

#### DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER) BOARD AND CODE ADMINISTRATION DIVISION 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 Conventional Built-Up Roof Systems for Lightweight Concrete 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. 18-0402.04 and consists of pages 1 through 14.

08/08/24

The submitted documentation was reviewed by Jorge L. Acebo.



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# ROOFING SYSTEM APPROVALCategory:RoofingSub-Category:BURMaterial:FiberglassDeck Type:Lightweight ConcreteMaximum Design Pressure:-150 psf.

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

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Product	Dimensions	Test Specification	Product Description
GAFGLAS <sup>®</sup> Ply 4	39.37" (1 meter) Wide	ASTM D2178	A smooth surfaced asphaltic ply sheet reinforced with fiberglass mat.
Tri-Ply <sup>®</sup> Ply 4	39.37" (1 meter) Wide	ASTM D2178	A smooth surfaced asphaltic ply sheet reinforced with fiberglass mat.
GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6	39.37" (1 meter) Wide	ASTM D2178	A smooth surfaced asphaltic ply sheet reinforced with fiberglass mat.
GAFGLAS <sup>®</sup> #75 Base Sheet	39.37" (1 meter) Wide	ASTM D4601	A 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	A 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	A smooth asphaltic base or base/ply sheet reinforced with fiberglass mat.
GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Eliminator <sup>™</sup> Perforated Venting Base Sheet	39.37" (1 meter) Wide	ASTM D4897	A smooth surfaced asphaltic perforated venting base sheet reinforced with fiberglass mat.
GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Eliminator <sup>™</sup> Nailable Venting Base Sheet	39.37" (1 meter) Wide	ASTM D4897	A smooth surfaced asphaltic nailable venting base sheet reinforced with fiberglass mat. Bottom side surfaced with granules.
Ruberoid <sup>®</sup> 20	39.37" (1 meter) Wide	ASTM D6163	SBS polymer-modified asphalt base sheet reinforced with a glass fiber mat.
GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet	39.37" (1 meter) Wide	ASTM D3909	A granule surfaced asphaltic cap sheet reinforced with fiberglass mat.
Tri-Ply <sup>®</sup> Mineral Surfaced Cap Sheet	39.37" (1 meter) Wide	ASTM D3909	A granule surfaced asphaltic cap sheet reinforced with fiberglass mat.
GAFGLAS <sup>®</sup> EnergyCap <sup>™</sup> BUR Mineral Surfaced Cap Sheet	39.37" (1 meter) Wide	ASTM D3909	A granule surfaced asphaltic cap sheet reinforced with fiberglass mat. Cap sheet is factory coated with Topcoat <sup>®</sup> EnergyCote <sup>™</sup> Elastomeric Coating.
Topcoat <sup>®</sup> Membrane	1, 5 or 55 gallons	ASTM D6083	Acrylic, water based elastomeric membrane system designed to protect various types of roofing surfaces.

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

Product	Dimensions	Test Specification	Product Description
Topcoat <sup>®</sup> Surface Seal SB	5 or 55 gallons	ASTM D6083	Solvent based sprayable thermoplastic rubber sealant designed to protect and restore aged roof surfaces and to increase roof reflectivity.
Topcoat <sup>®</sup> MB Plus	5 or 55 gallons	Proprietary	Water based, low VOC primer designed to block asphalt bleed-through.
Matrix <sup>™</sup> 307 Premium Asphalt Primer	3, 5 or 55 gallons	ASTM D41	Asphalt concrete primer used to promote adhesion of all types of asphalt-based roofing materials.
GAF 2-Part Roofing Adhesive	1:1 Applicator	Proprietary	A dual component, low rise, polyurethane froth adhesive.

# **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> Tapered Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard <sup>TM</sup> Ultra 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> RH Tapered Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard <sup>™</sup> RN Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard <sup>™</sup> RN Tapered Polyiso Insulation	Polyisocyanurate foam insulation	GAF
EnergyGuard <sup>™</sup> Perlite Roof Insulation	Perlite insulation board	GAF
EnergyGuard <sup>™</sup> Perlite Recover Board	Perlite recover board	GAF
Securock <sup>®</sup> Gypsum-Fiber Roof Board	Gypsum board	United States Gypsum Corp.
Structodek <sup>®</sup> High Density Fiberboard Roof Insulation	High Density fiber board	Blue Ridge Fiberboard, Inc.
DensDeck <sup>®</sup> Prime <sup>®</sup> Roof Board	Gypsum board	Georgia-Pacific Gypsum LLC
DensDeck <sup>®</sup> Roof Board	Gypsum board	Georgia-Pacific Gypsum LLC



