



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

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

**NOTICE OF ACCEPTANCE (NOA)**

**GAF Material Corporation  
1361 Alps Road  
Wayne, NJ 07470**

**SCOPE:**

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by the BCCO and accepted by the Building Code and Product Review Committee to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

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

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

**DESCRIPTION: GAF RUBEROID® Modified Bitumen Roof System for Wood Decks.**

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

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

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

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

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

This NOA revises NOA No. 07-1203.01 and consists of pages 1 through 31.  
The submitted documentation was reviewed by Jorge L. Acebo.



**NOA No.: 09-0224.01  
Expiration Date: 11/06/13  
Approval Date: 04/08/09  
Page 1 of 31**

## ROOFING SYSTEM APPROVAL

<b>Category:</b>	Roofing
<b>Sub-Category:</b>	Modified Bitumen
<b>Material:</b>	SBS/APP
<b>Deck Type:</b>	Wood
<b>Maximum Design Pressure</b>	-75 psf

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

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Leak Buster™ Matrix™ 307 Premium Asphalt Primer	5, 55 gallons	ASTM D41	Asphalt concrete primer used to promote adhesion of asphalt in built-up roofing.
GAF Mineral Shield® Granules	60 lb. Bags 100 lb. bags	ASTM D1863	Granules for surfacing of exposed asphalt, cold process cement or emulsion. GAF Mineral Shield® Granules shall be used for flashing applications only.
Leak Buster™ Matrix™ 305 Fibered Asphalt Emulsion	5 gallons	ASTM D1227	Surface coating for smooth surfaced roofs.
Leak Buster™ Matrix™ 303 Premium Fibered Aluminum Roof Coating	1, 5 gallons	ASTM D 2824	Fibered aluminum coating.
LeakBuster™ Matrix™ 322 Elastomeric Roof Coating	55 gallons		Elastomeric roof coating.
LeakBuster™ Matrix™ 306	55 gallons		Asphalt emulsion fibered.
LeakBuster™ Matrix™ 204 Wet/Dry Roof Cement	1, 5 gallons	ASTM D3019 ASTM D3409 ASTM D4586 ASTM D3409	Refined asphalt blended with a mineral stabilizer and fibers. Permits adhesion to wet and dry surfaces.
GAFGLAS® #75 Base Sheet	39.37" (1 meter) Wide	ASTM D4601	Type II Asphalt impregnated and coated glass mat base sheet.
GAFGLAS® #80 ULTIMA™ Base Sheet	39.37" (1 meter) Wide	ASTM D4601	Type II Asphalt impregnated and coated, fiberglass base sheet
GAFGLAS® Flex Ply™ 6	39.37" (1 meter) Wide	ASTM D2178	Type VI asphalt impregnated glass felt with asphalt coating.
GAFGLAS® Ply 4	39.37" (1 meter) Wide	ASTM D2178	Type IV asphalt impregnated glass felt with asphalt coating.
GAFGLAS® Mineral Surfaced Cap Sheet	39,37" (1 meter) Wide	ASTM D3909	Asphalt coated, glass fiber mat cap sheet surfaced with mineral granules.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
GAFGLAS® EnergyCap™ Mineral Surfaced Cap Sheet	39.37" (1 meter) Wide	ASTM D3909	Asphalt coated, glass fiber mat cap sheet surfaced with mineral granules with factory applied layer of TOPCOAT® EnergyCote™.
GAFGLAS® EnergyCap™ BUR Mineral Surface Cap Sheet	39.37" (1 meter) wide	ASTM D3909 Energystar™ Title 24 Compliant	Asphalt coated, glass fiber mat cap sheet surfaced with mineral granules with factory applied EnergyCote™
GAFGLAS® STRATAVENT® Eliminator™ Perforated	39.37" (1 meter) Wide	ASTM D3672 ASTM D4897	Fiberglass base sheet coated on both sides with asphalt. Surfaced on the bottom side with mineral granules embedded in asphaltic coating with factory perforations.
GAFGLAS® Flashing	various		Asphalt coated glass fiber mat flashing sheet available in three sizes.
GAFGLAS® STRATAVENT® Eliminator™ Perforated Nailable	39.37" (1 meter) Wide	ASTM D3672 ASTM D4897	Fiberglass base sheet coated on both sides with asphalt. Surfaced on the bottom side with mineral granules embedded in asphaltic coating.
RUBEROID® SBS Heat-Weld™ Smooth	1 meter (39.37") wide	ASTM D6164	Non-Woven Polyester mat coated with polymer-modified asphalt and smooth surfaced.
RUBEROID® SBS Heat-Weld™ Granule	1 meter (39.37") wide	ASTM D6164	Non-Woven Polyester mat coated with polymer modified asphalt and surfaced with mineral granules.
Roof Match™ SBS Mop Granule	107 sq. ft. (9.9 m2)	ASTM D6222 ASTM D5147	Non-woven polyester mat coated with polymer modified asphalt and surfaced with colored mineral granules.
RUBEROID® SBS Heat-Weld™ 170 FR	1 meter (39.37") wide	ASTM D6164	Non-Woven Polyester mat coated with fire retardant polymer modified asphalt and surfaced with mineral granules.
RUBEROID® SBS Heat-Weld™ PLUS	1 meter (39.37") wide	ASTM D6164	Non-Woven Polyester mat coated with polymer modified asphalt and surfaced with mineral granules.
RUBEROID® SBS Heat-Weld™ PLUS FR	1 meter (39.37") wide	ASTM D6164	Non-Woven Polyester mat coated with fire retardant polymer modified asphalt and surfaced with mineral granules.
RUBEROID® EnergyCap SBS Heat-Weld™ PLUS FR	1 meter (39.37") wide	ASTM D6164	A fiberglass mat reinforced, SBS modified bitumen cap membrane.
RUBEROID® Modified Base Sheet	39.37" (1 meter) Wide	ASTM D4601, Type II, UL Type G2 BUR	Premium glass fiber reinforced SBS-modified base sheet
RUBEROID® SBS Heat-Weld™ 25	1 meter (39.37") wide	ASTM D6164	Non-Woven Polyester mat coated with polymer-modified asphalt and smooth surfaced.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
