

#### 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 Conventional Built-Up-Roof 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. 13-1022.18 consists of pages 1 through 21. The submitted documentation was reviewed by Jorge L. Acebo.

Andin

NOA No.: 18-0919.06 Expiration Date: 11/06/23 Approval Date: 11/08/18 Page 1 of 21



#### **ROOFING SYSTEM APPROVAL**

Category:	Roofing
Sub-Category:	BUR
Material:	Fiberglass
<u>Deck Type:</u>	Steel
Maximum Design Pressure:	-90 psf.

# TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

<b>Product</b>	Dimensions	Test <u>Specification</u>	Product <u>Description</u>
GAFGLAS <sup>®</sup> Ply 4	39.37" (1 meter) Wide	ASTM D2178	Smooth surfaced asphaltic ply sheet reinforced with fiberglass mat.
Tri-Ply <sup>®</sup> Ply 4	39.37" (1 meter) Wide	ASTM D2178	Smooth surfaced asphaltic ply sheet reinforced with fiberglass mat.
GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6	39.37" (1 meter) Wide	ASTM D2178	Smooth surfaced asphaltic ply sheet reinforced with fiberglass mat.
GAFGLAS <sup>®</sup> #75 Base Sheet	39.37" (1 meter) Wide	ASTM D4601	Smooth asphaltic base or base/ply sheet reinforced with fiberglass mat.
Tri-Ply <sup>®</sup> #75 Base Sheet	39.37" (1 meter) Wide	ASTM D4601	Smooth asphaltic base or base/ply sheet reinforced with fiberglass mat.
GAFGLAS <sup>®</sup> #80 Ultima <sup>™</sup> Base Sheet	39.37" (1 meter) Wide	ASTM D4601	Smooth asphaltic base or base/ply sheet reinforced with fiberglass mat.
GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Perforated Venting Base Sheet	39.37" (1 meter) Wide	ASTM D4897	Smooth surfaced asphaltic perforated venting base sheet reinforced with fiberglass mat.
GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet	39.37" (1 meter) Wide	ASTM D3909	Granule surfaced asphaltic cap sheet reinforced with fiberglass mat.
Tri-Ply <sup>®</sup> BUR Granule Cap Sheet	39.37" (1 meter) Wide	ASTM D3909	Granule surfaced asphaltic cap sheet reinforced with fiberglass mat.
GAFGLAS <sup>®</sup> EnergyCap <sup>™</sup> Mineral Surfaced Cap Sheet	39.37" (1 meter) Wide	ASTM D3909	Granule surfaced asphaltic cap sheet reinforced with fiberglass mat. Cap sheet is factory coated with TOPCOAT <sup>®</sup> EnergyCote <sup>™</sup> Elastomeric Coating.
Ruberoid <sup>®</sup> 20 Smooth	39.37" (1 meter) Wide	ASTM D6163	SBS polymer-modified asphalt base sheet reinforced with a fiberglass mat.
Ruberoid <sup>®</sup> Mop Smooth	39.37" (1 meter) Wide	ASTM D6164	Smooth surfaced mop applied SBS base sheet reinforced with a polyester mat.
Ruberoid <sup>®</sup> Mop Smooth 1.5	39.37" (1 meter) Wide	ASTM D6164	Smooth surfaced mop applied SBS base sheet reinforced with a polyester mat.
Ruberoid <sup>®</sup> Mop Plus Smooth	39.37" (1 meter) Wide	ASTM D6164	Smooth surfaced mop applied SBS base or ply sheet reinforced with a polyester mat.

TABLE 1



NOA No.: 18-0919.06 Expiration Date: 11/06/23 Approval Date: 11/08/18 Page 2 of 21

## TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT: TABLE 1

<u>Product</u>	Dimensions	Test <u>Specification</u>	Product <u>Description</u>
Topcoat <sup>®</sup> Surface Seal SB	5 or 55 gallons	ASTM D6083	Solvent-based thermoplastic rubber sealant designed to protect and restore aged roof surfaces and to increase roof reflectivity.
Topcoat <sup>®</sup> Membrane	1, 5 or 55 gallons	ASTM D6083	Water-based elastomeric coating.
Topcoat <sup>®</sup> MB Plus	5 or 55 gallons	Proprietary	Water based, low VOC primer designed to block asphalt bleed-through.
Topcoat <sup>®</sup> FlexSeal <sup>™</sup>	1, 5 gallons or 1 qt. tube	TAS 139	Solvent-based elastomeric sealant.

## **APPROVED INSULATIONS:**

# TABLE 2

Product Name	<b>Product Description</b>	Manufacturer (With Current NOA)
EnergyGuard <sup>™</sup> Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard <sup>™</sup> RA Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard <sup>™</sup> RH Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard <sup>™</sup> RN Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard <sup>™</sup> RA Composite Polyiso Insulation	Polyisocyanurate foam insulation with high density fiberboard or permalite	GAF
EnergyGuard <sup>™</sup> Perlite Roof Insulation	Perlite insulation board	GAF
EnergyGuard <sup>™</sup> Perlite Recover Board	Perlite recover board	GAF
DensDeck <sup>®</sup> Roof Board	Gypsum board	Georgia-Pacific Gypsum LLC.
DensDeck <sup>®</sup> Prime <sup>®</sup> Roof Board	Gypsum board	Georgia-Pacific Gypsum LLC.
Securock <sup>®</sup> Gypsum-Fiber Roof Board	Gypsum board	USG Corporation
Structodek <sup>®</sup> High Density Fiberboard	High density fiberboard	Blue Ridge FiberBoard, Inc.