# **APPROVED FASTENERS:**

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)	
1.	Drill-Tec <sup>™</sup> Base Sheet Fastener (1.7 in.)	G-90 galvanized fastener with plate for base sheet attachment to gypsum decks and lightweight insulating concrete decks. Coated with CR-10 fluorocarbon coating.	1.125" head x 1.75" length 2.75" Galvalume <sup>®</sup> steel stress plate	GAF	
2.	Drill-Tec <sup>™</sup> Base Sheet Fastener E (1.7 in.)	G-90 galvanized fastener with plate for base sheet attachment to gypsum decks and lightweight insulating concrete decks. Coated with CR-10 fluorocarbon coating.		GAF	

TABLE 3



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# **EVIDENCE SUBMITTED:**

<b>Test Agency</b>	<u>Test Identifier</u>	<b>Description</b>	Date
FM Approvals	J.I. 0D0A8.AM	4470	07/09/97
	JI 0D1A8.AM	4470	04/01/98
	J.I. 0Y9Q5.AM	4470	04/01/98
	JI 2B8A4.AM	4470	07/02/97
	3014692	4470	08/05/03
	3017250	4470	05/05/04
	3023458	4450	07/18/06
	3031350	4470	09/27/07
	3032172	4470	06/12/09
	3036980	4470	08/14/09
	3041769	4470	09/27/12
	3042887	4470	11/14/11
	3046388	4470	09/24/12
	3048066	4470	12/13/13
UL LLC	UL 790	R1306	06/27/24
Trinity   ERD	4674.11.01-1	TAS 114	11/21/01
	G30250.02.10-3-R2	ASTM D3909	06/03/15
	G34140.04.11-4-R2	ASTM D4601	06/04/15
	G34140.04.11-5-R3	ASTM D4897	06/04/15
	G43610.01.14	ASTM D4798	01/22/14
	SC6870.08.14-R1	ASTM D3909	09/04/14
	SC10680.05.16	ASTM D6163	05/10/16
NEMO ETC, LLC	4S-GAF-18-001.01.19-1	ASTM D2178	01/02/19
	4Q-GAF-21-SSMBB-01.B	ASTM D4897	09/07/21
PRI Construction Materials	GAF-464-02-01	ASTM C1289	02/06/14
Technologies, LLC	GAF-498-02-01	ASTM D6083	03/12/14
	GAF-499-02-01	ASTM D6083	03/12/14
	GAF-500-02-01	ASTM D6083	03/12/14
	GAF-692-02-01	ASTM D6083	03/14/16
	376T0227	ASTM D4897	12/20/21
	376T0228	ASTM D4897	12/20/21
	376T0229	ASTM D4897	12/20/21
	376T0272	ASTM D3909	02/03/22
	376T0275	ASTM D2178	01/02/19

# **DECK STRESS ANALYSIS CALCULATIONS/REPORTS**

<b>Engineer/Agency</b>	<u>Identifier</u>	<u>Assemblies</u>	Date
FM Approval Deck Limitation	N/A	A(1), A(2), E(1), E(2)	01/01/13