RUBEROID® Mop Granule	39.37" (1 meter) Wide	ASTM D6222 ASTM D5147	Non-woven polyester mat coated with polymer modified asphalt and surfaced with mineral granules.
RUBEROID® MOP Smooth	1 sq. roll 87 lbs.	ASTM D6298 ASTM D5147	Non-woven polyester mat coated with polymer-modified asphalt and smooth surfaced.
RUBEROID® MOP PLUS	39.37" (1 meter) Wide	ASTM D6164 ASTM D5147	Non-woven polyester mat coated with polymer modified asphalt and surfaced with mineral granules.
RUBEROID® MOP 170FR	39.37" (1 meter) Wide	ASTM D6164 ASTM D5147	Non-Woven polyester mat coated with fire retardant polymer modified asphalt and surfaced with mineral granules.
RUBEROID® MOP FR	39.37" (1 meter) Wide	ASTM D6164 ASTM D5147	Non-Woven polyester mat coated with fire retardant polymer modified asphalt and surfaced with mineral granules.
RUBEROID® TORCH Smooth	39.37" (1 meter) Wide	ASTM D6222 ASTM D5147	Heavy duty, polyester reinforced, asphalt modified bitumen membrane, smooth surface.
RUBEROID® TORCH Granule	39.37" (1 meter) Wide	ASTM D6222 ASTM D5147	Heavy duty, polyester reinforced, asphalt modified bitumen membrane, granule surface.
RUBEROID® EnergyCap Torch Granule FR	1 meter (39.37") wide	ASTM D6222 ASTM D5147	A fiberglass mat reinforced, SBS modified bitumen cap membrane.
Roof Match™ APP Torch Granule	107 sq. ft. (9.9 m2)	ASTM D6222 ASTM D5147	Non-woven polyester mat coated with polymer modified asphalt and surfaced with colored mineral granules.
RUBEROID® TORCH PLUS	39.37" (1 meter) Wide	ASTM D6222 ASTM D5147	Heavy duty, polyester reinforced, asphalt modified bitumen membrane, granule surface
RUBEROID® TORCH FR	39.37" (1 meter) Wide	ASTM D6222 ASTM D5147	Heavy duty, polyester reinforced, coated with fire retardant asphalt modified bitumen membrane, granule surface.
RUBEROID® 170FR TORCH	39.37" (1 meter) Wide	ASTM D6222 ASTM D5147	Heavy duty, polyester reinforced, coated with fire retardant asphalt modified bitumen membrane, granule surface.
RUBEROID® EnergyCap SBS Heat Weld Plus FR	1 meter (39.37") wide	ASTM D6163 ASTM D5147	A fiberglass mat reinforced, SBS modified bitumen cap membrane.
RUBEROID® 20	39.37" (1 meter) Wide	ASTM D6163 ASTM D5147	SBS modified asphalt base sheet reinforce with a glass fiber mat.
RUBEROID® 30	39.37" (1 meter) Wide	ASTM D6163 ASTM D5147	Non woven fiberglass mat coated with polymer modified asphalt and surfaced with mineral granules.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
RUBEROID® 30 FR	39.37" (1 meter) Wide	ASTM D6298 ASTM D5147	Non woven fiberglass mat coated with fire retardant, polymer modified asphalt and surfaced with mineral granules.
RUBEROID® EnergyCap SBS 30 FR	1 meter (39.37") wide	ASTM D6163	A fiberglass mat reinforced, SBS modified bitumen cap membrane.
RUBEROID® ULTRACLAD® SBS	39.37" (1 meter) Wide	ASTM D6163 ASTM D5147	Woven fiberglass mat coated with Polymer modified asphalt surfaced with aluminum, copper or stainless steel foil.
RUBEROID® Dual FR	39.37" (1 meter) Wide	ASTM D6164 ASTM D5147	Non-woven polyester and fiberglass mat coated with fire retardant, polymer-modified asphalt and surfaced with mineral granules.
Vent Stacks (metal and plastic)		TAS 100(A) ASTM D1929 ASTM D635	One-way valve vent used to relieve built-up pressure within the roof system. GAF Vent Stacks are available in metal or plastic.
GAF Built-Up Roofing Asphalt	100 lb. cartons, bulk	ASTM D312, Types I, II, III and IV	Interply mopping and surfacing asphalt
RUBEROID® MOD Asphalt Asphalt L & Asphalt P	60 lb. kegs		SEBS modified asphalt
TOPCOAT® Surface Seal SB	5 gallons		Surface coating for smooth surfaced and mineral surfaced roofs.
LEAK BUSTER™ Matrix™ 715 MB Elastomeric Roofing Membrane	5 gallons	ASTM D3412 ASTM D21 ASTM D1475 ASTM E1644 ASTM D6083	Surface coating for smooth surfaced and mineral surfaced roofs.
EnergyCote™ Coating	2, 5 gallons		Highly reflective elastomeric coating
VersaShield®	350 sq. ft roll	ASTM-D226 4869 Type I, II	Non-Asphaltic Fiberglass-Based Underlayment
TOPCOAT® FireShield® MB	5, 55 gallons	ASTM D412 ASTM D21 ASTM 1475 ASTM E1644	Elastomeric roofing membrane
Leak Buster™ Matrix™ 531 WeatherCote™ Elastomeric Flashing Grade	5 gallons		Surface coating for smooth surfaced and mineral surfaced roofs.
LeakBuster™ Matrix™ 201 Premium SBS Flashing	5 gallons	ASTM D3019	Cold Applied Modified SEBS Asphalt Adhesive – Flashing Grade.
Leak Buster™ Matrix™ 102 SBS Adhesive Label	5 gallons	ASTM D3019	Cold Applied Modified SEBS Asphalt Adhesive.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Leak Buster™ Matrix™ 202 SBS Flashing Cement Label	5 gallons	ASTM D4586	Cold Applied Modified SEBS Asphalt Adhesive – Flashing Grade.
Leak Buster™ Matrix™ 203 Plastic Roof Cement Label	5 gallons	ASTM D4586	Standard Plastic Asphalt Roofing Cement
Leak Buster™ Matrix™ 103 Cold Process Adhesive Label	5 gallons	ASTM D3019	Cold Applied Asphalt Adhesive.
LeakBuster™ Matrix™ 304 Non-Fibered Aluminum Roof	5 gallons	ASTM D2824, Type I	Non-fibered. Aluminum pigmented, asphalt roof coating.
Leak Buster™ Matrix™ 602 MB Xtra Elastomeric Roofing Membrane	5 gallons	ASTM D412 ASTM B117 ASTM C794 ASTM G21 FTMS141.6271 ASTM D2196 ASTM D1475 ASTM E1644	Surface coating for smooth surfaced and mineral surfaced roofs.
TOPCOAT® MB Plus	5, 55 gallons	ASTM D412, ASTM D21, ASTM D1475 ASTM E1644	Water-based, low VOC, sprayable polymeric liquid, which cures to form a seamless rubber membrane.



