlite Minimum ¾" thick	N/A	N/A
Dens-Deck, Dens-Deck Prime Minimum ¼" thick	N/A	N/A
(Optional) Top Insulation Layer	Insulation Fasteners	Fastener Density/ft²
High Density Wood Fiber Minimum ½" thick	N/A	N/A
Perlite Minimum 1" thick	N/A	N/A
Dens Deck, Dens-Deck Prime Minimum ¼" thick	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 ft². 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.



- Anchor Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base or Poly SMS mechanically attached to the deck as detailed below:
- Fastening #1: (Poly SMS only) Nail-Tite Type A or Type R with minimum 1-5/8" diameter head or Simplex Base-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.
(Maximum Design Pressure –52.5 psf, See General Limitation #9.)
- Fastening #2: Nail-Tite Type A or Type R with FM-30 discs or FM-90 Base Ply Fasteners or Simplex Base-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.
(Maximum Design Pressure –52.5 psf, See General Limitation #9.)
- Fastening #3: Nail-Tite Type A or Type R with FM-30 discs or FM-90 Base Ply Fasteners or Simplex Base-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.
(Maximum Design Pressure –45 psf, See General Limitation #9.)
- Fastening #4: Nail-Tite Type A or Type R with FM-30 discs or FM-90 Base Ply Fasteners or Simplex Base-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.
(Maximum Design Pressure –60 psf, See General Limitation #9.)
- Base Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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 All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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. or one ply of Black Diamond Base Sheet self adhered or Flintlastic STA torch adhered.
- Membrane: Flintlastic STA, Flintlastic Diamond GTA, Flintlastic Diamond GTA Coolstar, Flintlastic GTA, Flintlastic GTA Coolstar, Flintlastic GTA-FR or Flintlastic GTA-FR torch adhered to base or ply sheet.
- Surfacing: (Optional) Install one of the following:
 1. Flood coat of hot asphalt with an application rate of 60 lbs./sq. ± 20%; plus gravel or slag with an application rate of 400 lbs./sq. & 300 lbs./sq., respectively.
 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: See fastening requirements above



Membrane Type: APP MODIFIED
Deck Type 6I: Poured Gypsum, Insulated
Deck Description: Poured Gypsum Concrete
System Type A(2): Anchor sheet mechanically fastened; all insulation layers adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners</u>	<u>Fastener Density/ft²</u>
AC-Foam II, ENRGY 3, FlintBoard Iso, Multi-Max, H-Shield Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners</u>	<u>Fastener Density/ft²</u>
FrescoBoard Minimum 0.75" thick	N/A	N/A
High Density Wood Fiberboard Minimum 0.5" thick	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 ft². 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.

Anchor Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base or All Weather/Empire Base mechanically attached to the deck as detailed below:

Fastening #1: Twin Loc-Nails spaced 7" o.c. in 4" side lap and two staggered rows in center of the sheet, 7" o.c.
(Maximum Design Pressure –60 psf, See General Limitation #7.)

Fastening #2: Twin Loc-Nails spaced 9" o.c. in 4" side lap and two staggered rows in center of the sheet, 9" o.c.
(Maximum Design Pressure –60 psf, See General Limitation #7.)

Base Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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 All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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. or one ply of Black Diamond Base Sheet self adhered or Flintlastic STA torch adhered.

Membrane: One ply of Flintlastic GTS, Flintlastic GTS Coolstar, Flintlastic FR Cap T or Flintlastic FR Cap T Coolstar, Flintlastic STA, Flintlastic Diamond GTA, Flintlastic Diamond GTA Coolstar, Flintlastic GTA, Flintlastic GTA Coolstar, Flintlastic GTA-FR or Flintlastic GTA-FR Coolstar torch adhered to base sheet or ply sheet

Maximum Design Pressure: See fastening requirements above



Membrane Type: SBS MODIFIED
Deck Type 6I: Poured Gypsum, Insulated
Deck Description: Poured Gypsum Concrete
System Type A(3): Anchor sheet mechanically fastened; all insulation layers adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners	Fastener Density/ft²
AC-Foam II, ENRGY 3, FlintBoard Iso, Multi-Max, H-Shield Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners</u>	<u>Fastener Density/ft²</u>
FrescoBoard Minimum 0.75" thick	N/A	N/A
High Density Wood Fiberboard Minimum 0.5" thick	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 ft². 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.

Anchor Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base or All Weather/Empire Base mechanically attached to the deck as detailed below:

Fastening #1: Twin Loc-Nails spaced 7" o.c. in 4" side lap and two staggered rows in center of the sheet, 7" o.c.
(Maximum Design Pressure –60 psf, See General Limitation #7.)