## **APPROVED FASTENERS:**

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Drill-Tec <sup>™</sup> #12 Fastener	Phillips head, modified buttress thread, pinch point, carbon steel fastener for use in steel or wood decks. With CR-10 coating. Available with a pinch point or drill point.	#12 x 8" max. length, #3 Phillips head.	GAF
2.	Drill-Tec <sup>™</sup> #14 Fastener	Truss head, self-drilling, pinch point, high thread fastener for use in steel, wood or concrete decks.	#14 x 16" max. length, #3 Phillips head.	GAF
3.	Drill-Tec <sup>™</sup> AccuTrac <sup>®</sup> Flat Plate	A2-SS aluminized steel plate for use with Drill-Tec <sup>™</sup> fasteners.	3" square; .017" thick	GAF
4.	Drill-Tec <sup>™</sup> AccuTrac <sup>®</sup> Recessed Plate	Galvalume <sup>®</sup> steel plate with recess for use with Drill- Tec <sup>™</sup> fasteners.	3" square; .017" thick	GAF
5.	Drill-Tec <sup>™</sup> 3" Steel Plates	Round Galvalume <sup>®</sup> steel stress plate with reinforcing ribs and recessed for use with Drill-Tec <sup>™</sup> fasteners.	3" Round	GAF
6.	Drill-Tec <sup>™</sup> 3" Standard Steel Plates	Galvalume <sup>®</sup> coated steel stress plate for use with approved Drill-Tec <sup>™</sup> fasteners.	3" Round	GAF

## **EVIDENCE SUBMITTED:**

Test Agency	<b>Test Identifier</b>	<b>Description</b>	Date
FM Approvals	2B8A4.AM	4470	07/02/97
	3B9Q1.AM	4470	01/08/98
	0D0A8.AM	4470	07/09/99
	0Y9Q5.AM	4470	04/01/98
	3011140	4470	08/14/01
	3014547	4470	05/22/03
	3017250	4470	04/05/04
	3035140	4470	08/10/09
	3023458	4470	07/18/06
	3034312	4470	04/09/09
	3046388	4470	09/24/12
	3036614	4470	06/09/06
UL LLC	R1306	UL 790	08/21/18
IRT-ARCON, Inc.	04-009	TAS 114-J	01/26/04
Trinity ERD	G34140.04.11-2	ASTM D6163	04/25/11
	G31360.03.10	ASTM D6164	03/31/10
	G34140.04.11-4	ASTM D4601	04/25/11
	G34140.04.11-5	ASTM D4897	04/25/11
	G34140.04.11-5-R1	ASTM D4897	10/18/13
	G33470.01.11	ASTM D6164	11/16/11
	C8500SC.11.07	ASTM D6862	11/30/07
	G30250.02.10-3-R1	ASTM D3909	11/26/12
	G33470.01.11	ASTM D6164	01/13/11
	G30250.02.10-3-R1	ASTM D3909	11/26/12
	SC9700.08.15-R1	ASTM D2178	08/31/15
	SC10680.05.16	ASTM D6163	05/10/16
	SC13105.03.17-R1	ASTM D6164	03/23/17
	SC15710.12.17-1-R1	ASTM D1970	12/08/17
PRI Construction Materials	GAF-314-02-01	ASTM D2178	08/23/11
Technologies LLC	GAF-315-02-01	ASTM D2178	08/23/11
	GAF-369-02-01	ASTM C1289	10/23/12

# **DECK STRESS ANALYSIS CALCULATIONS/REPORTS**

Engineer/Agency	<b>Identifier</b>	Assemblies:	<u>Date</u>
FM Approval Deck Limitations	N/A	B(2), C(3), C(4)	01/01/13
Robert Nieminen, P.E.	Letter	C(2)	09/06/18



#### **APPROVED ASSEMBLIES**

Membrane Type:	BUR		
Deck Type 2I:	Steel, Insulated		
Deck Description:	Minimum 18-22 gauge steel, Grade 33		
System Type B(1):	Base layer of insulation is mechanically attache adhered to base layer of insulation. Membrane i	<i>v</i> 1	•
All General and Sys	stem limitations apply.		
<b>Base Insulation Lay</b>	rer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard <sup>™</sup> RA	Polyiso Insulation, EnergyGuard <sup>™</sup> RH Polyiso	Insulation	·
Minimum 1.3" thick	K	2, 3, 4, 5, 6	1:4 ft <sup>2</sup>
EnergyGuard <sup>™</sup> RN	Polyiso Insulation, EnergyGuard <sup>™</sup> RH Polyiso	Insulation	
Minimum 1.4" thick	K Start	2, 3, 4, 5, 6	1:3 ft <sup>2</sup>
<b>EnergyGuard<sup>™</sup> Poly</b>	yiso Insulation, EnergyGuard <sup>™</sup> RH Polyiso Insu	lation	
Minimum 1.5" thick	K C	2, 3, 4, 5, 6	1:3.2 ft <sup>2</sup>
EnergyGuard <sup>™</sup> RN	Polyiso Insulation, EnergyGuard <sup>™</sup> RH Polyiso	Insulation	
Minimum 1.5" thick	ĸ	2, 3, 4, 5, 6	1:3.2 ft <sup>2</sup>
Structodek <sup>®</sup> High D	ensity Fiberboard		
Minimum <sup>3</sup> / <sub>4</sub> " thick		2, 3, 4, 5, 6	1:4 ft <sup>2</sup>
EnergyGuard <sup>™</sup> Perlite Roof Insulation			
Minimum <sup>3</sup> / <sub>4</sub> ' thick		2, 3, 4, 5, 6	1:2 ft <sup>2</sup>