**APPROVED INSULATIONS:**

<b>Product Name</b>	<b>Product Description</b>	<b>Manufacturer (With Current NOA)</b>
EnergyGuard™ Fiberboard	Fiberboard insulation	GAF Materials Corp.
EnergyGuard™ Permalite	Perlite insulation board	GAF Materials Corp.
EnergyGuard™ Strip	Cut perlite board	GAF Materials Corp.
EnergyGuard™ Recover Board	Perlite recover board	GAF Materials Corp.
EnergyGuard™ Tapered Edge Strip	Tapered perlite board	GAF Materials Corp.
EnergyGuard™ PolyIso	Polyisocyanurate foam insulation	GAF Materials Corp.
EnergyGuard™ RA, RN	Polyisocyanurate foam insulation	GAF Materials Corp.
EnergyGuard™ Composite, RA	Polyisocyanurate/wood fiberboard or perlite composite	GAF Materials Corp.
DensDeck®	Water resistant gypsum board	G-P Gypsum Corp.
DensDeck Prime®	Water resistant gypsum board	G-P Gypsum Corp.
DensDeck DuraGuard™	Water resistant gypsum board	G-P Gypsum Corp.
Structodek®	Wood fiber insulation board	Knight Celotex
Structodek® TD	Flame Resistant High Density Wood Fiber board.	Knight-Celotex
Securock™	Fiber reinforced roof board	USG Corporation

**APPROVED FASTENERS:**

<b>TABLE 3</b>				
<b>Fastener Number</b>	<b>Product Name</b>	<b>Product Description</b>	<b>Dimensions</b>	<b>Manufacturer (With Current NOA)</b>
1.	Drill-Tec™ #12 Standard, #14 and #15 extra Heavy Duty Fastener, Heavy Duty Roofing Fastener	Insulation fastener and Base Play fastener for steel, wood & concrete decks.	Various	GAF Materials Corp.
2.	Drill-Tec™ ASAP	Pre-assembled Drill-Tec™ Fasteners and metal and plastic plates.	Various	GAF Materials Corp.
3.	Drill-Tec™ CR Base Sheet Fastener and Plate	Base sheet fastening assembly.	Various	GAF Materials Corp.
4.	Drill-Tec™ Galvalume Plates	Round Galvalume stress plates.	3" and 3 ½"	GAF Materials Corp.
5.	Drill-Tec™ Polypropylene Plates	Round polypropylene stress plates.	3" and 3 ½"	GAF Materials Corp.
6.	Drill-Tec™ AccuTrac Plate	Square Galvalume® coated steel plate.	3" Square	OMG



**EVIDENCE SUBMITTED:**

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Factory Mutual Research Corp.	3029832	4470 - TAS 114	05/11/07
	3010215	4470 - TAS 114	03/01/01
	3001276	4470 - TAS 114	01/28/99
	1B9A8.AM	4470 - TAS 114	09/04/97
	3D4Q2.AM	4470 - TAS 114	04/30/97
	0D1A8.AM	4470 - TAS 114	04/01/98
Underwriters Laboratories	TGFU.R19254	UL 790	10/27/06
Trinity Engineering	4483.04 97-1	TAS 114	06/06/97
PRI Asphalt Technologies, Inc.	GAF-020-02-01	ASTM D 249	02/01/02
		ASTM D 4977	
IRT-ARCON Inc.	02-005	TAS 114	03/01/02
	02-014	TAS 114	04/08/02
	01-039	TAS 114	03/01/02
Trinity   ERD	G6850.08.08	ASTM D6164	08/29/08
	G6850.08.08	ASTM D6163	08/01/08
	G6850.10.08	ASTM D6222	10/06/08
	G6850.11.08	ASTM D6222	11/05/08



**APPROVED ASSEMBLIES**

- Membrane Type:** SBS
- Deck Type II:** Wood, Insulated
- Deck Description:** 19/32" or greater plywood or wood plank
- System Type A(1):** Anchor sheet mechanically fastened, all layers of insulation adhered with approved asphalt.

**All General and System Limitations shall apply.**

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
<b>EnergyGuard™ PolyIso, RA, RN, EnergyGuard™ Composite RA,</b> Minimum 1" thick	N/A	N/A
<b>Wood Fiber, Structodek®, Structodek® TD, EnergyGuard™ Recover Board</b> Minimum 1/2" thick	N/A	N/A
<b>EnergyGuard™ Perlite</b> Minimum 3/4" thick	N/A	N/A

**Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 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® STRATAVENT® Eliminator™ Perforated laid dry or a layer of EnergyGuard™, Perlite or wood fiber overlay board on all polyisocyanurate applications.**

**Fire Barrier:** FireOut™ Fire Barrier Coating, VersaShield® Non-Asphaltic Fiberglass-Based Underlayment or Securock™.

**Anchor sheet:** GAFGLAS® #80 ULTIMA™ Base Sheet, STRATAVENT® Eliminator™ Nailable Base Sheet, RUBEROID® Modified Base Sheet, RUBEROID® 20, RUBEROID® SBS Heat-Weld™ Smooth or RUBEROID® SBS Heat-Weld™ 25 base sheet mechanically fastened to deck as described below;

**Fastening Options:** GAFGLAS® Ply 4, GAFGLAS® Flex Ply™ 6, GAFGLAS® #75 Base Sheet or any of above Anchor sheets attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the lap staggered and in two rows 12" o.c. in the field.

*(Maximum Design Pressure –45 psf, See General Limitation #7)*

GAFGLAS® Ply 4, GAFGLAS® Flex Ply™ 6, GAFGLAS® #75 Base Sheet or any of above Anchor sheets attached to deck with Drill-Tec™ #12 standard, #14 or #15 Screws and 3" Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates, 12" o.c. in 3 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 12" o.c. in the field of the sheet.