Fastening #2: Twin Loc-Nails spaced 9" o.c. in 4" side lap and two staggered rows in center of the sheet, 9" o.c.
(Maximum Design Pressure –60 psf, See General Limitation #7.)

Base Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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 All Weather/Empire Base Sheet, Glas Base, Flexiglas Base, Flexiglas FR Base, 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. or one ply of Black Diamond Base Sheet (for use with a torched cap sheet only) self adhered.

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

Maximum Design Pressure: See fastening requirements above



Membrane Type: APP MODIFIED
Deck Type 6I: Poured Gypsum, Insulated
Deck Description: Poured Gypsum Concrete
System Type A(4): Anchor sheet mechanically fastened; all insulation layers adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners	Fastener Density/ft ²
AC-Foam II, ENRGY 3, FlintBoard Iso, Multi-Max, H-Shield Minimum 1.5" thick	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 ft². 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.

Anchor Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base or All Weather/Empire Base mechanically attached to the deck as detailed below:

Fastening #1: Twin Loc-Nails spaced 7" o.c. in 4" side lap and two staggered rows in center of the sheet, 7" o.c.
(Maximum Design Pressure –60 psf, See General Limitation #9.)

Fastening #2: Twin Loc-Nails spaced 9" o.c. in 4" side lap and two staggered rows in center of the sheet, 9" o.c.
(Maximum Design Pressure –60 psf, See General Limitation #9.)

Base Sheet: One ply of Black Diamond Base Sheet Self Adhered.

Ply Sheet: (Optional) One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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. or one ply of Black Diamond Base Sheet self adhered or Flintlastic STA torch adhered.

Membrane: One ply of Flintlastic GTS, Flintlastic GTS Coolstar, Flintlastic FR Cap T or Flintlastic FR Cap T Coosltar, Flintlastic STA, Flintlastic Diamond GTA, Flintlastic Diamond GTA Coolstar, Flintlastic GTA, Flintlastic GTA Coolstar, Flintlastic GTA-FR or Flintlastic GTA-FR Coolstar torch adhered to base sheet or ply sheet

Maximum Design Pressure: See fastening requirements above



Membrane Type: SBS MODIFIED
Deck Type 6I: Poured Gypsum, Insulated,
Deck Description: Poured Gypsum Concrete
System Type A(5): Anchor sheet mechanically fastened; all insulation layers adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners	Fastener Density/ft ²
AC-Foam II, ENRGY 3, FlintBoard Iso, Multi-Max, H-Shield Minimum 1.5" thick	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 ft². 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.

Anchor Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base or All Weather/Empire Base mechanically attached to the deck as detailed below:

Fastening #1: Twin Loc-Nails spaced 7" o.c. in 4" side lap and two staggered rows in center of the sheet, 7" o.c.
(Maximum Design Pressure -52.5 psf, See General Limitation #9.)

Fastening #2: Twin Loc-Nails spaced 9" o.c. in 4" side lap and two staggered rows in center of the sheet, 9" o.c.
(Maximum Design Pressure -52.5 psf, See General Limitation #9.)

Base Sheet: One ply of Black Diamond Base Sheet Self Adhered.

Ply Sheet: (Optional) One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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. or one ply of Black Diamond Base Sheet (for use with a torched cap sheet only) self adhered.

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

Maximum Design Pressure: See fastening requirements above



Membrane Type: SBS MODIFIED
Deck Type 6I: Poured Gypsum, Insulated
Deck Description: Poured Gypsum Concrete
System Type A(6): Anchor sheet mechanically fastened; all insulation layers adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners	Fastener Density/ft²
AC-Foam II, ENRGY 3, PSI-25, UltraGard Gold, H-Shield Minimum 1.5" thick	N/A	N/A
High Density Wood Fiber Minimum ½" thick	N/A	N/A
Perlite Minimum ¾" thick	N/A	N/A
Dens-Deck, Dens-Deck Prime Minimum ¼" thick	N/A	N/A
(Optional) Top Insulation Layer	Insulation Fasteners	Fastener Density/ft²
High Density Wood Fiber Minimum ½" thick	N/A	N/A
Perlite Minimum ¾" thick	N/A	N/A
Dens Deck, Dens-Deck Prime Minimum ¼" thick	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 ft². 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.



