



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

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NOTICE OF ACCEPTANCE (NOA)

GAF
1 Campus Drive
Parsippany, NJ 07054

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section 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 Section (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. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

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

DESCRIPTION: GAF Liberty™ SBS Self-Adhering Modified Bitumen Roofing Systems Over Steel 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 renews and revises NOA No. 14-0102.11 and consists of pages 1 through 19.
The submitted documentation was reviewed by Jorge L. Acebo.



NOA No.: 16-1206.03
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ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Material:	APP/SBS
Deck Type:	Steel
Maximum Design Pressure:	-60 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Liberty™ SBS Self-Adhering Base/Ply Sheet	39.375" x 66'	ASTM D4601	Self-adhered, SBS modified base or ply sheet with glass reinforced mat.
Ruberoid® SBS Heat-Weld™ 25	39.37" (1 meter) wide	ASTM D6163	SBS modified asphalt base sheet reinforced with a glass fiber mat and smooth surfaced.
Ruberoid® SBS Heat-Weld™ Smooth	39.37" (1 meter) wide	ASTM D6164	Non-woven polyester mat coated with SBS polymer-modified asphalt and smooth surfaced.
Ruberoid® SBS Heat-Weld™ Granule	39.37" (1 meter) wide	ASTM D6164	Non-woven polyester mat coated with SBS polymer-modified asphalt and surfaced with mineral granules.
Ruberoid® SBS Heat-Weld™ 170 FR	39.37" (1 meter) wide	ASTM D6164	Non-woven polyester mat coated with fire retardant SBS polymer-modified asphalt and surfaced with mineral granules.
Ruberoid® SBS Heat-Weld™ Plus	39.37" (1 meter) wide	ASTM D6164	Non-woven polyester mat coated with SBS polymer-modified asphalt and surfaced with mineral granules.
Ruberoid® SBS Heat-Weld™ Plus FR	39.37" (1 meter) wide	ASTM D6164	Non-woven polyester mat coated with fire retardant SBS polymer-modified asphalt surfaced with mineral granules.
Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR	39.37" (1 meter) wide	ASTM D6164	Non-woven polyester mat coated with fire retardant SBS polymer-modified asphalt and surfaced with mineral granules with factory applied EnergyCote™.
Ruberoid® Torch Smooth	39.37" (1 meter) wide	ASTM D6222	Non-woven polyester mat coated with APP modified asphalt and smooth surfaced.



Product	Dimensions	Test Specification	Product Description
Tri-Ply® TP-4	39.37" (1 meter) wide	ASTM D6222	Non-woven polyester mat coated with APP modified asphalt and smooth surfaced.
Ruberoid® Torch Granule	39.37" (1 meter) wide	ASTM D6222	Non-woven polyester mat coated with APP modified asphalt and surfaced with mineral granules.
Tri-Ply® TP-4G	39.37" (1 meter) wide	ASTM D6222	Non-woven polyester mat coated with APP modified asphalt and surfaced with mineral granules.
Ruberoid® Torch FR	39.37" (1 meter) wide	ASTM D6222	Non-woven polyester mat coated with fire retardant polymer modified asphalt surfaced with mineral granules.
Ruberoid® EnergyCap™ Torch Plus FR	39.37" (1 meter) wide	ASTM D6222	APP modified cap membrane with a torch grade bottom surface and a mineral granular top surface coated with factory applied EnergyCote™.
Ruberoid® EnergyCap™ Torch Granule FR	39.37" (1 meter) Wide	ASTM D6222	APP modified cap membrane with a torch grade bottom surface and a mineral granular top surface coated with factory applied EnergyCote™.
GAFGLAS® Mineral Surfaced Cap Sheet	39.37" (1 meter) wide	ASTM D3909	Asphalt coated, glass fiber mat cap sheet surfaced with mineral granules.
Tri-Ply® Mineral Surfaced Cap Sheet	39.37" (1 meter) wide	ASTM D3909	Asphalt coated, glass fiber mat cap sheet surfaced with mineral granules.
GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet	39.4" (1 meter) wide	ASTM D3909	Asphalt coated, glass fiber mat cap sheet surfaced with mineral granules and factory applied EnergyCote™.
WeatherWatch® XT	36" x 50' rolls 36" x 66.7' rolls	ASTM D1970	Mat surfaced SBS modified, fiberglass reinforced, bituminous sheet material for use as a leak barrier underlayment.
UnderRoof™ 2	39 3/8" x 67.8' rolls	ASTM D1970	Self-adhering reinforced membrane of SBS modified asphalt with polyester surfacing.
UnderRoof™ HT	39 3/8" x 61.0' rolls	ASTM D1970	Self-adhering reinforced membrane of SBS modified asphalt reinforced with fiberglass strands.