*(Maximum Design Pressure –45 psf, See General Limitation #7)*



GAFGLAS® Flex Ply™ 6, GAFGLAS® #75 Base Sheet or any of above Anchor sheets attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the 4" lap staggered and in two rows 9" o.c. in the field.

*(Maximum Design Pressure –52.5 psf, See General Limitation #7)*

GAFGLAS® #80 ULTIMA™, RUBEROID® 20, RUBEROID® Mop Smooth, base sheet attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the 4" lap staggered and in two rows 9" o.c. in the field.

*(Maximum Design Pressure –60 psf, See General Limitation #7)*

GAFGLAS® #75 Base Sheet or any of above Anchor sheets attached to deck with Drill-Tec™ #12 standard, #14 or # 15 Screws and 3" Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates, 12" o.c. in 4 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 9" o.c. in the field of the sheet.

*(Maximum Design Pressure –60 psf, See General Limitation #7)*

Any of above Anchor sheets attached to deck approved annular ring shank nails and 3" inverted Drill-Tec™ insulation plates at a fastener spacing of 9" o.c. at the 4" lap staggered in two rows 9" in the field.

*(Maximum Design Pressure –60 psf, See General Limitation #7)*

GAFGLAS® #75 Base Sheet or any of above Anchor sheets attached to deck with Drill-Tec™ #12 standard, #14 or # 15 Screws and 3" Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates, 8" o.c. in 4 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 9" o.c. in the field of the sheet.

*(Maximum Design Pressure –75 psf, See General Limitation #7)*

**Base Sheet:**

(Optional) Install one ply of GAFGLAS® #75, GAFGLAS® #80 ULTIMA™ Base Sheet, GAFGLAS® PLY 4, GAFGLAS Flex Ply™ 6, GAFGLAS® STRATAVENT® Eliminator™ Perforated (laid dry), RUBEROID® Modified Base Sheet, RUBEROID® MOP Smooth, RUBEROID® 20, RUBEROID® SBS Heat-Weld™ Smooth or RUBEROID® SBS Heat-Weld™ 25 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 (see General Limitation #4).

**Ply Sheet:**

(Optional) One or more plies GAFGLAS® PLY 4, GAFGLAS® Flex Ply™ 6 sheet, GAFGLAS® #80, RUBEROID® MOP Smooth, RUBEROID® 20 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Membrane:**

One or more plies of RUBEROID® 20, RUBEROID® 30, RUBEROID® EnergyCap SBS 30 FR, RUBEROID® 30 FR RUBEROID® MOP Smooth, RUBEROID® Mop 170 FR, RUBEROID® Mop Granule, Roof Match™ SBS Mop Granule, RUBEROID® MOP PLUS, RUBEROID® MOP FR, RUBEROID® ULTRACLAD® SBS, or RUBEROID® Dual FR fully adhered in an approved asphalt at an application rate of 25 lb./sq. ± 15%.



**Surfacing:**

(Optional, required if RUBEROID® MOP Smooth or RUBEROID® 20 is top membrane) Install one of the following:

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. or applied in a flood coat of Leak Buster™ Matrix™ 103 Cold Process Adhesive applied at a rate of 3 gal./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, GAFGLAS® Energy Cap Mineral Surfaced Capsheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Leak Buster™ Matrix™ 303 Premium Fibered Aluminum Roof Coating, at 1.5 gal./sq.
4. Leak Buster™ Matrix™ 715, Leak Buster™ Matrix™ 322, TOPCOAT® MB+, TOPCOAT® Fireshield Elastomeric Roofing Membrane, applied at 1 to 1.5 gal./sq.
5. Leak Buster™ Matrix™ 602 MB Xtra Elastomeric Roofing Membrane, EnergyCote® roof coating applied at 1 to 1.5 gal./sq.
6. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq
7. Advance Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.

**Maximum  
Design Pressure:**

**See Fastening Above**



**Membrane Type:** APP/SBS Heat Weld  
**Deck Type II:** Wood, Insulated  
**Deck Description:**  $\frac{19}{32}$ " or greater plywood or wood plank  
**System Type A(2):** Anchor sheet mechanically fastened, all layers of insulation adhered with approved asphalt.

**All General and System Limitations shall apply.**

One or more layers of any of the following insulations.

<b>Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™ RA, EnergyGuard™ RA Composite</b> Minimum 1" thick	N/A	N/A
<b>Wood Fiber, Structodek®, Structodek® TD, EnergyGuard™ RecoverBoard</b> Minimum ½" thick	N/A	N/A
<b>EnergyGuard™ Perlite</b> Minimum ¾" thick	N/A	N/A

**Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 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® STRATAVENT® Eliminator™ perforated laid dry or a layer of EnergyGuard™ Perlite or EnergyGuard™ wood fiber overlay board on all polyisocyanurate applications.**

**Fire Barrier:** FireOut™ Fire Barrier Coating, VersaShield® Non-Asphaltic Fiberglass-Based Underlayment or Securock™.  
**(optional)**

**Anchor sheet:** GAFGLAS® #80 ULTIMA™ Base Sheet, STRATAVENT® Eliminator™ Nailable, RUBEROID® Modified Base Sheet, RUBEROID® 20, RUBEROID® SBS Heat-Weld™ Smooth or RUBEROID® SBS Heat-Weld™ 25 base sheet mechanically fastened to deck as described below;

**Fastening Options:** GAFGLAS® Ply 4, GAFGLAS® Flex Ply™ 6, GAFGLAS® #75 Base Sheet or any of above Anchor sheets attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the lap staggered and in two rows 12" o.c. in the field.

*(Maximum Design Pressure –45 psf, See General Limitation #7)*

GAFGLAS® Ply 4, GAFGLAS® Flex Ply™ 6, GAFGLAS® #75 Base Sheet or any of above Anchor sheets attached to deck with Drill-Tec™ #12 standard, #14 or #15 Screws and 3" Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates, 12" o.c. in 3 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 12" o.c. in the field of the sheet.

*(Maximum Design Pressure –45 psf, See General Limitation #7)*



GAFGLAS® Flex Ply™ 6, GAFGLAS® #75 Base Sheet or any of above Anchor sheets attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the 4" lap staggered and in two rows 9" o.c. in the field.