#### **APPROVED ASSEMBLIES**

Membrane:	BUR			
Deck Type 4I:	Lightweight Concrete, Insulated			
<b>Deck Description</b> :	Minimum 300 psi Celcore Cellular Lightweight Cond	crete		
System Type A(1)	: Anchor sheet mechanically fastened; one or more lay asphalt; membrane adhered.	ers of insulation adhered with	approved	
Deck:	Structural concrete deck or Minimum 22 ga. Grade 33 steel deck secured 6" o.c. to structural supports spaced a maximum of 5 ft. o.c. with 5/8" puddle welds and at each support at side laps. This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.			
All General and S	ystem Limitations shall apply.			
Anchor Sheet:	Install one ply of GAFGLAS <sup>®</sup> #75 Base Sheet, Tri-Ply <sup>®</sup> #75 Base Sheet, GAFGLAS <sup>®</sup> #80 Ultima <sup>™</sup> Base Sheet, GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Eliminator <sup>™</sup> Nailable Venting Base Sheet or Ruberoid <sup>®</sup> 20 mechanically fastened as described below.			
Fasteners: Drill-Tec <sup>™</sup> Base Sheet Fasteners (1.7 in.) or Drill-Tec <sup>™</sup> Base Sheet Fasteners E (1.7 in.) fastened at 9" o.c. in the 2" wide side laps and 9" o.c. staggered in two equally spaced rows in the field of the anchor sheet.   OR Drill-Tec <sup>™</sup> Base Sheet Fasteners (1.7 in.) or Drill-Tec <sup>™</sup> Base Sheet Fasteners E (1.7 in.) fastened at 12" o.c. in the 2" wide side laps and 12" o.c. staggered in three equally spaced rows in the field of the anchor sheet.				
One or more layers of any of the following insulations. Insulation Layer Insulation Fasteners Fastener (Table 3) Density/ft <sup>2</sup> EnergyGuard <sup>™</sup> Polyiso Insulation, EnergyGuard <sup>™</sup> RH Polyiso Insulation, EnergyGuard <sup>™</sup> RN Polyiso Insulation, EnergyGuard <sup>™</sup> Ultra Polyiso Insulation				
Minimum 0.5" thi		N/A	N/A	
EnergyGuard <sup>®</sup> R Minimum 1" thicl	A Polyiso Insulation <sup>K</sup>	N/A	N/A	
EnergyGuard <sup>™</sup> Perlite Recover Board, EnergyGuard <sup>™</sup> Perlite Roof Insulation, Structodek <sup>®</sup> High Density Roofing Fiberboard				
Minimum <sup>1</sup> / <sub>2</sub> " thic		N/A	N/A	
DensDeck <sup>®</sup> Roof H Minimum ¼" thic	Board, DensDeck <sup>®</sup> Prime <sup>®</sup> Roof Board, Securock <sup>®</sup> G k	ypsum-Fiber Roof Board N/A	N/A	

Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft<sup>2</sup>. 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. GAF requires either a ply of GAFGLAS<sup>®</sup> Stratavent<sup>®</sup> Eliminator<sup>™</sup> Perforated Venting Base Sheet laid dry or a layer of EnergyGuard<sup>™</sup> Perlite Roof Insulation or wood fiber overlay board on all polyisocyanurate insulation applications.



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Base Sheet:	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 or Ruberoid <sup>®</sup> 20 adhered to the insulation in a full mopping of an approved asphalt at an application rate of 25 lbs./sq. in accordance with manufacturer's instructions (see General Limitation #4). OR GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Eliminator <sup>™</sup> Perforated Venting Base Sheet loose laid dry. (Not for use with DensDeck <sup>®</sup> Roof Board, EnergyGuard <sup>™</sup> Perlite Recover Board, EnergyGuard <sup>™</sup> Perlite Roof Insulation or Structodek <sup>®</sup> High Density Roofing Fiberboard)
Ply Sheet:	One or more 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. applied in accordance with manufacturer's application instructions.
Cap Sheet: (Optional)	One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet, Tri-Ply <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. applied in accordance with manufacturer's application instructions.
Surfacing:	Optional on granular surfaced membranes; required for smooth membranes. Chosen components must be applied according to manufacturer's application 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.	Aluminum Fibered Roof Coating applied in accordance with manufacturer's instructions.
Maximum	Design

**Pressure:** -45 psf. (See General Limitation #7)



Membrane:	BUR		
Deck Type 4:	Lightweight Concrete, Insulated		
Deck Description:	Minimum 300 psi Celcore Cellular Lightweight Concrete with minimum 1" EPS Holey Board. Minimum 2" slurry coat poured over the EPS. When LWC is set up to support foot traffic, apply Celcore PVA Curing Compound to the top surface at a rate of 300 ft <sup>2</sup> /gal.		
System Type A(2):	: Anchor sheet mechanically fastened; one or more layers of insulation adhered with approved asphalt, membrane adhered.		
Deck:	Structural concrete deck or minimum 22 ga. Grade 33 steel deck secured 6" o.c. to structural supports spaced a maximum of 5 ft. o.c. with 5/8" puddle welds and at each support at side laps. This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.		
All General and Sy	stem Limitations apply.		
Anchor Sheet:	Install one ply of GAFGLAS <sup>®</sup> #75 Base Sheet, Tri-Ply <sup>®</sup> #75 Base Sheet, GAFGLAS <sup>®</sup> #80 Ultima <sup>™</sup> Base Sheet or GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Eliminator <sup>™</sup> Nailable Venting Base Sheet mechanically fastened as described below.		
Fastening:	Drill-Tec <sup>™</sup> Base Sheet Fasteners (1.7 in.) or Drill-Tec <sup>™</sup> Base Sheet Fasteners E (1.7 in.) fastened at 7" o.c. at the 3" wide side laps and 7" o.c. staggered in two equally spaced rows in the field of the anchor sheet.		
One or more layers of	of any of the following insulations.		
Insulation Layer		ition Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard <sup>™</sup> Pol Minimum 1.5" thic	lyiso Insulation, EnergyGuard <sup>™</sup> Ultra Polyiso Insulation k	N/A	N/A
EnergyGuard <sup>™</sup> Per Minimum 0.5" thic	rlite <sup>®</sup> Roof Insulation, Structodek <sup>®</sup> High Density Fiberboa k	rd N/A	N/A
			1 1/ 2 2
Minimum 0.25" thi	oard, DensDeck <sup>®</sup> Prime <sup>®</sup> Roof Board, Securock <sup>®</sup> Gypsum ick	-Fiber Roof Board N/A	N/A

Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft<sup>2</sup>. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down. GAF requires either a ply of GAFGLAS<sup>®</sup> Stratavent<sup>®</sup> Eliminator<sup>™</sup> Perforated Venting Base Sheet laid dry or a layer of EnergyGuard<sup>™</sup> Perlite Roof Insulation or wood fiber overlay board on all polyisocyanurate insulation applications.

Base Sheet: One ply of GAFGLAS<sup>®</sup> Ply 4, Tri-Ply<sup>®</sup> Ply 4, GAFGLAS<sup>®</sup> FlexPly<sup>™</sup> 6, GAFGLAS<sup>®</sup> #80 Ultima<sup>™</sup> Base Sheet, Ruberoid<sup>®</sup> 20, GAFGLAS<sup>®</sup> #75 Base Sheet or Tri-Ply<sup>®</sup> #75 Base Sheet adhered to the insulation in a full mopping of an approved asphalt at an application rate of 25 lbs./sq. in accordance with manufacturer's instructions (see General Limitation #4). OR GAFGLAS<sup>®</sup> Stratavent<sup>®</sup> Eliminator<sup>™</sup> Perforated Venting Base Sheet loose laid dry (Not for use with DensDeck<sup>®</sup> Roof Board, EnergyGuard<sup>™</sup> Perlite Recover Board, EnergyGuard<sup>™</sup> Perlite

Roof Insulation or Structodek<sup>®</sup> High Density Roofing Fiberboard)



Ply Sheet:	One or more 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> Mineral Surfaced Cap Sheet
(Optional)	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. Fibered Aluminum Roof Coating.
- 3.

#### Maximum Design

-75 psf. (See General Limitation #7) **Pressure:** 



Membrane:	BUR
Deck Type :	Lightweight Concrete, Insulated
Deck Description:	Minimum 300 psi Elastizell Lightweight Concrete, minimum 300 psi Celcore Cellular Lightweight Concrete or minimum 300 psi Mearlcrete over structural concrete deck.

System Type A(3): One or more layers of insulation adhered with adhesive, membrane adhered.

#### All General and System Limitations apply.

One or more layers of any of the following insulations. **Base Insulation Layer** 

Base Insulation Layer	<b>Insulation Fasteners</b>	Fastener		
	(Table 3)	Density/ft <sup>2</sup>		
EnergyGuard <sup>™</sup> Polyiso Insulation, EnergyGuard <sup>™</sup> RH Polyiso Insu	lation, EnergyGuard <sup>™</sup> RA P	olyiso		
Insulation, EnergyGuard <sup>™</sup> Ultra Polyiso Insulation				
Minimum 1.5" thick	N/A	N/A		
Top Insulation Layer	<b>Insulation Fasteners</b>	Fastener		
	(Table 3)	Density/ft <sup>2</sup>		
DensDeck <sup>®</sup> Roof Board, DensDeck <sup>®</sup> Prime <sup>®</sup> Roof Board, Securock <sup>®</sup> Gypsum-Fiber Roof Board				
Minimum 0.25" thick	N/A	N/A		