- Anchor Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base or Poly SMS mechanically attached to the deck as detailed below.
- Fastening #1: (Poly SMS only) Nail-Tite Type A or Type R with minimum 1-5/8" diameter head or Simplex Base-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.
(Maximum Design Pressure –52.5 psf, See General Limitation #9.)
- Fastening #2: Nail-Tite Type A or Type R with FM-30 discs or FM-90 Base Ply Fasteners or Simplex Base-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.
(Maximum Design Pressure –52.5 psf, See General Limitation #9.)
- Fastening #3: Nail-Tite Type A or Type R with FM-30 discs or FM-90 Base Ply Fasteners or Simplex Base-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.
(Maximum Design Pressure –45 psf, See General Limitation #9.)
- Fastening #4: Nail-Tite Type A or Type R with FM-30 discs or FM-90 Base Ply Fasteners or Simplex Base-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.
(Maximum Design Pressure –60 psf, See General Limitation #9.)
- Base Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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 All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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. or one ply of Black Diamond Base Sheet (for use with a torched cap sheet only) self adhered.
- Membrane: One ply of Flintlastic GMS, Flintlastic GMS Coolstar, Flintlastic Premium GMS, Flintlastic Premium GMS Coolstar, Flintlastic FR-P, Flintlastic FR-P Coolstar, Flintlastic FR Cap Sheet, Flintlastic FR Cap Sheet Coolstar applied to the base sheet or ply sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or Flintlastic GTS, Flintlastic GTS Coolstar, Flintlastic FR Cap T or Flintlastic FR Cap T Coosltar torch adhered to base or ply sheet.
- Surfacing: (Optional) Install one of the following:
 1. Flood coat of hot asphalt with an application rate of 60 lbs./sq. ± 20%; plus gravel or slag with an application rate of 400 lbs./sq. & 300 lbs./sq., respectively.
 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: See fastening requirements above



Membrane Type: APP MODIFIED
Deck Type 6I: Poured Gypsum, Insulated
Deck Description: Poured gypsum concrete
System Type B(1): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners	Fastener Density/ft²
AC-Foam II, UltraGard Gold, H-Shield Minimum 1.3" thick	7 or 9	1:4 ft ²
ENRGY-3, PSI-25 Minimum 1.4" thick	5	1:3 ft ²
Minimum 2" thick	3, 5, 7 or 9	1:4 ft ²
High Density Wood Fiber Minimum ½" thick	3, 5, 7 or 9	1:2 ft ²
Perlite Minimum ¾" thick	3, 5, 7 or 9	1:2 ft ²

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).

(Optional) Top Insulation Layer	Insulation Fasteners	Fastener Density/ft²
Any of the insulations listed for Base Layer, above.		
High Density Wood Fiber Minimum ½" thick	N/A	N/A
Perlite Minimum ¾" thick	N/A	N/A
Dens Deck, Dens-Deck Prime Minimum ¼" thick	N/A	N/A

Note: Optional top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to 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 All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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.



Membrane Type: SBS MODIFIED
Deck Type 6I: Poured Gypsum, Insulated
Deck Description: Poured Gypsum Concrete
System Type B(2): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners	Fastener Density/ft²
AC-Foam II, UltraGard Gold, H-Shield Minimum 1.3" thick	7 or 9	1:4 ft ²
ENRGY-3, PSI-25 Minimum 1.4" thick	5	1:3 ft ²
Minimum 2" thick	3, 5, 7 or 9	1:4 ft ²
High Density Wood Fiber Minimum ½" thick	3, 5, 7 or 9	1:2 ft ²
Perlite Minimum ¾" thick	3, 5, 7 or 9	1:2 ft ²

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).

(Optional) Top Insulation Layer	Insulation Fasteners	Fastener Density/ft²
Any of the insulations listed for Base Layer, above.		
High Density Wood Fiber Minimum ½" thick	N/A	N/A
Perlite Minimum ¾" thick	N/A	N/A
Dens Deck, Dens-Deck Prime Minimum ¼" thick	N/A	N/A

Note: Optional top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to 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 All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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 All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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. or one ply of Black Diamond Base Sheet (for use with a torched cap sheet only) self adhered.
- Membrane:** One ply of Flintlastic GMS, Flintlastic GMS Coolstar, Flintlastic Premium GMS, Flintlastic Premium GMS Coolstar, Flintlastic FR-P, Flintlastic FR-P Coolstar, Flintlastic FR Cap Sheet, Flintlastic FR Cap Sheet Coolstar applied to the base sheet or ply sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or Flintlastic GTS, Flintlastic GTS Coolstar, Flintlastic FR Cap T or Flintlastic FR Cap T Coosltar torch adhered to base or ply sheet.
- Surfacing:** (Optional) Install one of the following:
1. Flood coat of hot asphalt with an application rate of 60 lbs./sq. \pm 20%; plus gravel or slag with an application rate of 400 lbs./sq. & 300 lbs./sq., respectively.
 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 (See General Limitation #9)



Membrane Type: APP MODIFIED
Deck Type 6I: Poured Gypsum, Insulated
Deck Description: Poured gypsum concrete
System Type C(1): All layers of insulation simultaneously fastened.