***(Maximum Design Pressure –52.5 psf, See General Limitation #7)***

GAFGLAS® #80 ULTIMA™, RUBEROID® 20, RUBEROID® Mop Smooth, base sheet attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the 4" lap staggered and in two rows 9" o.c. in the field.

***(Maximum Design Pressure –60 psf, See General Limitation #7)***

GAFGLAS® #75 Base Sheet or any of above Anchor sheets attached to deck with Drill-Tec™ #12 standard, #14 or # 15 Screws and 3" Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates, 12" o.c. in 4 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 9" o.c. in the field of the sheet.

***(Maximum Design Pressure –60 psf, See General Limitation #7)***

Any of above Anchor sheets attached to deck approved annular ring shank nails and 3" inverted Drill-Tec™ insulation plates at a fastener spacing of 9" o.c. at the 4" lap staggered in two rows 9" in the field.

***(Maximum Design Pressure –60 psf, See General Limitation #7)***

GAFGLAS® #75 Base Sheet or any of above Anchor sheets attached to deck with Drill-Tec™ #12 standard, #14 or # 15 Screws and 3" Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates, 8" o.c. in 4 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 9" o.c. in the field of the sheet.

***(Maximum Design Pressure –75 psf, See General Limitation #7)***

**Base Sheet:**

Install one ply of GAFGLAS® #75, GAFGLAS® #80 ULTIMA™ Base Sheet, GAFGLAS® PLY 4, GAFGLAS® Flex Ply™ 6, GAFGLAS® STRATAVENT® Eliminator™ Perforated (laid dry), RUBEROID® Modified Base Sheet, RUBEROID® MOP Smooth, RUBEROID® 20, RUBEROID® SBS Heat-Weld™ Smooth or RUBEROID® SBS Heat-Weld™ 25 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 (see **General Limitation #4**).

**Ply Sheet:**

(Optional except over RUBEROID® Modified Base Sheet, RUBEROID® MOP Smooth, RUBEROID® 20, RUBEROID® SBS Heat-Weld™ Smooth or RUBEROID® SBS Heat-Weld™) One or more plies GAFGLAS® PLY 4, GAFGLAS® Flex Ply™ 6 or GAFGLAS® #80 ULTIMA™ sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or RUBEROID® Torch Smooth torch applied according to manufacturer's application instructions.



**Membrane:**

One ply of RUBEROID® Torch Smooth, RUBEROID® Torch Granule, RUBEROID® EnergyCap Torch Granule FR, Roof Match™ APP Torch Granule, RUBEROID® Torch Plus Granule, RUBEROID® EnergyCap Torch Plus FR, or RUBEROID® Torch FR torch applied according to manufacturer's application instructions.

Or

One or more plies of RUBEROID® SBS Heat-Weld™ PLUS, RUBEROID® SBS Heat-Weld™ PLUS FR, RUBEROID® SBS Heat-Weld™ 170 FR, RUBEROID® EnergyCap™ SBS Heat Weld Plus, RUBEROID® SBS Heat-Weld™, RUBEROID® SBS Heat-Weld™ Smooth, RUBEROID® ULTRACLAD® SBS and RUBEROID® SBS Heat-Weld™ 25 applied according to manufacturer's application instructions.

**Surfacing:**

(Optional, required if RUBEROID® MOP Smooth or RUBEROID® 20 is top membrane) Install one of the following:

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. or applied in a flood coat of Leak Buster™ Matrix™ 103 Cold Process Adhesive applied at a rate of 3 gal./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, GAFGLAS® Energy Cap Mineral Surfaced Capsheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Leak Buster™ Matrix™ 303 Premium Fibered Aluminum Roof Coating, at 1.5 gal./sq.
4. Leak Buster™ Matrix™ 715, Leak Buster™ Matrix™ 322, TOPCOAT® MB+, TOPCOAT® Fireshield Elastomeric Roofing Membrane, applied at 1 to 1.5 gal./sq.
5. Leak Buster™ Matrix™ 602 MB Xtra Elastomeric Roofing Membrane, EnergyCote® roof coating applied at 1 to 1.5 gal./sq.
6. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.
7. Advance Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.

**Maximum  
Design Pressure:**

**See Fastening Above**



- Membrane Type:** SBS
- Deck Type II:** Wood, Insulated
- Deck Description:**  $\frac{19}{32}$ " or greater plywood or wood plank
- System Type B(1):** Optional base sheet laid dry; base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

**All General and System Limitations shall apply.**

One or more layers of any of the following insulations.

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™ RA</b> Minimum 1.3" thick	1, 2, or 3	1:3 ft <sup>2</sup>
<b>EnergyGuard™ RN</b> Minimum 1.4" thick	1, 2, or 3	1:3 ft <sup>2</sup>
<b>EnergyGuard™</b> Minimum 1.3" thick	1, 2, or 3	1:3 ft <sup>2</sup>
<b>EnergyGuard™</b> Minimum 1.5" thick	3	1:3 ft <sup>2</sup>
<b>EnergyGuard™ Perlite</b> Minimum ¾" thick	1, or 3	1:2 ft <sup>2</sup>
<b>Wood Fiber, EnergyGuard™ Fiberboard, Structodek®, Structodek® TD</b> Minimum 1" thick	1, 2, or 3	1:2 ft <sup>2</sup>

**Note:** Base layers of insulation shall be mechanically attached 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. Insulation fasteners shall be tested for withdrawal resistance in compliance with Protocol TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment. GAF requires either a ply of GAFGLAS® STRATAVENT® Eliminator™ perforated laid dry or a layer of EnergyGuard™ Perlite or wood fiber overlay board on all polyisocyanurate applications.

<b>Top Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>Any of the insulation listed for Base Layer, above.</b>		
<b>High Density Wood Fiber, Structodek®, Structodek® TD, EnergyGuard™ Recover Board</b> Minimum ½" thick	N/A	N/A

**Note:** Optional top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 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.

- Fire Barrier:** FireOut™ Fire Barrier Coating, VersaShield® Non-Asphaltic Fiberglass-Based Underlayment or Securock™.
- (optional)**



**Base Sheet:** (Optional) Install one ply of GAFGLAS® #75, GAFGLAS® #80 ULTIMA™ Base Sheet, GAFGLAS® PLY 4, GAFGLAS® Flex Ply™ 6, GAFGLAS® STRATAVENT® Eliminator™ Perforated (laid dry), RUBEROID® Modified Base Sheet, RUBEROID® MOP Smooth or RUBEROID® 20 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; (see **General Limitation #4**).