Product	Dimensions	Test Specification	Product Description
Topcoat® Surface Seal SB	5 gallons	ASTM D6083	Solvent based sprayable thermoplastic rubber sealant designed to protect and restore aged roof surfaces and to increase a roof's reflectivity.
Topcoat® Membrane	1,5 or 55 gallons	ASTM D6083	An acrylic, water based elastomeric membrane system designed to protect various types of roofing surfaces.
Topcoat® MB Plus	5 or 55 gallons	Proprietary	Water based, low VOC primer designed to block asphalt bleed-through.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
EnergyGuard™ Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ Tapered Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ RA Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ RA Tapered Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ RH Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ RH Tapered Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ RN Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ RN Tapered Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard™ Perlite Roof Insulation	Perlite insulation board	GAF
DensDeck® Roof Board	Gypsum board	Georgia-Pacific Gypsum LLC
DensDeck® Prime® Roof Board	Gypsum board	Georgia-Pacific Gypsum LLC
Securock® Gypsum-Fiber Roof Board	Gypsum board	United States Gypsum Corporation
Securock® Glass-Mat Roof Board	Gypsum board	United States Gypsum Corporation



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APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Drill-Tec™ #12 Fasteners	Carbon steel fastener used in steel or wood decks.	various	GAF
2.	Drill-Tec™ #14 Fasteners	Carbon steel fastener used in steel, wood or concrete decks.	various	GAF
3.	Drill-Tec™ XHD Fastener	Carbon steel extra heavy duty fastener used in steel decks.	various	GAF
4.	Drill-Tec™ 3" Standard Steel Plate	Round galvalume stress plate used with Drill-Tec™ fasteners.	3" round	GAF
5.	Drill-Tec™ 3" Steel Plate	Round galvalume plated steel stress plate with reinforced ribs for use with Drill-Tec™ fasteners.	3" round	GAF
6.	Drill-Tec™ AccuTrac® Flat Plate	AZ-SS aluminized steel plate for use with Drill-Tec™ #12 Fastener, Drill-Tec™ #14 Fastener and Drill-Tec™ XHD Fastener.	3x3	GAF
7.	Drill-Tec™ AccuTrac® Recessed Plate	Galvalume steel plate for use with Drill-Tec™ fasteners.	3x3	GAF
8.	ASAP 3S	Drill-Tec™ #12 fastener with Drill-Tec™ 3" Standard Steel Plate.	Various	GAF



EVIDENCE SUBMITTED:

Test Agency	Test Name	TestIdentifier	Date	
Factory Mutual Research Corp.	4470	3024805	11/20/06	
	4470	3036225	08/10/09	
	4470	3031350	09/27/07	
	4470	3036614	06/09/09	
	4470	3044862	05/11/12	
	4470	3014955	01/28/05	
	4470	3047636	08/08/13	
	4470	3033135	11/24/08	
UL LLC	UL 790	R10689	03/14/13	
	UL 790	R1306	05/22/13	
Trinity ERD	ASTM D6164	G6850.08.08-R1	04/14/11	
	ASTM D6222	G6850.11.08	11/05/08	
	ASTM D6222	G6850.10.08	10/06/08	
	ASTM D3909	G6850.08.07-1	08/13/07	
	ASTM D3909	G30250.02.10-3-R1	11/26/12	
	ASTM D6222	G40620.07.12-2	07/17/12	
	ASTM D6163	G12210.06.09	08/03/09	
	ASTM D6222	G30250.02.10-2	05/11/10	
	ASTM D6222	G43190.11.13-1	11/15/13	
	ASTM D6163	G40630.01.14-1	01/06/14	
	ASTM D6164	G40630.01.14-2A	01/07/14	
	ASTM D6164	G40630.01.14-2B	01/07/14	
	ASTM D6164	G40630.01.14-2C	01/07/14	
	ASTM D4601	G43180.01.14-1	01/10/14	
	ASTM D4897	G34140.04.11-5	04/25/11	
	ASTM D4601	G121110.12.08	12/02/08	
	ASTM D4601	G34140.04.11-4	04/25/11	
	ASTM D6163	G34140.04.11-2	04/25/11	
	ASTM D6862	C8500SC.11.07	11/30/07	
	ASTM D6164	G33470.01.11	01/13/11	
	ASTM D6164	G31360.03.10	03/31/10	
	Exterior Research and Design, LLC	ASTM D5147	18034.03.03-2	04/23/03
	PRI Construction Technologies LLC	ASTM D1970	GAF-238-02-01	03/03/10
		ASTM D1970	GAF-344-02-01	04/23/12
		ASTM D1970	GAF-275-02-01	11/11/10
		ASTM D6083	GAF-498-02-01	08/22/16
		ASTM D6083	GAF-276-02-01REV	01/03/11
	TAS 139	GAF-122-02-01	05/07/06	
	ASTM D6083	GAF-209-211-02-01	05/05/09	