Note: All insulation shall be adhered with OlyBond<sup>®</sup> 500 or Olybond 500<sup>®</sup> Green applied in 0.75"-1" ribbons 12" o.c. Optional layers of the same insulation adhered with OlyBond<sup>®</sup> 500 or Olybond 500<sup>®</sup> Green may be applied. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One ply of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4, GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6, GAFGLAS <sup>®</sup> #80 Ultima <sup>™</sup> Base Sheet, Ruberoid <sup>®</sup> 20, GAFGLAS <sup>®</sup> #75 Base Sheet or Tri-Ply <sup>®</sup> #75 Base Sheet adhered to the insulation in a full mopping of an approved asphalt at an application rate of 25 lbs./sq. in accordance with manufacturer's instructions (see General Limitation #4).
Ply Sheet:	One or more plies of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply, 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: (Optional)	One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet, Tri-Ply <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
2.	asphalt at 60 lbs./sq. Topcoat <sup>®</sup> Membrane, Topcoat <sup>®</sup> MB Plus (to be used as a primer with Topcoat <sup>®</sup> Membrane) or Topcoat <sup>®</sup>
2.	Surface Seal SB applied at 1 to 1.5 gal./sq.
3.	Fibered Aluminum Roof Coating.

#### **Maximum Design**

Pressure:	-150 psf. (See General Limitation #9
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Membrane: BUR **Deck Type 4I:** Lightweight Concrete, Insulated **Deck Description:** Minimum 300 psi Elastizell Lightweight Concrete over structural concrete deck. System Type A(4): One or more layers of insulation adhered with adhesive, membrane adhered. All General and System Limitations apply. One or more layers of any of the following insulations. **Base Insulation Layer Insulation Fasteners** Fastener Density/ft<sup>2</sup> (Table 3) EnergyGuard<sup>™</sup> Polyiso Insulation, EnergyGuard<sup>™</sup> RA Polyiso Insulation, EnergyGuard<sup>™</sup> RH Polyiso Insulation, EnergyGuard<sup>™</sup> RN Polyiso Insulation, EnergyGuard<sup>™</sup> Ultra Polyiso Insulation Minimum 1.5" thick N/A N/A **Insulation Fasteners Top Insulation Layer** Fastener Density/ft<sup>2</sup> (Table 3) DensDeck<sup>®</sup> Roof Board, DensDeck<sup>®</sup> Prime<sup>®</sup> Roof Board, Securock<sup>®</sup> Gypsum-Fiber Roof Board Minimum 0.25" thick N/A N/A

Note: All insulation shall be adhered with GAF 2-Part Roofing Adhesive applied in 1.5" ribbons spaced 12" o.c. Optional layers of the same insulation adhered with GAF 2-Part Roofing Adhesive may be applied. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

S ti a Ply Sheet: C #	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 heet, Tri-Ply <sup>®</sup> #75 Base Sheet, GAFGLAS <sup>®</sup> #80 Ultima <sup>™</sup> Base Sheet or Ruberoid <sup>®</sup> 20 adhered to he insulation in a full mopping of an approved asphalt at an application rate of 25 lbs./sq. in ccordance with manufacturer's instructions One or more plies of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply, 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 ange and at a rate of 20-40 lbs./sq. in accordance with manufacturer's instructions.
(Optional) o	One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet, Tri-Ply <sup>®</sup> Mineral Surfaced Cap Sheet r GAFGLAS <sup>®</sup> EnergyCap <sup>™</sup> BUR Mineral Surfaced Cap Sheet adhered in a full mopping of pproved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. in accordance with nanufacturer's instructions.
C	Optional on granular surfaced membranes; required for smooth membranes. Chosen omponents must be applied in accordance with manufacturer's instructions. All coatings nust be listed within a current NOA.
	or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved
	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:** -127.5 psf. (See General Limitation #9