Note: Base layers of insulation shall be mechanically attached through the optional thermal barrier (when present) and into the steel deck; using the fastener density listed. 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. Please refer to Roofing Application Standard RAS 117 for insulation attachment. GAF requires either a ply of GAFGLAS<sup>®</sup> Stratavent<sup>®</sup> Perforated Venting Base Sheet, loose laid dry or a layer of EnergyGuard<sup>™</sup> Perlite Roof Insulation or wood fiber overlay board on all polyisocyanurate applications.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
Any of the insulations listed above for Base Insulation Layer		·
EnergyGuard <sup>™</sup> Perlite Recover Board		
Minimum ½" thick	N/A	N/A

Note: The top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft<sup>2</sup>. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	(Optional) Install one or more plies of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4, GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6, GAFGLAS <sup>®</sup> #75 Base Sheet, Tri-Ply <sup>®</sup> #75 Base Sheet, GAFGLAS <sup>®</sup> #80 Ultima <sup>™</sup> Base Sheet, Ruberoid <sup>®</sup> 20 Smooth, Ruberoid <sup>®</sup> Mop Smooth, Ruberoid <sup>®</sup> Mop Smooth 1.5 or Ruberoid <sup>®</sup> Mop Plus Smooth directly to the insulated substrate. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Ply Sheet:	Minimum two plies of GAFGLAS <sup>®</sup> Ply 4 or GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Cap Sheet:	One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet, Tri-Ply <sup>®</sup> BUR Granule Cap Sheet or GAFGLAS <sup>®</sup> EnergyCap <sup>™</sup> 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. in accordance with manufacturer's instructions.
Surfacing:	Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied in accordance with manufacturer's instructions. All coatings must be listed within a current NOA.
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.	Topcoat <sup>®</sup> Membrane, Topcoat <sup>®</sup> MB Plus (to be used as a primer with Topcoat <sup>®</sup> Membrane) or Topcoat <sup>®</sup> Surface Seal SB applied at 1 to 1.5 gal./sq.
3.	Fibered Aluminum Roof Coating.
Maximum Design Pressure:	-45 psf. (See General Limitation #9.)

Membrane Type:	BUR		
Deck Type 2I:	Steel, Insulated		
Deck Description:	Minimum 18-22 gauge, ASTM A1008 SS or ASTM a steel supports spaced 6 ft. o.c. with Buildex Traxs 5 flute), and with side laps attached with Buildex Traxs <b>This Tested Assembly has been analyzed for allow Table.</b>	fasteners spaced 6" o.c. (at t x/1 fasteners spaced at maxi	he bottom mum of 24" o.c.
System Type B(2): All General and Sys	Base layer of insulation is mechanically attached to readhered to base layer of insulation. Membrane is substem limitations apply.	<b>P 1</b>	•
Thermal Barrier: (Optional)	Minimum 1/4" DensDeck <sup>®</sup> Roof Board, DensDeck <sup>®</sup> I DuraGuard <sup>®</sup> Roof Board, 1/2" Securock <sup>®</sup> Gypsum- Perlite Roof Insulation loose laid on steel deck.		
Base Insulation Lay		Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard <sup>™</sup> Poly Minimum 1.5" thick	yiso Insulation, EnergyGuard <sup>™</sup> RH Polyiso Insulati k	on 1, 2, 3, 4, 5, 6	1:1.3 ft <sup>2</sup>

Note: Base layers of insulation shall be mechanically attached through the optional thermal barrier (when present) and into the steel deck; using the fastener density listed. 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. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
Structodek <sup>®</sup> High Density Fiber Board		
Minimum <sup>1</sup> /2" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft<sup>2</sup>. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	(Optional) One ply of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4, GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6, GAFGLAS <sup>®</sup> #75 Base Sheet, Tri-Ply <sup>®</sup> #75 Base Sheet, GAFGLAS <sup>®</sup> #80 Ultima <sup>™</sup> Base Sheet, Ruberoid <sup>®</sup> 20 Smooth, Ruberoid <sup>®</sup> Mop Smooth, Ruberoid <sup>®</sup> Mop Smooth 1.5 or Ruberoid <sup>®</sup> Mop Plus Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
Ply Sheet:	Minimum two plies of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4, GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6 or GAFGLAS <sup>®</sup> #80 Ultima <sup>™</sup> Base Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
Cap Sheet:	One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet, Tri-Ply <sup>®</sup> BUR Granule Cap Sheet or GAFGLAS <sup>®</sup> EnergyCap <sup>™</sup> 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. in accordance with manufacturer's instructions.

(MIAMI-DADE COUNTY) APPROVED NOA No.: 18-0919.06 Expiration Date: 11/06/23 Approval Date: 11/08/18 Page 8 of 21

Surfacing:	Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied in accordance with manufacturer's instructions. All coatings must be listed within a current NOA.
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.	Topcoat <sup>®</sup> Membrane, Topcoat <sup>®</sup> MB Plus (to be used as a primer with Topcoat <sup>®</sup> Membrane) or Topcoat <sup>®</sup> Surface Seal SB applied at 1 to 1.5 gal./sq.
3. Maximum Design	Fibered Aluminum Roof Coating.
Pressure:	-90 psf. (See General Limitation #7)



NOA No.: 18-0919.06 Expiration Date: 11/06/23 Approval Date: 11/08/18 Page 9 of 21

Membrane Type:	BUR		
Deck Type 2I:	Steel, Insulated		
<b>Deck Description:</b>	Minimum 22 gauge steel, Grade 33		
System Type B(3):	Base layer of insulation is mechanically attached to roof deck. Any subsequent layers are then adhered to base layer of insulation. Membrane is subsequently partially adhered to insulation.		
All General and System Limitations apply.			
Thermal Barrier: (Optional)	Minimum 1/4" DensDeck <sup>®</sup> Roof Board, DensDeck <sup>®</sup> Prime <sup>®</sup> Roof Board, DensDeck <sup>®</sup> DuraGuard <sup>®</sup> Roof Board, 1/2" Securock <sup>®</sup> Gypsum-Fiber Roof Board or 3/4" EnergyGuard <sup>™</sup> Perlite Roof Insulation loose laid on steel deck.		
<b>Base Insulation Lay</b>	ver	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard <sup>™</sup> Polyiso Insulation Minimum 1.5" thick		1, 2, 3, 4, 5, 6	1:4.0 ft <sup>2</sup>
Top Insulation Layer		Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard <sup>™</sup> Poly	yiso Insulation		
Minimum 1.5" thick	k	N/A	N/A