**Ply Sheet:** (Optional) One or more plies GAFGLAS® PLY 4, GAFGLAS Flex Ply™ 6 sheet or GAFGLAS® #80 ULTIMA™ adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Membrane:** One or more plies of RUBEROID® 20, RUBEROID® 30, RUBEROID® EnergyCap SBS 30 FR RUBEROID® 30 FR RUBEROID® MOP Smooth, RUBEROID® Mop 170 FR, RUBEROID® Mop Granule, Roof Match™ SBS Mop Granular RUBEROID® MOP PLUS, RUBEROID® MOP FR, RUBEROID® Dual FR or RUBEROID® ULTRACLAD® SBS, fully adhered in an approved asphalt at an application rate of 25 lb./sq. ± 15%.

**Surfacing:** (Optional, required if RUBEROID® MOP Smooth or RUBEROID® 20 is top membrane) Install one of the following:

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. or applied in a flood coat of Leak Buster™ Matrix™ 103 Cold Process Adhesive applied at a rate of 3 gal./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, GAFGLAS® Energy Cap Mineral Surfaced Capsheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Leak Buster™ Matrix™ 303 Premium Fibered Aluminum Roof Coating, at 1.5 gal./sq.
4. Leak Buster™ Matrix™ 715, Leak Buster™ Matrix™ 322, TOPCOAT® MB+, TOPCOAT® Fireshield Elastomeric Roofing Membrane, applied at 1 to 1.5 gal./sq.
5. Leak Buster™ Matrix™ 602 MB Xtra Elastomeric Roofing Membrane, EnergyCote® roof coating applied at 1 to 1.5 gal./sq.
6. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq
7. Advance Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.

**Maximum Design**

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



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- Membrane Type:** APP/SBS Heat Weld
- Deck Type 1I:** Wood, Insulated
- Deck Description:** <sup>19</sup>/<sub>32</sub> " or greater plywood or wood plank.
- System Type B(2):** Optional base sheet laid dry; base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

**All General and System Limitations shall apply.**

One or more layers of any of the following insulations.

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™ RA</b> Minimum 1.3" thick	1, 2, or 3	1:3 ft <sup>2</sup>
<b>EnergyGuard™ RN</b> Minimum 1.4" thick	1, 2, or 3	1:3 ft <sup>2</sup>
<b>EnergyGuard™</b> Minimum 1.3" thick	1, 2, or 3	1:3 ft <sup>2</sup>
<b>EnergyGuard™ Composite EnergyGuard™ RA Composite</b> Minimum 1.5" thick	3	1:3 ft <sup>2</sup>
<b>EnergyGuard™ Perlite</b> Minimum ¾" thick	1, or 3	1:2 ft <sup>2</sup>
<b>Wood Fiber, EnergyGuard™ Fiberboard, Structodek®, Structodek® TD</b> Minimum 1" thick	1, 2, or 3	1:2 ft <sup>2</sup>

**Note:** Base layers of insulation shall be mechanically attached 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. Insulation fasteners shall be tested for withdrawal resistance in compliance with Protocol TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment. GAF requires either a ply of GAFGLAS® STRATAVENT® Eliminator™ perforated laid dry or a layer of EnergyGuard™ Perlite or wood fiber overlay board on all polyisocyanurate applications.

<b>Top Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>Any of the insulation listed for Base Layer, above.</b>		
<b>High Density Wood Fiber, Structodek®, Structodek® TD, EnergyGuard™ Recover Board</b> Minimum ½" thick	N/A	N/A

**Note:** Optional top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 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.

**Fire Barrier:** FireOut™ Fire Barrier Coating, VersaShield® Non-Asphaltic Fiberglass-Based Underlayment or Securock™.



- Base Sheet:** Install one ply of GAFGLAS® #75, GAFGLAS® #80 ULTIMA™ Base Sheet, GAFGLAS® PLY 4, GAFGLAS® Flex Ply™ 6, GAFGLAS® STRATAVENT® Eliminator™ Perforated (laid dry), RUBEROID® Modified Base Sheet, RUBEROID® MOP Smooth, RUBEROID® 20, RUBEROID® SBS Heat-Weld™ Smooth or RUBEROID® SBS Heat-Weld™ 25 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; **(see General Limitation #4).**
- Ply Sheet:** (Optional, required when using RUBEROID® 20) One or more plies GAFGLAS® PLY 4, GAFGLAS® Flex Ply™ 6 sheet or GAFGLAS® #80 ULTIMA™ adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Membrane:** One ply of RUBEROID® Torch Smooth, RUBEROID® Torch Granule, Roof Match™ APP Torch Granule, RUBEROID® EnergyCap™ Torch Granule FR, RUBEROID® Torch Plus Granule or RUBEROID® Torch FR, RUBEROID® EnergyCap™ Torch Plus FR torch applied according to manufacturer's application instructions.  
Or  
One or more plies of RUBEROID® SBS Heat-Weld™ PLUS, RUBEROID® SBS Heat-Weld™ PLUS FR, RUBEROID® SBS Heat-Weld™ 170 FR, RUBEROID® EnergyCap™ SBS Heat-Weld™ Plus FR, RUBEROID® SBS Heat-Weld™, RUBEROID® SBS Heat-Weld™ Smooth, RUBEROID® ULTRACLAD® SBS and RUBEROID® SBS Heat-Weld™ 25 applied according to manufacturer's application instructions.
- Surfacing:** (Optional, required if RUBEROID® MOP Smooth or RUBEROID® 20 is top membrane) Install one of the following:
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. or applied in a flood coat of Leak Buster™ Matrix™ 103 Cold Process Adhesive applied at a rate of 3 gal./sq.
  2. GAFGLAS® Mineral Surfaced Cap Sheet, GAFGLAS® Energy Cap Mineral Surfaced Capsheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
  3. Leak Buster™ Matrix™ 303 Premium Fibered Aluminum Roof Coating, at 1.5 gal./sq.
  4. Leak Buster™ Matrix™ 715, Leak Buster™ Matrix™ 22, TOPCOAT® MB+, TOPCOAT® Fireshield Elastomeric Roofing Membrane, applied at 1 to 1.5 gal./sq.
  5. Leak Buster™ Matrix™ 602 MB Xtra Elastomeric Roofing Membrane, EnergyCote® roof coating applied at 1 to 1.5 gal./sq.
  6. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.
  7. Advance Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
- Maximum Design Pressure:** -45 psf;(See General Limitation #7)



**Membrane Type:** SBS  
**Deck Type II:** Wood, Insulated  
**Deck Description:**  $\frac{19}{32}$ " or greater plywood or wood plank  
**System Type C(1):** One or more layers of insulation simultaneously attached; Base layer optional.