Membrane:	BUR			
Deck Type :	Lightweight Concrete, Non-insulated			
<b>Deck Description:</b>	Minimum 300 psi Celcore Cellular Lightweight Concrete			
System Type E(1):	Base sheet mechanically attached, ply sheet adhered, membrane adhered.			
Deck:	Structural concrete deck or Minimum 22 ga. Grade 33 steel deck secured 6" o.c. to structural supports spaced a maximum of 5 ft. o.c. with 5/8" puddle welds and at each support at side laps. This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.			
All General and System Limitations shall apply.				
Anchor Sheet:	Install one ply of GAFGLAS <sup>®</sup> #75 Base Sheet, Tri-Ply <sup>®</sup> #75 Base Sheet, GAFGLAS <sup>®</sup> #80 Ultima <sup>™</sup> Base Sheet or GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Eliminator <sup>™</sup> Nailable Venting Base Sheet mechanically fastened as described below.			
Fasteners:	Drill-Tec <sup>™</sup> Base Sheet Fasteners (1.7 in.) or Drill-Tec <sup>™</sup> Base Sheet Fasteners E (1.7 in.) fastened 9" o.c. at the 2" wide side laps and 9" o.c. staggered in two equally spaced rows in the field of the base sheet. Or			
	Drill-Tec <sup>™</sup> Base Sheet Fasteners (1.7 in.) or Drill-Tec <sup>™</sup> Base Sheet Fasteners E (1.7 in.) fastened 12" o.c. at the 2" wide side laps and 12" o.c. staggered in three equally spaced rows in the field of the base sheet.			
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 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. Or			
	One or more plies of 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: (Optional)	(Required if GAFGLAS <sup>®</sup> #80 Ultima <sup>™</sup> Base Sheet is used as a single ply sheet.) One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet, Tri-Ply <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 according to manufacturer's application instructions. All coatings must be listed within a current NOA.			
	l or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved			
2. Topco	It at 60 lbs./sq. bat <sup>®</sup> Membrane, Topcoat <sup>®</sup> MB Plus (to be used as a primer with Topcoat <sup>®</sup> Membrane) or Topcoat <sup>®</sup> be Seal SB applied at 1 to 1.5 gal./sq.			
	ed Aluminum Roof Coating.			

Maximum Design

**Pressure:** -45 psf. (See General Limitation #7)



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Membrane:	BUR	
Deck Type 4I:	Lightweight Concrete, Insulated	
Deck Description	<b>on:</b> Minimum 300 psi Celcore Cellular Lightweight Concrete with minimum 1" EPS Holey Board. Minimum 2" slurry coat poured over the EPS, When LWC is set up to support foot traffic apply Celcore PVA Curing Compound to the top surface at a rate of 300 ft <sup>2</sup> /gal.	
System Type E	(2): Anchor sheet mechanically fastened; one or more layers of insulation adhered with approved asphalt, membrane adhered.	
Deck:	Structural concrete deck or Minimum 22 ga. Grade 33 steel deck secured 6" o.c. to structural supports spaced a maximum of 5 ft. o.c. with 5/8" puddle welds and at each support at side laps. This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.	
All General and	d System Limitations apply.	
Anchor Sheet:	Install one ply of GAFGLAS <sup>®</sup> #75 Base Sheet, Tri-Ply <sup>®</sup> #75 Base Sheet, GAFGLAS <sup>®</sup> #80 Ultima <sup>™</sup> Base Sheet or GAFGLAS <sup>®</sup> Stratavent <sup>®</sup> Eliminator <sup>™</sup> Nailable Venting Base Sheet mechanically fastened as described below.	
Fastening:	Drill-Tec <sup>™</sup> Base Sheet Fasteners (1.7 in.) or Drill-Tec <sup>™</sup> Base Sheet Fasteners E (1.7 in.) fastened at 7" o.c. at the 3" wide side laps and 7" o.c. staggered in two equally spaced rows in the field of the anchor sheet.	
Base Sheet:	One ply of GAFGLAS <sup>®</sup> Ply 4, Tri-Ply <sup>®</sup> Ply 4, GAFGLAS <sup>®</sup> FlexPly <sup>™</sup> 6, GAFGLAS <sup>®</sup> #80 Ultima <sup>™</sup> Base Sheet, Ruberoid <sup>®</sup> 20, GAFGLAS <sup>®</sup> #75 Base Sheet or Tri-Ply <sup>®</sup> #75 Base Sheet adhered to the insulation in a full mopping of an approved asphalt at an application rate of 25 lbs./sq. in accordance with manufacturer's instructions (see General Limitation #4).	
Ply Sheet:	One or more 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: (Optional)	One ply of GAFGLAS <sup>®</sup> Mineral Surfaced Cap Sheet, Tri-Ply <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 according to manufacturer's application instructions. All coatings must be listed within a current NOA.	
	ravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved	
2. To Su	It at 60 lbs./sq. oat <sup>®</sup> Membrane, Topcoat <sup>®</sup> MB Plus (to be used as a primer with Topcoat <sup>®</sup> Membrane) or Topcoat <sup>®</sup> ce Seal SB applied at 1 to 1.5 gal./sq.	
3. Fi	bered Aluminum Roof Coating.	
Maximum Desi	gn	

**Pressure:** -75 psf. (See General Limitation #7



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# LIGHTWEIGHT INSULATING CONCRETE 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 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 gauge attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.
- 3. For systems where specific lightweight insulating concrete is not referenced, the minimum design mix shall be a minimum of 300 psi.

## **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



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