Note: One or more base layers of insulation may be installed with a maximum 12 inch insulation thickness. Top insulation layer is adhered with hot asphalt applied at 20-25 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One ply of GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Perforated Vented Base Sheet with 2" side laps, loose laid dry.
Ply Sheet:	Two plies of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4 or GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6 in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
Cap Sheet:	One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet, Tri-Ply <sup>®</sup> BUR Granule Cap Sheet or GAFGLAS <sup>®</sup> EnergyCap <sup>™</sup> 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. in accordance with manufacturer's instructions.
Surfacing:	Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied in accordance with manufacturer's instructions. All coatings must be listed within a current NOA.
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.	Topcoat <sup>®</sup> Membrane, Topcoat <sup>®</sup> MB Plus (to be used as a primer with Topcoat <sup>®</sup> Membrane) or Topcoat <sup>®</sup> Surface Seal SB applied at 1 to 1.5 gal./sq.
3.	Fibered Aluminum Roof Coating.
Maximum Design Pressure:	-45 psf. (See General Limitation #9.)

MIAMI-DADE COUNTY APPROVED NOA No.: 18-0919.06 Expiration Date: 11/06/23 Approval Date: 11/08/18 Page 10 of 21

Membrane Type:	BUR
Deck Type 2I:	Steel, Insulated
Deck Description:	Minimum 22 gauge steel, Grade 33
System Type B(4):	Base layer of insulation is mechanically attached to roof deck. Any subsequent layers are then adhered to base layer of insulation. Membrane is subsequently fully adhered to insulation.
•	stem Limitations apply.
Thermal Barrier:	Minimum 1/4" DensDeck <sup>®</sup> Roof Board, DensDeck <sup>®</sup> Prime <sup>®</sup> Roof Board, DensDeck <sup>®</sup>
(Optional)	DuraGuard <sup>®</sup> Roof Board, 1/2" Securock <sup>®</sup> Gypsum-Fiber Roof Board or 3/4" EnergyGuard <sup>™</sup> Perlite Roof Insulation loose laid on steel deck.
Insulations:	See Insulation Options Table B(4) below. Please refer to Roofing Application Standard
Base Ply:	RAS 117 for insulation attachment. GAFGLAS <sup>®</sup> #75 Base Sheet, Tri-Ply <sup>®</sup> #75 Base Sheet, GAFGLAS <sup>®</sup> #80 Ultima <sup>™</sup> Base Sheet,
(Optional)	Ruberoid <sup>®</sup> 20 Smooth, Ruberoid <sup>®</sup> Mop Smooth, Ruberoid <sup>®</sup> Mop Smooth 1.5 or Ruberoid <sup>®</sup> Mop
(optional)	Plus Smooth in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the insulation in accordance with manufacturer's instructions.
Ply Sheet:	Two or more plies of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4 or GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6 in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
Cap Sheet:	One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet, Tri-Ply <sup>®</sup> BUR Granule Cap Sheet or
	GAFGLAS <sup>®</sup> EnergyCap <sup>™</sup> 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. in accordance with
Grander a line a	manufacturer's instructions.
Surfacing:	Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied in accordance with manufacturer's instructions. All coatings must
	be listed within a current NOA.
1.	Topcoat <sup>®</sup> Membrane, Topcoat <sup>®</sup> MB Plus (to be used as a primer with Topcoat <sup>®</sup> Membrane) or
	Topcoat <sup>®</sup> Surface Seal SB applied at 1 to 1.5 gal./sq.
2.	Fibered Aluminum Roof Coating.
Maximum Design	
Pressure:	-45 psf. (See General Limitation #9.)
	Insulation Options Table for Assembly B(4)
Note: One or I Option #1.	more layers of insulation may be installed with a maximum 12 inch insulation thickness. Base Layer: Min. 1.5" EnergyGuard <sup>™</sup> Polyiso Insulation mechanically fastened at 1:4 ft <sup>2</sup> with
Option #1.	any of the approved fasteners in Table 3.
	<b>Top Layer:</b> $0.5 - 1.0$ " EnergyGuard <sup>TM</sup> Perlite Recover Board or $0.25 - 0.625$ " Securock <sup>®</sup>
	Gypsum-Fiber Roof Board, DensDeck <sup>®</sup> Roof Board, DensDeck <sup>®</sup> DuraGuard <sup>®</sup> Roof Board or
	DensDeck <sup>®</sup> Prime <sup>®</sup> Roof Board mopped in approved asphalt at the rate of 20-25 lbs./sq.
Option #2.	Base Layer: Min. 1.5" EnergyGuard <sup>™</sup> Polyiso Insulation mechanically fastened at 1:2.67 ft <sup>2</sup>
	with any of the approved fasteners in Table 3.
	<i>Top Layer:</i> $0.5 - 1.0$ " Structodek <sup>®</sup> High Density Fiberboard Roof Insulation or EnergyGuard <sup>™</sup> Perlite Recover Board mopped in approved asphalt at the rate of 20-25 lbs./sq.
Option #3.	<b>Base Layer:</b> Min. 2.0" EnergyGuard <sup>™</sup> Polyiso Insulation mechanically fastened at 1:4 ft <sup>2</sup> with
	any of the approved fasteners in Table 3. Top $I$ means 0.25 $\pm$ 1.0" thick Structure delt <sup>®</sup> High Density Eikerboard Reaf Insulation or
	<i>Top Layer:</i> $0.25 - 1.0$ " thick Structodek <sup>®</sup> High Density Fiberboard Roof Insulation or $0.75 - 1.0$ " thick EnergyGuard <sup>TM</sup> Perlite Recover Board mopped in approved asphalt at the rate
	of 20-25 lbs./sq.