All General and System limitations apply.

One or more layers of any of the following insulations:

(Optional) Base Insulation Layer

	Insulation Fasteners	Fastener Density/ft²
ACFoam-II, ENRGY-3, PSI-25, UltraGard Gold, UltraGard Premier, Isotherm R, H-Shield Minimum 1.5" thick	N/A	N/A
High Density Wood Fiber Minimum ½" thick	N/A	N/A
Perlite Minimum ¾" thick	N/A	N/A
Dens-Deck, Dens-Deck Prime Minimum ¼" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. 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. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer

	Insulation Fasteners	Fastener Density/ft²
High Density Wood Fiber Minimum ½" thick	3, 5, 7 or 9	1:2 ft ²
Perlite Minimum ¾" thick	3, 5, 7 or 9	1:2 ft ²
Dens Deck, Dens-Deck Prime Minimum ¼" thick	3, 5, 7 or 9	1:1.77 ft ²

Base Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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 All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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. or one ply of Black Diamond Base Sheet self adhered or Flintlastic STA torch adhered.

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

Surfacing: (Optional) Install one of the following:
 1. Flood coat of hot asphalt with an application rate of 60 lbs./sq. ± 20%; plus gravel or slag with an application rate of 400 lbs./sq. & 300 lbs./sq., respectively.
 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 (See General Limitation #9)



Membrane Type: SBS MODIFIED
Deck Type 6I: Poured Gypsum, Insulated
Deck Description: Poured gypsum concrete
System Type C(2): All layers of insulation simultaneously fastened.

All General and System limitations apply.

One or more layers of any of the following insulations:

(Optional) Base Insulation Layer	Insulation Fasteners	Fastener Density/ft²
ACFoam-II, ENRGY-3, PSI-25, UltraGard Gold, UltraGard Premier, Isotherm R, H-Shield Minimum 1.5" thick	N/A	N/A
High Density Wood Fiber Minimum ½" thick	N/A	N/A
Perlite Minimum ¾" thick	N/A	N/A
Dens-Deck, Dens-Deck Prime Minimum ¼" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. 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. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners	Fastener Density/ft²
High Density Wood Fiber Minimum ½" thick	3, 5, 7 or 9	1:2 ft²
Perlite Minimum ¾" thick	3, 5, 7 or 9	1:2 ft²
Dens Deck, Dens-Deck Prime Minimum ¼" thick	3, 5, 7 or 9	1:1.77 ft²

Base Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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 All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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. or one ply of Black Diamond Base Sheet (for use with a torched cap sheet only) self adhered.



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

Surfacing: (Optional) Install one of the following:

1. Flood coat of hot asphalt with an application rate of 60 lbs./sq. \pm 20%; plus gravel or slag with an application rate of 400 lbs./sq. & 300 lbs./sq., respectively.
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 (See General Limitation #9)



Membrane Type: APP MODIFIED
Deck Type 6: Poured Gypsum, Non-insulated
Deck Description: Poured gypsum concrete
System Type E(1): Base sheet mechanically fastened.

All General and System limitations apply.

Base Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base or Poly SMS Base mechanically fastened to the deck as detailed below.

Fastening #1: (Poly SMS only) Nail-Tite Type A or Type R with minimum 1-5/8" diameter head or 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.
(Maximum Design Pressure –52.5 psf, See General Limitation #9.)

Fastening #2: Nail-Tite Type A or Type R with FM-30 discs or 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, 18" o.c.
(Maximum Design Pressure –52.5 psf, See General Limitation #9.)

Fastening #3: Nail-Tite Type A or Type R with FM-30 discs or 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.
(Maximum Design Pressure –45 psf, See General Limitation #9.)

Fastening #4: Nail-Tite Type A or Type R with FM-30 discs or 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.
(Maximum Design Pressure –60 psf, See General Limitation #9.)

Ply Sheet: (Optional) One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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. or one ply of Black Diamond Base Sheet self adhered or Flintlastic STA torch adhered.

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

Surfacing: (Optional) Install one of the following:
 1. Flood coat of hot asphalt with an application rate of 60 lbs./sq. ± 20%; plus gravel or slag with an application rate of 400 lbs./sq. & 300 lbs./sq., respectively.
 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: See fastening requirements above



Membrane Type: SBS MODIFIED
Deck Type 6: Poured Gypsum, Non-Insulated
Deck Description: Poured Gypsum Concrete
System Type E(2): Base sheet mechanically fastened

All General and System limitations apply.