**All General and System Limitations shall apply.**

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™ RA, EnergyGuard™ RN</b> Minimum 1.3" thick	N/A	N/A
<b>EnergyGuard™</b> Minimum 1.4" thick	N/A	N/A
<b>EnergyGuard™ Composite, EnergyGuard™ RA Composite</b> Minimum 1.5" thick	N/A	N/A
<b>EnergyGuard™ Perlite</b> Minimum ¾" thick	N/A	N/A
<b>Wood Fiber, EnergyGuard™ Fiberboard</b> Minimum 1" thick	N/A	N/A

**Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

<b>Top Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard RA</b> Minimum 1.3" thick	1, 2, or 3	1:3 ft <sup>2</sup>
<b>EnergyGuard™ RN</b> Minimum 1.4" thick	1, 2, or 3	1:3 ft <sup>2</sup>
<b>EnergyGuard™ RA, EnergyGuard</b> Minimum 1.3" thick	1, 2, or 3	1:3 ft <sup>2</sup>
<b>EnergyGuard™ Composite, EnergyGuard™ RA Composite</b> Minimum 1.5" thick	3	1:3 ft <sup>2</sup>
<b>EnergyGuard™ Perlite</b> Minimum ¾" thick	1, or 3	1:2 ft <sup>2</sup>
<b>EnergyGuard™ Fiberboard, Structodek®, Structodek® TD</b> Minimum 1" thick	1, 2, or 3	1:2 ft <sup>2</sup>

**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® STRATAVENT® Eliminator™ Perforated laid dry or a layer of EnergyGuard™ Perlite or wood fiber overlay board on all polyisocyanurate applications.**



**Fire Barrier:** FireOut™ Fire Barrier Coating, VersaShield® Non-Asphaltic Fiberglass-Based Underlayment or Securock™.

**Base Sheet:** Install one ply of GAFGLAS® #75, GAFGLAS® #80 ULTIMA™ Base Sheet GAFGLAS® PLY 4, GAFGLAS® FlexPly™ 6, GAFGLAS® STRATAVENT® Perforated (laid dry), RUBEROID® Modified Base Sheet, RUBEROID® MOP Smooth or RUBEROID® 20 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. If base sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval the use of an overlay board is approved; (see **General Limitation #4**).

**Ply Sheet:** (Optional) One or more plies GAFGLAS® PLY 4, GAFGLAS® Flex Ply™ 6 sheet or GAFGLAS® #80 ULTIMA™ adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Membrane:** One or more plies of RUBEROID® 20 , RUBEROID® 30, RUBEROID® EnergyCap™ SBS 30 FR, RUBEROID® 30 FR, RUBEROID® MOP Smooth, RUBEROID® Mop 170 FR, RUBEROID® Mop Granule, Roof Match™ SBS Mop Granule, RUBEROID® MOP PLUS, RUBEROID® MOP FR, RUBEROID® Dual FR or RUBEROID® ULTRACLAD® SBS, fully adhered in an approved asphalt at an application rate of 20-40 lbs./sq.

**Surfacing:** (Optional, required if RUBEROID® MOP Smooth or RUBEROID® 20 is top membrane) Install one of the following:

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. or applied in a flood coat of Leak Buster™ Matrix™ 103 Cold Process Adhesive applied at a rate of 3 gal./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, GAFGLAS® Energy Cap Mineral Surfaced Capsheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Leak Buster™ Matrix™ 303 Premium Fibered Aluminum Roof Coating, at 1.5 gal./sq.
4. Leak Buster™ Matrix™ 715, Leak Buster™ Matrix™ 322, TOPCOAT® MB+, TOPCOAT® Fireshield Elastomeric Roofing Membrane, applied at 1 to 1.5 gal./sq.
5. Leak Buster™ Matrix™ 602 MB Xtra Elastomeric Roofing Membrane, EnergyCote® roof coating applied at 1 to 1.5 gal./sq.
6. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq
7. Advance Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.

**Maximum Design Pressure:**

-45 psf;(See **General Limitation #7**)



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**Membrane Type:** APP/SBS Heat Weld

**Deck Type II:** Wood, Insulated

**Deck Description:**  $\frac{19}{32}$ " or greater plywood or wood plank

**System Type C(2):** One or more layers of insulation simultaneously attached; Base layer optional.

**All General and System Limitations shall apply.**

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™, EnergyGuard™ RA, EnergyGuard™ RN</b> Minimum 1.3" thick	N/A	N/A
<b>EnergyGuard™</b> Minimum 1.4" thick	N/A	N/A
<b>EnergyGuard™ Composite, EnergyGuard™ RA Composite</b> Minimum 1.5" thick	N/A	N/A
<b>EnergyGuard™ Perlite, EnergyGuard™ Recover Board</b> Minimum ¾" thick	N/A	N/A
<b>EnergyGuard™ Fiberboard</b> Minimum 1" thick	N/A	N/A

**Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

<b>Top Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™ RA</b> Minimum 1.3" thick	1, 2, or 3	1:3 ft <sup>2</sup>
<b>EnergyGuard™ RN</b> Minimum 1.4" thick	1, 2, or 3	1:3 ft <sup>2</sup>
<b>EnergyGuard™</b> Minimum 1.3" thick	1, 2, or 3	1:3 ft <sup>2</sup>
<b>EnergyGuard™ Composite, EnergyGuard™ RA Composite</b> Minimum 1.5" thick	3	1:3 ft <sup>2</sup>
<b>EnergyGuard™ Perlite</b> Minimum ¾" thick	1, or 3	1:2 ft <sup>2</sup>
<b>EnergyGuard™ Fiberboard, Structodek®, Structodek® TD</b> Minimum 1" thick	1, 2 or 3	1:2 ft <sup>2</sup>