MIAMI-DADE COUNTY APPROVED NOA No.: 18-0919.06 Expiration Date: 11/06/23 Approval Date: 11/08/18 Page 11 of 21

Membrane Type:	BUR
Deck Type 2I:	Steel, Insulated
<b>Deck Description:</b>	Minimum 22 gauge steel, Grade 33
System Type B(5):	Base layer of insulation is mechanically attached to roof deck. Any subsequent layers are then adhered to base layer of insulation. Membrane is subsequently fully or partially adhered to insulation.
All General and Sys	stem Limitations apply.
Thermal Barrier: (Optional)	Minimum 1/4" DensDeck <sup>®</sup> Roof Board, DensDeck <sup>®</sup> Prime <sup>®</sup> Roof Board, DensDeck <sup>®</sup> DuraGuard <sup>®</sup> Roof Board, 1/2" Securock <sup>®</sup> Gypsum-Fiber Roof Board or 3/4" EnergyGuard <sup>™</sup> Perlite Roof Insulation loose laid on steel deck.
Insulations:	See Insulation Options Table B(5) below. Please refer to Roofing Application Standard RAS 117 for insulation attachment.
Ply Sheet:	Three or more plies of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4 or GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6 in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the insulation in accordance with manufacturer's instructions.
Surfacing:	Flood coat of hot asphalt applied at 60 lbs./sq. followed by gravel applied at 400 lbs./sq. or slag applied at a rate of 300 lbs./sq.
Maximum Design Pressure:	-45 psf. (See General Limitation #9.)
	Insulation Options Table for Assembly B(5)
Note: One or I Option #1.	<ul> <li>more layers of insulation may be installed with a maximum 12 inch insulation thickness.</li> <li>Base Layer: Min. 1.5" EnergyGuard<sup>™</sup> Polyiso Insulation mechanically fastened at 1:4 ft<sup>2</sup> with any of the approved fasteners in Table 3.</li> <li>Top Layer: 0.5 - 1.0" EnergyGuard<sup>™</sup> Perlite Recover Board or 0.25 - 0.625" Securock<sup>®</sup> Gypsum-Fiber Roof Board, DensDeck<sup>®</sup> Roof Board, DensDeck<sup>®</sup> DuraGuard<sup>®</sup> Roof Board or DensDeck<sup>®</sup> Prime<sup>®</sup> Roof Board mopped in approved asphalt at the rate of 20-25 lbs./sq.</li> </ul>
Option #2.	<b>Base Layer:</b> Min. 1.5" EnergyGuard <sup>TM</sup> Polyiso Insulation mechanically fastened at 1:2.67 ft <sup>2</sup> with any of the approved fasteners in Table 3. <b>Top Layer:</b> $0.5 - 1.0$ " Structodek <sup>®</sup> High Density Fiberboard Roof Insulation or EnergyGuard <sup>TM</sup> Perlite Recover Board mopped in approved asphalt at the rate of 20-25 lbs./sq.
Option #3.	<b>Base Layer:</b> Min. 2.0" EnergyGuard <sup>TM</sup> Polyiso Insulation mechanically fastened at 1:4 ft <sup>2</sup> with any of the approved fasteners in Table 3. <b>Top Layer:</b> $0.25 - 1.0$ " thick Structodek <sup>®</sup> High Density Fiberboard Roof Insulation or $0.75 - 1.0$ " thick EnergyGuard <sup>TM</sup> Perlite Recover Board mopped in approved asphalt at the rate of 20-25 lbs./sq.

Membrane Type:	BUR		
Deck Type 2I:	Steel, Insulated		
<b>Deck Description:</b>	Minimum 18-22 gauge steel, Grade 33		
System Type C(1):	All layer of insulation are mechanically attached to roof deck. Membrane is subsequently fully or partially adhered to insulation.		
All General and Sys	stem limitations apply.		
Thermal Barrier: (Optional)	Minimum 1/4" DensDeck <sup>®</sup> Roof Board, DensDeck <sup>®</sup> Prime <sup>®</sup> Roof Board, DensDeck <sup>®</sup> DuraGuard <sup>®</sup> Roof Board; 1/2" Securock <sup>®</sup> Gypsum-Fiber Roof Board or 3/4" EnergyGuard <sup>™</sup> Perlite Roof Insulation loose laid on steel deck.		
<b>Base Insulation Lay</b>	ver (Optional)	Insulation Fasteners	Fastener
Insulation, Energy	yiso Insulation, EnergyGuard™ RN Polyiso Insul Guard™ RH Polyiso Insulation		-
Minimum 1.3" thick		N/A	N/A
EnergyGuard <sup>™</sup> Poly EnergyGuard <sup>™</sup> RH	yiso Insulation, EnergyGuard <sup>™</sup> Polyiso Insulatio Polyiso Insulation	on, EnergyGuard <sup>™</sup> RN Polyis	so Insulation,
Minimum 1.4" thick		N/A	N/A
EnergyGuard <sup>™</sup> Polyiso Insulation, EnergyGuard <sup>™</sup> RN Polyiso Insulation, EnergyGuard <sup>™</sup> RA Composite Polyiso Insulation, EnergyGuard <sup>™</sup> RH Polyiso Insulation			
Minimum 1.5" thick		N/A	N/A
EnergyGuard <sup>™</sup> Per Minimum ¾' thick	lite Roof Insulation	N/A	N/A
Note: Both layers sl	hall be simultaneously attached; see top layer be	low for fasteners and density	/ <b>.</b>
Top Insulation Lay		Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
	Polyiso Insulation, EnergyGuard <sup>™</sup> RH Polyiso I		1 4 642
Minimum 1.3" thick		1, 2, 3, 4, 5, 6	1:4 ft <sup>2</sup>
Minimum 1.4" thick	Polyiso Insulation, EnergyGuard <sup>™</sup> RH Polyiso I k	1, 2, 3, 4, 5, 6	1:3 ft <sup>2</sup>
<b>EnergyGuard<sup>™</sup> Poly</b>	yiso Insulation, EnergyGuard <sup>™</sup> RH Polyiso Insul	lation	
Minimum 1.5" thick	k	1, 2, 3, 4, 5, 6	1:4 ft <sup>2</sup>
EnergyGuard <sup>™</sup> RN Minimum 1.5" thicl	Polyiso Insulation, EnergyGuard <sup>™</sup> RH Polyiso I k	Insulation 1, 2, 3, 4, 5, 6	1:4 ft <sup>2</sup>
EnergyGuard <sup>™</sup> Perlite Roof Insulation, EnergyGuard <sup>™</sup> RH Polyiso Insulation Minimum ¾" thick 1, 2, 3, 4, 5, 6 1:2 ft <sup>2</sup>			
Structodek <sup>®</sup> High D Minimum ¾" thick	•	1, 2, 3, 4, 5, 6	1:4 ft <sup>2</sup>
	nels listed are minimum sizes and dimensions; i		