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies	Date
FM Approval Deck Limitation	N/A	C(1), C(3), C(4), C(5)	11/02/16



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APPROVED ASSEMBLIES:

- Membrane Type:** APP/SBS
 - Deck Type 1I:** Steel, Insulated
 - Deck Description:** Min. 22 gauge, Grade 33. (see Steel Deck System Limitation #2)
 - System Type B:** Base insulation (thermal barrier) is mechanically attached to the deck. Additional layers of insulation are adhered. Membrane fully or partially adhered.
- All General and System Limitations apply.**

One or more layers of any of the following insulations (maximum 12” total thickness.)

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Securock[®] Gypsum-Fiber Roof Board Minimum 1/2” thick	1, 2 & 4, 6, 8	1:2.7

Vapor Barrier: UnderRoof™ 2 or UnderRoof™ HT is self-adhered to the base insulation layer and rolled with a weighted roller.

Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ Tapered Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RA Tapered Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RH Tapered Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation, EnergyGuard™ RN Tapered Polyiso Insulation Minimum 1.5” thick	N/A	N/A

Note: Middle insulation layer is adhered to the vapor barrier with OlyBond 500[®] or Olybond 500[®] Green applied in 0.75 – 1.0 in wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck[®] Prime[®] Roof Board, Securock[®] Gypsum-Fiber Roof Board Minimum 0.25” thick	N/A	N/A

Note: Optional top layer of insulation (when present) is adhered to the middle layer of insulation with OlyBond 500[®] or Olybond 500[®] Green applied in minimum 3/4” to 1” wide ribbons spaced a maximum of 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet, self-adhered with minimum 3” wide laps and rolled with a weighted roller in accordance with manufacturer's instructions.
Or
One layer of WeatherWatch[®] XT self-adhered with minimum 3” wide laps and rolled with a weighted roller in accordance with manufacturer's instructions.



Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR with minimum 3” wide laps. Membrane is heat welded to the self-adhering base/ply in accordance with manufacturer’s application instructions.
Or
One or more layers of Ruberoid® Torch Smooth, Tri-Ply® TP-4, Ruberoid® Torch Granule, Ruberoid® Torch 180, RoofMatch™ APP Modified Granular, Tri-Ply® TP-4G, Ruberoid® Torch FR, Ruberoid® EnergyCap™ Torch Plus FR or Ruberoid® EnergyCap™ Torch Granule FR with minimum 3” wide laps. Membrane is torch adhered to the self-adhering base/ply in accordance with manufacturer’s application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be listed in a current NOA Approval and applied in accordance with manufacturer's instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, Tri-Ply® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Membrane, Topcoat® MB Plus (to be used as a primer with Topcoat® Membrane) or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.
4. Fibered Aluminum Roof Coating.