Base Sheet: One ply of All Weather/Empire Base Sheet, Glas Base, Flexiglas Base, Flexiglas FR Base or Poly SMS mechanically attached to the deck as detailed below:

Fastening #1: (Poly SMS only) Nail-Tite Type A or Type R with minimum 1-5/8" diameter head or Simplex Base-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.
(Maximum Design Pressure –52.5 psf, See General Limitation #9.)

Fastening #2: Nail-Tite Type A or Type R with FM-30 discs or FM-90 Base Ply Fasteners or Simplex Base-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.
(Maximum Design Pressure –52.5 psf, See General Limitation #9.)

Fastening #3: Nail-Tite Type A or Type R with FM-30 discs or FM-90 Base Ply Fasteners or Simplex Base-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.
(Maximum Design Pressure –45 psf, See General Limitation #9.)

Fastening #4: Nail-Tite Type A or Type R with FM-30 discs or FM-90 Base Ply Fasteners or Simplex Base-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.
(Maximum Design Pressure –60 psf, See General Limitation #9.)

Ply Sheet: (Optional) One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base, 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. or one ply of Black Diamond Base Sheet (for use with a torched cap sheet only) self adhered.

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

Surfacing: (Optional) Install one of the following:
 1. Flood coat of hot asphalt with an application rate of 60 lbs./sq. ± 20%; plus gravel or slag with an application rate of 400 lbs./sq. & 300 lbs./sq., respectively.
 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: See fastening requirements above



Membrane Type: APP MODIFIED
Deck Type 6: Poured Gypsum, Non-insulated
Deck Description: Poured gypsum concrete
System Type E(3): Base sheet mechanically fastened.

All General and System limitations apply.

Base Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexglas Base, Flexiglas FR Base or All Weather/Empire Base mechanically fastened to the deck as detailed below.

Fastening #1: Twin Loc-Nails spaced 7" o.c. in 4" side lap and two staggered rows in center of the sheet, 7" o.c.
(Maximum Design Pressure –67.5 psf, See General Limitation #9.)

Fastening #2: Twin Loc-Nails spaced 9" o.c. in 4" side lap and two staggered rows in center of the sheet, 9" o.c.
(Maximum Design Pressure –60 psf, See General Limitation #9.)

Ply Sheet: (Optional) One ply of All Weather/Empire Base Sheet, Glas Base, Flexiglas Base, Flexiglas FR Base, 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. or one ply of Black Diamond Base Sheet self adhered or Flintlastic STA torch adhered.

Membrane: One ply of Flintlastic GTS, Flintlastic GTS Coolstar, Flintlastic FR Cap T, or Flintlastic FR Cap T Coolstar, Flintlastic STA, Flintlastic Diamond GTA, Flintlastic Diamond GTA Coolstar, Flintlastic GTA, Flintlastic GTA Coolstar, Flintlastic GTA-FR or Flintlastic GTA-FR Coolstar torch adhered to base sheet or ply sheet

Maximum Design Pressure: See fastening requirements above



Membrane Type: SBS MODIFIED
Deck Type 6: Poured Gypsum, Non-insulated,
Deck Description: Poured gypsum concrete
System Type E(4): Base sheet mechanically fastened.

All General and System limitations apply.

Base Sheet: One ply of All Weather/Empire Base Sheet, Glas-Base, Flexiglas Base, Flexiglas FR Base or All Weather/Empire Base mechanically fastened to the deck as detailed below.

Fastening #1: Twin Loc-Nails spaced 7" o.c. in 4" side lap and two staggered rows in center of the sheet, 7" o.c.
(Maximum Design Pressure –67.5 psf, See General Limitation #9.)

Fastening #2: Twin Loc-Nails spaced 9" o.c. in 4" side lap and two staggered rows in center of the sheet, 9" o.c.
(Maximum Design Pressure –60 psf, See General Limitation #9.)

Ply Sheet: (Optional) One ply of All Weather/Empire Base Sheet, Glas Base, Flexiglas Base, Flexiglas FR Base, 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. or one ply of Black Diamond Base Sheet (for use with a torched cap sheet only) self adhered.

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

Maximum Design Pressure: See fastening requirements above



GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.

Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.

5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered 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 to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**

END OF THIS ACCEPTANCE



NOA No.: 08-0514.01
Expiration Date: 04/28/13
Approval Date: 11/20/08
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