Note: 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. GAF requires either a ply of GAFGLAS<sup>®</sup> Stratavent<sup>®</sup> Eliminator<sup>™</sup> Perforated Venting Base Sheet loose laid dry or a layer of EnergyGuard<sup>™</sup> Perlite Recover Board or wood fiber overlay board on all polyisocyanurate applications.

MIAMI-DADE COUNTY APPROVED

Base Sheet: (Optional)	Install one ply of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4, GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6, GAFGLAS <sup>®</sup> #75 Base Sheet, Tri-Ply <sup>®</sup> #75 Base Sheet, GAFGLAS <sup>®</sup> #80 Ultima <sup>™</sup> Base Sheet, Ruberoid <sup>®</sup> 20 Smooth, Ruberoid <sup>®</sup> Mop Smooth, Ruberoid <sup>®</sup> Mop Smooth 1.5 or Ruberoid <sup>®</sup> Mop Plus Smooth directly over the top layer of insulation. Adhere with any approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions. Or
	One ply of GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Perforated Venting Base Sheet with 2" side laps, loose laid
Ply Sheet:	dry. Minimum two plies of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4 or GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
Cap Sheet:	One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet or GAFGLAS <sup>®</sup> EnergyCap <sup>™</sup> 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. in accordance with manufacturer's instructions.
Surfacing:	Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied in accordance with manufacturer's instructions. All coatings must be listed within a current NOA.
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.	Topcoat <sup>®</sup> Membrane, Topcoat <sup>®</sup> MB Plus (to be used as a primer with Topcoat <sup>®</sup> Membrane) or Topcoat <sup>®</sup> Surface Seal SB applied at 1 to 1.5 gal./sq.
3.	Fibered Aluminum Roof Coating.
Maximum Design	
Pressure:	-45 psf. (See General Limitation #9.)

MIAMI-DADE COUNTY APPROVED

Membrane Type:	BUR		
Deck Type 2I:	Steel, Insulated		
Deck Description:	Minimum 22 gauge, Grade 33, non-vented, steel B-deck attached to steel supports spaced 5' o.c., with puddle welds and washers at 6"o.c., and tech screws at 12"o.c. <b>This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.</b>		
System Type C(2):	All layer of insulation are mechanically attached to roof deck. Membrane is subsequently partially adhered to insulation.		
All General and System limitations apply.			
Thermal Barrier: (Optional)	Minimum 1/4" DensDeck <sup>®</sup> Roof Board, DensDeck <sup>®</sup> Prime <sup>®</sup> Roof Board, DensDeck <sup>®</sup> DuraGuard <sup>®</sup> Roof Board, 1/2" Securock <sup>®</sup> Gypsum-Fiber Roof Board or 3/4" EnergyGuard <sup>™</sup> Perlite Roof Insulation loose laid on steel deck.		
Insulation Layer	Insulation Fasteners Fastener		
(Table 3)Density/ft²EnergyGuard™ Polyiso Insulation, EnergyGuard™ RH Polyiso Insulation1, 2, 3, 4, 5, 6Minimum 1.5" thick1, 2, 3, 4, 5, 61:1.45 ft²			
Note: The insulation shall be attached through the optional thermal barrier (when present) and into the steel deck. Please refer to Roofing Application Standard RAS 117 for insulation attachment.			

Base Sheet:	GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Perforated Venting Base Sheet with 2 in. (50mm) side laps loose laid dry.
Ply Sheet:	One or more plies of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4 or GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20- 40 lbs./sq. in accordance with manufacturer's instructions.
Cap Sheet:	One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet, Tri-Ply <sup>®</sup> BUR Granule Cap Sheet or GAFGLAS <sup>®</sup> EnergyCap <sup>™</sup> 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. in accordance with manufacturer's instructions.
Surfacing:	Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied in accordance with manufacturer's instructions. All coatings must be listed within a current NOA.
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.	Topcoat <sup>®</sup> Membrane, Topcoat <sup>®</sup> MB Plus (to be used as a primer with Topcoat <sup>®</sup> Membrane) or Topcoat <sup>®</sup> Surface Seal SB applied at 1 to 1.5 gal./sq.
3. Maximum Design	Fibered Aluminum Roof Coating.
Pressure:	-60 psf. (See General Limitation #7)

Membrane Type:	BUR
Deck Type 2I:	Steel, Insulated
Deck Description:	Minimum 18-22 gauge, Type B, Grade 33 steel decking attached to steel supports spaced 6 ft. o.c. with Buildex Traxx/4 or 5 fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached with Buildex Traxx/1 fasteners spaced at max. of 24" o.c. <b>This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.</b>
System Type C(3):	All layer of insulation are mechanically attached to roof deck. Membrane is subsequently partially adhered to insulation.