Maximum Design Pressure: -45 psf. (See General Limitation # 9)



Membrane Type: APP/SBS

Deck Type II: Steel, Insulated

Deck Description: Min. 22 gauge, Grade 33, Type B, wide rib steel deck secured to minimum ¼” thick structural steel supports spaced maximum 6’ o.c. using two ICH Traxx/5 fasteners spaced 6” o.c. along each support. Deck side laps fastened with ICH Traxx/1 fasteners spaced maximum 24” o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type C(1): Insulation is mechanically attached through loose laid optional thermal barrier to the deck. Membrane fully adhered.

Thermal Barrier: (Optional) Minimum 1/4" DensDeck® Roof Board, DensDeck® Prime® Roof Board, 1/2" Securock® Gypsum-Fiber Roof Board or 3/4" EnergyGuard™ Perlite Roof Insulation loose laid on steel deck.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 2” thick	1 & 4	1:1.45

Note: Optional thermal barrier (when present) is loose laid over the deck and simultaneously mechanically attached with the insulation layer as specified above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Liberty™ SBS Self-Adhering Base/Ply Sheet self-adhered with minimum 3” wide laps and rolled with a weighted roller in accordance with manufacturer's instructions.
Or
One layer of WeatherWatch® XT self-adhered with minimum 3” wide laps and rolled with a weighted roller in accordance with manufacturer's instructions.

Note: WeatherWatch® XT may only be used with a torch adhered cap.

Ply Sheet: (Optional) One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet, self-adhered with minimum 3” wide laps and rolled with a weighted roller in accordance with manufacturer's instructions (Not for use with WeatherWatch® XT).



Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ 25, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR with minimum 3” wide laps. Membrane is heat welded to the self-adhering base/ply in accordance with manufacturer’s application instructions.

Or

One or more layers of Ruberoid® Torch Smooth, Tri-Ply® TP-4, Ruberoid® Torch Granule, Ruberoid® Torch 180, RoofMatch™ APP Modified Granular, Tri-Ply® TP-4G, Ruberoid® Torch FR, Ruberoid® EnergyCap™ Torch Plus FR or Ruberoid® EnergyCap™ Torch Granule FR with minimum 3” wide laps. Membrane is torch adhered to the self-adhering base/ply in accordance with manufacturer’s application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be listed in a current NOA Approval and applied in accordance with manufacturer's instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, Tri-Ply® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Membrane, Topcoat® MB Plus (to be used as a primer with Topcoat® Membrane) or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.
4. Fibered Aluminum Roof Coating.

Maximum Design

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



- Membrane Type:** APP/SBS
- Deck Type 1I:** Steel, Insulated
- Deck Description:** Min. 22 gauge, Grade 33. (See Steel Deck System Limitation #2).
- System Type C(2):** All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.
- Thermal Barrier:** 0.5" DensDeck® Prime® Roof Board or Securock® Gypsum-Fiber Roof Board or Securock® Glass-Mat Roof Board, loose laid.
- Vapor Retarder:** WeatherWatch® XT, UnderRoof™ 2 or UnderRoof™ HT is self-adhered to the thermal barrier and rolled with a weighted roller.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5" thick	1, 2, 4, 5, 6, 7, 8	1:2
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 2" thick	1, 2, 4, 5, 6, 7, 8	1:4

Note: Thermal barrier is loose laid over the deck and simultaneously mechanically attached with the insulation layer as specified above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

- Base Sheet:** Liberty™ SBS Self-Adhering Base/Ply Sheet self-adhered with minimum 3" wide laps and rolled with a weighted roller in accordance with manufacturer's instructions.
Or
One layer of WeatherWatch® XT self-adhered with minimum 3" wide laps and rolled with a weighted roller in accordance with manufacturer's instructions.

- Membrane:** One or more layers of Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR with minimum 3" wide laps. Membrane is heat welded to the self-adhering base/ply in accordance with manufacturer's application instructions.
Or
One or more layers of Ruberoid® Torch Smooth, Tri-Ply® TP-4, Ruberoid® Torch Granule, Ruberoid® Torch 180, RoofMatch™ APP Modified Granular, Tri-Ply® TP-4G, Ruberoid® Torch FR, Ruberoid® EnergyCap™ Torch Plus FR or Ruberoid® EnergyCap™ Torch Granule FR with minimum 3" wide laps. Membrane is torch adhered to the self-adhering base/ply in accordance with manufacturer's application instructions.



Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be listed in a current NOA Approval and applied in accordance with manufacturer's instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, Tri-Ply® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Membrane, Topcoat® MB Plus (to be used as a primer with Topcoat® Membrane) or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.
4. Fibered Aluminum Roof Coating.

Maximum Design

Pressure: -45 psf. (See General Limitation # 9)



- Membrane Type:** APP/SBS
- Deck Type 1I:** Steel, Insulated
- Deck Description:** Min. 22 gauge, type B, wide rib steel deck, Grade 33 secured to minimum 0.25 in. thick steel structural supports spaced at maximum, 72 in. o.c. with ICH Traxx/5, ICH Traxx/4, Teks 4 or Teks 5 fasteners, The deck is fastened to the structural steel supports with fasteners applied 6.0 in. o.c. The deck side laps are fastened 24.0 in o.c. with ICH Traxx/1 or Stitch Teks 1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.
- System Type C(3):** All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.
- Thermal Barrier: (Optional)** 0.5” DensDeck® Prime® Roof Board or Securock® Gypsum-Fiber Roof Board or Securock® Glass-Mat Roof Board, loose laid.
- Vapor Retarder:** WeatherWatch® XT, UnderRoof™ 2 or UnderRoof™ HT is self-adhered to the thermal barrier and rolled with a weighted roller.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 2” thick	1, 2, 4, 5, 6, 7, 8	1:2

Note: Thermal barrier is loose laid over the deck and simultaneously mechanically attached with the insulation layer as specified above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

- Base Sheet:** Liberty™ SBS Self-Adhering Base/Ply Sheet self-adhered with minimum 3” wide laps and rolled with a weighted roller in accordance with manufacturer's instructions.
 Or
 One layer of WeatherWatch® XT self-adhered with minimum 3” wide laps and rolled with a weighted roller in accordance with manufacturer's instructions.

- Membrane:** One or more layers of Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR with minimum 3” wide laps. Membrane is heat welded to the self-adhering base/ply in accordance with manufacturer’s application instructions.
 Or
 One or more layers of Ruberoid® Torch Smooth, Tri-Ply® TP-4, Ruberoid® Torch Granule, Ruberoid® Torch 180, RoofMatch™ APP Modified Granular, Tri-Ply® TP-4G, Ruberoid® Torch FR, Ruberoid® EnergyCap™ Torch Plus FR or Ruberoid® EnergyCap™ Torch Granule FR with minimum 3” wide laps. Membrane is torch adhered to the self-adhering base/ply in accordance with manufacturer’s application instructions.



Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be listed in a current NOA Approval and applied in accordance with manufacturer's instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, Tri-Ply® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Membrane, Topcoat® MB Plus (to be used as a primer with Topcoat® Membrane) or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.
4. Fibered Aluminum Roof Coating.

Maximum Design

Pressure: -52.5 psf. (See General Limitation # 7)



Membrane Type: APP/SBS

Deck Type 1I: Steel, Insulated

Deck Description: Min. 22 gauge, type B, wide rib steel deck, Grade 33 secured to minimum 0.25 in. thick steel structural supports spaced at maximum, 72 in. o.c. with ICH Traxx/5, ICH Traxx/4, Teks 4 or Teks 5 fasteners. The deck is fastened to the structural steel supports with fasteners applied 6.0 in. o.c. The deck side laps are fastened 24.0 in. o.c. with ICH Traxx/1 or Stitch Teks 1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type C(4): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) 0.5” DensDeck® Prime® Roof Board or Securock® Gypsum-Fiber Roof Board or Securock® Glass-Mat Roof Board, loose laid.

Vapor Retarder: WeatherWatch® XT, UnderRoof™ 2 or UnderRoof™ HT is self-adhered to the thermal barrier and rolled with a weighted roller.

All General and System Limitations apply.

One or more layers of any of the following insulations: (maximum 12” total thickness.)

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 2” thick	1, 2, 4, 5, 6, 7, 8	1:1.45
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5” thick	1, 2, 4, 5, 6, 7, 8	1:1.33

Note: Thermal barrier is loose laid over the deck and simultaneously mechanically attached with the insulation layer as specified above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Liberty™ SBS Self-Adhering Base/Ply Sheet self-adhered with minimum 3” wide laps and rolled with a weighted roller in accordance with manufacturer's instructions.
Or
One layer of WeatherWatch® XT self-adhered with minimum 3” wide laps and rolled with a weighted roller in accordance with manufacturer's instructions.



Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR with minimum 3” wide laps. Membrane is heat welded to the self-adhering base/ply in accordance with manufacturer’s application instructions.
Or
One or more layers of Ruberoid® Torch Smooth, Tri-Ply® TP-4, Ruberoid® Torch Granule, Ruberoid® Torch 180, RoofMatch™ APP Modified Granular, Tri-Ply® TP-4G, Ruberoid® Torch FR, Ruberoid® EnergyCap™ Torch Plus FR or Ruberoid® EnergyCap™ Torch Granule FR with minimum 3” wide laps. Membrane is torch adhered to the self-adhering base/ply in accordance with manufacturer’s application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be listed in a current NOA Approval and applied in accordance with manufacturer's instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, Tri-Ply® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Membrane, Topcoat® MB Plus (to be used as a primer with Topcoat® Membrane) or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.
4. Fibered Aluminum Roof Coating.

Maximum Design

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



Membrane Type: APP/SBS

Deck Type II: Steel, Insulated

Deck Description: Min. 22 gauge, type B, wide rib steel deck, Grade 33 secured to minimum 0.25 in. thick steel structural supports spaced at maximum 72 in. o.c. with ICH Traxx/5, ICH Traxx/4, Teks 4 or Teks 5 fasteners. The deck is fastened to the structural steel supports with fasteners applied 6.0 in. o.c. The deck side laps are fastened 24.0 in o.c. with ICH Traxx/1 or Stitch Teks 1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type C(5): All layers of insulation are mechanically attached to the roof deck. Membrane is adhered.

Thermal Barrier: (Optional) 0.5” DensDeck® Prime® Roof Board or Securock® Gypsum-Fiber Roof Board or Securock® Glass-Mat Roof Board, loose laid.

Vapor Retarder: WeatherWatch® XT, UnderRoof™ 2 or UnderRoof™ HT is self-adhered to the thermal barrier and rolled with a weighted roller.

All General and System Limitations apply.

One or more layers of any of the following insulations: (maximum 12” total thickness.)

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5” thick	N/A	N/A
Top Insulation Layer	Cover Board Fasteners (Table 3)	Fastener Density/ft²
Securock® Gypsum-Fiber Roof Board Minimum 0.25” thick	1, 2, 4, 6, 8	1:1.6

Note: Thermal barrier and Base Layer are loose laid over the deck and simultaneously mechanically attached with the insulation layer as specified above. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Liberty™ SBS Self-Adhering Base/Ply Sheet self-adhered with minimum 3” wide laps and rolled with a weighted roller in accordance with manufacturer's instructions.
Or
One layer of WeatherWatch® XT self-adhered with minimum 3” wide laps and rolled with a weighted roller in accordance with manufacturer's instructions.



Membrane: One or more layers of Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ Plus FR, Ruberoid® EnergyCap™ SBS Heat-Weld™ Plus FR with minimum 3” wide laps. Membrane is heat welded to the self-adhering base/ply in accordance with manufacturer’s application instructions.
Or
One or more layers of Ruberoid® Torch Smooth, Tri-Ply® TP-4, Ruberoid® Torch Granule, Ruberoid® Torch 180, RoofMatch™ APP Modified Granular, Tri-Ply® TP-4G, Ruberoid® Torch FR, Ruberoid® EnergyCap™ Torch Plus FR or Ruberoid® EnergyCap™ Torch Granule FR with minimum 3” wide laps. Membrane is torch adhered to the self-adhering base/ply in accordance with manufacturer’s application instructions.

Surfacing: **Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be listed in a current NOA Approval and applied in accordance with manufacturer's instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, Tri-Ply® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Topcoat® Membrane, Topcoat® MB Plus (to be used as a primer with Topcoat® Membrane) or Topcoat® Surface Seal SB applied at 1 to 1.5 gal./sq.
4. Fibered Aluminum Roof Coating.

Maximum Design

Pressure: -52.5 psf. (See General Limitation # 7)



STEEL DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gauge attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE



NOA No.: 16-1206.03
Expiration Date: 02/22/22
Approval Date: 02/23/17
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