All General and System limitations apply.

Base Insulation Layer	<b>Insulation Fastene</b>	rs Fastener
	(Table 3)	Density/ft <sup>2</sup>
EnergyGuard <sup>™</sup> Polyiso Insulation, EnergyGuard <sup>™</sup> RA Polyiso In	sulation, EnergyGuard™	<b>RH Polyiso Insulation</b>
Minimum 1.5" thick	N/A	N/A

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

Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft <sup>2</sup>
DensDeck <sup>®</sup> Roof Board		
Minimum <sup>1</sup> /4" thick	1 or 6	1:1 ft <sup>2</sup>

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. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One ply of GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Perforated Venting Base Sheet with 2" side laps loose laid dry.
Ply Sheet:	One or more plies of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4 or GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
Cap Sheet:	One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet, Tri-Ply <sup>®</sup> BUR Granule Cap Sheet or GAFGLAS <sup>®</sup> EnergyCap <sup>™</sup> 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. in accordance with manufacturer's instructions.
Surfacing:	Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied in accordance with manufacturer's instructions. All coatings must be listed within a current NOA.
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.	Topcoat <sup>®</sup> Membrane, Topcoat <sup>®</sup> MB Plus (to be used as a primer with Topcoat <sup>®</sup> Membrane) or Topcoat <sup>®</sup> Surface Seal SB applied at 1 to 1.5 gal./sq.
3.	Fibered Aluminum Roof Coating.
Maximum Design	
Pressure:	-82.5 psf. (See General Limitation #7)

(MIAMI-DADE COUNTY) APPROVED NOA No.: 18-0919.06 Expiration Date: 11/06/23 Approval Date: 11/08/18 Page 16 of 21

Membrane Type:	BUR	
Deck Type 2I:	Steel, Insulated	
Deck Description:	Minimum 18-22 gauge, Type B, Grade 33 steel decking attached to steel supports spaced 6 ft. o.c. with Buildex Traxx/4 or 5 fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached with Buildex Traxx/1 fasteners spaced at max. of 24" o.c. <b>This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.</b>	I
System Type C(4):	All layer of insulation are mechanically attached to roof deck. Membrane is subsequently fully adhered to insulation.	
All General and Sys	tem limitations apply.	
Thermal Barrier: (Optional)	Minimum 1/4" DensDeck <sup>®</sup> Roof Board, DensDeck <sup>®</sup> Prime <sup>®</sup> Roof Board, DensDeck <sup>®</sup> DuraGuard <sup>®</sup> Roof Board, 1/2" Securock <sup>®</sup> Gypsum-Fiber Roof Board or 3/4" EnergyGuard <sup>™</sup> Perlite Roof Insulation loose laid on steel deck.	
Base Insulation Lay	er Insulation Fasteners Fastener (Table 3) Density/ft <sup>2</sup>	
EnergyGuard <sup>™</sup> Polyiso Insulation, EnergyGuard <sup>™</sup> RA Polyiso Insulation, EnergyGuard <sup>™</sup> RH Polyiso Insulation, EnergyGuard <sup>™</sup> RN Polyiso Insulation		
Minimum 2" thick	N/A N/A	

Note: Base layer and top layer of insulation shall be simultaneously attached; through the optional thermal barrier (when present) and into the steel deck; see top layer below for fasteners and density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Lay	er	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
Securock <sup>®</sup> Gypsum Minimum 1/2" thic		1, 2 or 6	1:1.78 ft <sup>2</sup>
Base Sheet:	One ply of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4, GAF Ruberoid <sup>®</sup> Mop Smooth, Ruberoid <sup>®</sup> Mop Smooth with approved asphalt applied within the EVT rang with manufacturer's instructions and broomed in.	1.5 or Ruberoid® Mop Plus Sm	ooth adhered
Ply Sheet:	One or more plies of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> I full mopping of approved asphalt applied within the accordance with manufacturer's instructions.		
Cap Sheet:	One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap She GAFGLAS <sup>®</sup> EnergyCap <sup>™</sup> Mineral Surfaced Cap S asphalt applied within the EVT range and at a rate	heet adhered in a full mopping	
Maximum Design Pressure:	-60 psf. (See General Limitation #7)		

MIAMI-DADE COUNTY APPROVED NOA No.: 18-0919.06 Expiration Date: 11/06/23 Approval Date: 11/08/18 Page 17 of 21

Membrane Type:	BUR		
Deck Type 2I:	Steel, Insulated		
<b>Deck Description:</b>	Minimum 22 gauge steel, Grade 33		
System Type C(5):	All layer of insulation are mechanically attached to roof deck. Membrane is subsequently partially adhered to insulation.		
All General and Sys	stem Limitations apply.		
Thermal Barrier: (Optional)	Minimum 1/4" DensDeck <sup>®</sup> Roof Board, DensDeck <sup>®</sup> Prime <sup>®</sup> Roof Board, DensDeck <sup>®</sup> DuraGuard <sup>®</sup> Roof Board, 1/2" Securock <sup>®</sup> Gypsum-Fiber Roof Board or 3/4" EnergyGuard <sup>™</sup> Perlite Roof Insulation loose laid on steel deck.		
Insulation Layer		Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard <sup>™</sup> Pol Minimum 2.0" thic	•	1, 2, 3, 4, 5, 6	1:3.2 ft <sup>2</sup>
Note: One or more layers of insulation may be installed with a maximum 12 inch insulation thickness. Please refer to Roofing Application Standard RAS 117 for insulation attachment.			
Base Sheet:	One ply of GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Perforated Vented Base Sheet with 2" side laps, loose laid dry.		
Ply Sheet:	Two plies of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4 or GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6 in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the insulation in accordance with manufacturer's instructions.		
Cap Sheet:	One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet, Tri-Ply <sup>®</sup> BUR Granule Cap Sheet or GAFGLAS <sup>®</sup> EnergyCap <sup>™</sup> 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. in accordance with manufacturer's instructions.		
Surfacing:	Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied in accordance with manufacturer's instructions. All coatings must be listed within a current NOA.		
1.	Gravel or slag applied at 400 lbs./sq. and 300 l asphalt at 60 lbs./sq.	bs./sq. respectively in a flood c	coat of approved
2.	Topcoat <sup>®</sup> Membrane, Topcoat <sup>®</sup> MB Plus (to be Topcoat <sup>®</sup> Surface Seal SB applied at 1 to 1.5 g		t <sup>®</sup> Membrane) or
3.	Fibered Aluminum Roof Coating.		
Maximum Design Pressure:	-45 psf. (See General Limitation #9)		

Membrane Type:	BUR		
Deck Type 2I:	Steel, Insulated		
<b>Deck Description:</b>	Minimum 22 gauge steel, Grade 33		
System Type C(6):	All layer of insulation are mechanically attached to roof deck. Membrane is subsequently partially adhered to insulation.		
All General and Sys	stem Limitations apply.		
Thermal Barrier: (Optional)	Minimum 1/4" DensDeck <sup>®</sup> Roof Board, DensDec Roof Board, 1/2" Securock <sup>®</sup> Gypsum-Fiber Roof Perlite Roof Insulation loose laid on steel deck.		Deck <sup>®</sup> DuraGuard <sup>®</sup>
Insulation Layer		nsulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard <sup>™</sup> Poly Minimum 1.5" thick		1, 2, 3, 4, 5, 6	1:2.0 ft <sup>2</sup>
Note: Two or more	layers of insulation are installed with a maximu deck with joints staggered. Please refer to Roof	m 12 inch insulation thickne	ess. Insulation is
Base Sheet:	One ply of GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Perforated Vented Base Sheet with 2" side laps, loose laid dry.		
Ply Sheet:	Two or three plies of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4 or GAFGLAS <sup>®</sup> FlexPly <sup><math>m</math></sup> 6 in full mopping of approved asphalt to the insulation applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.		
Cap Sheet:	One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet, Tri-Ply <sup>®</sup> BUR Granule Cap Sheet or GAFGLAS <sup>®</sup> EnergyCap <sup>™</sup> 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. in accordance with manufacturer's instructions.		
Surfacing:	Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied in accordance with manufacturer's instructions. All coatings must be listed within a current NOA.		
1.	Gravel or slag applied at 400 lbs./sq. and 300 lbs. asphalt at 60 lbs./sq.	/sq. respectively in a flood co	at of approved
2.	Topcoat <sup>®</sup> Membrane, Topcoat <sup>®</sup> MB Plus (to be u Topcoat <sup>®</sup> Surface Seal SB applied at 1 to 1.5 gal.		<sup>®</sup> Membrane) or
3.	Fibered Aluminum Roof Coating.		
Maximum Design Pressure:	-45 psf. (See General Limitation #9.)		



Membrane Type:	BUR		
Deck Type 2I:	Steel, Insulated		
<b>Deck Description:</b>	Minimum 22 gauge steel, Grade 33		
System Type C(7):	All layer of insulation are mechanically attached to roof deck. Membrane is subsequently partially adhered to insulation.		
All General and System Limitations apply.			
Thermal Barrier: (Optional)	Minimum 1/4" DensDeck <sup>®</sup> Roof Board, DensDeck <sup>®</sup> Prime <sup>®</sup> Roof Board, DensDeck <sup>®</sup> DuraGuard <sup>®</sup> Roof Board, 1/2" Securock <sup>®</sup> Gypsum-Fiber Roof Board or 3/4" EnergyGuard <sup>™</sup> Perlite Roof Insulation loose laid on steel deck.		
Insulation Layer		Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard <sup>™</sup> Poly Minimum 1.5" thicl		1, 2, 3, 4, 5, 6	1:2.0 ft <sup>2</sup>
Note: Two or more layers of insulation are installed with a maximum 12 inch insulation thickness. Insulation is secured to the steel deck with joints staggered. Please refer to Roofing Application Standard RAS 117 for insulation attachment.			

Base Sheet:	One ply of GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Perforated Vented Base Sheet with 2" side laps, loose laid dry.
Ply Sheet:	Three plies of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4 or GAFGLAS <sup>®</sup> FlexPly <sup><math>m</math></sup> 6 in a full mopping of approved asphalt to the insulation applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
Surfacing:	Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied in accordance with manufacturer's instructions. All coatings must be listed within a current NOA.
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.	Topcoat <sup>®</sup> Membrane, Topcoat <sup>®</sup> MB Plus (to be used as a primer with Topcoat <sup>®</sup> Membrane) or Topcoat <sup>®</sup> Surface Seal SB applied at 1 to 1.5 gal./sq.
3.	Fibered Aluminum Roof Coating.
Maximum Design Pressure:	-45 psf. (See General Limitation #9.)

# **STEEL DECK SYSTEM LIMITATIONS:**

- 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 Professional Engineer, Registered Architect, or Registered Roof Consultant.
- 2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.

## **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.)
- 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.: 18-0919.06 Expiration Date: 11/06/23 Approval Date: 11/08/18 Page 21 of 21