**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® STRATAVENT® Eliminator™ Perforated laid dry or a layer of EnergyGuard™ Perlite or wood fiber overlay board on all polyisocyanurate applications.**



- Fire Barrier:** FireOut™ Fire Barrier Coating, VersaShield® Non-Asphaltic Fiberglass-Based Underlayment or Securock™.
- (optional)**
- Base Sheet:** Install one ply of GAFGLAS® #75, GAFGLAS® #80 ULTIMA™ Base Sheet GAFGLAS® PLY 4, GAFGLAS® FlexPly™ 6, GAFGLAS® STRATAVENT® Eliminator™ Perforated (laid dry), RUBEROID® Modified Base Sheet, RUBEROID® MOP Smooth or RUBEROID® 20 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. If base sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval the use of an overlay board is approved; (see **General Limitation #4**).
- Ply Sheet:** (Optional, required when using RUBEROID® 20) One or more plies GAFGLAS® PLY 4, GAFGLAS® Flex Ply™ 6 sheet or GAFGLAS® #80 ULTIMA™ adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Membrane:** One ply of RUBEROID® Torch Smooth, RUBEROID® Torch Granule, Roof Match™ APP Torch Granule, RUBEROID® Torch Plus Granule, RUBEROID® EnergyCap™ Torch Granule FR, RUBEROID® EnergyCap™ Torch Plus FR, or RUBEROID® Torch FR torch applied according to manufacturer's application instructions.  
Or  
One or more plies of RUBEROID® SBS Heat-Weld™ PLUS, RUBEROID® SBS Heat-Weld™ PLUS FR, RUBEROID® SBS Heat-Weld™ 170 FR, RUBEROID® EnergyCap™ SBS Heat-Weld™ Plus FR, RUBEROID® SBS Heat-Weld™, RUBEROID® SBS Heat-Weld™ Smooth, RUBEROID® ULTRACLAD SBS and RUBEROID® SBS Heat-Weld™ 25 applied according to manufacturer's application instructions.
- Surfacing:** (Optional, required if RUBEROID® MOP Smooth or RUBEROID® 20 is top membrane) Install one of the following:
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. or applied in a flood coat of Leak Buster™ Matrix™ 103 Cold Process Adhesive applied at a rate of 3 gal./sq.
  2. GAFGLAS® Mineral Surfaced Cap Sheet, GAFGLAS® Energy Cap Mineral Surfaced Capsheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
  3. Leak Buster™ Matrix™ 303 Premium Fibered Aluminum Roof Coating, at 1.5 gal./sq.
  4. Leak Buster™ Matrix™ 715, Leak Buster™ Matrix™ 322, TOPCOAT® MB+, TOPCOAT® Fireshield Elastomeric Roofing Membrane, applied at 1 to 1.5 gal./sq.
  5. Leak Buster™ Matrix™ 602 MB Xtra Elastomeric Roofing Membrane, EnergyCote® roof coating applied at 1 to 1.5 gal./sq.
  6. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq
  7. Advance Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.

**Maximum Design Pressure:**

-45 psf;(See **General Limitation #7**)



**Membrane Type:** SBS/SBS Cold Applied  
**Deck Type II:** Wood, Insulated  
**Deck Description:** <sup>19</sup>/<sub>32</sub> " or greater plywood or wood plank  
**System Type D(1):** Insulation and Base sheet simultaneously attached

**All General and System Limitations shall apply.**

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard™, EnergyGuard™ RA, EnergyGuard™ RA, EnergyGuard™ Composite, Structodek®, Structodek® TD, EnergyGuard™ Fiberboard Minimum 1" thick	N/A	N/A

**Fire Barrier:** FireOut™ Fire Barrier Coating, VersaShield® Non-Asphaltic Fiberglass-Based Underlayment or Securock™.  
**(optional)**

**Base Sheet:** Install one ply of GAFGLAS® #75, GAFGLAS® #80 ULTIMA™ Base Sheet, GAFGLAS® STRATAVENT® Eliminator™ Perforated or RUBEROID® 20 base sheet applied over the loose laid insulation with 2" side laps mechanically fastened to deck as described below;

**Fastening Options:** Drill-Tec™ #12 standard, #14 or # 15 Screws and 3" Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates are installed through the base sheet and insulation in 3 rows 12" o.c. One row is in the 2" side lap. The other rows are equally spaced approximately 12" o.c. in the field of the sheet.  
*(Maximum Design Pressure –45 psf, See General Limitation #7)*

GAFGLAS® #80 ULTIMA™, RUBEROID® 20, RUBEROID® Mop Smooth, base sheet attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the 4" lap staggered and in two rows 9" o.c. in the field.  
*(Maximum Design Pressure –60 psf, See General Limitation #7)*

Drill-Tec™ #12 standard, #14 or # 15 Screws and 3" Plates in 4 rows 12" o.c. One row is in the 2" side lap. The other rows are equally spaced approximately 9" o.c. in the field of the sheet.  
*(Maximum Design Pressure –60 psf, See General Limitation #7)*

Drill-Tec™ #12 standard, #14 or # 15 Screws and 3" Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates are installed through the base sheet and insulation in 4 rows 8" o.c. One row is in the 2" side lap. The other 3 rows are equally spaced approximately 9" o.c. in the field of the sheet.  
*(Maximum Design Pressure –75 psf, See General Limitation #7)*

**Ply Sheet:** (Optional) One or more plies GAFGLAS® PLY 4, GAFGLAS® Flex Ply™ 6 sheet, GAFGLAS® #80 Ultima™, RUBEROID® MOP Smooth or RUBEROID® 20 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.



**Membrane:**

One or more plies of RUBEROID® MOP Smooth, RUBEROID® Mop 170 FR, RUBEROID® Mop Granule, Roof Match™ SBS Mop Granule, RUBEROID® Mop Plus Granule, RUBEROID® 20, RUBEROID® 30, RUBEROID® EnergyCap SBS 30 FR, RUBEROID® 30 FR or RUBEROID® Mop FR or RUBEROID® ULTRACLAD® SBS in adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Or,

One or more plies of RUBEROID® MOP Smooth, RUBEROID® Mop Granule, Roof Match™ SBS Mop Granule, RUBEROID® Mop 170 FR, RUBEROID® Mop Plus Granule, RUBEROID® 20, RUBEROID® 30, RUBEROID® EnergyCap™ SBS 30 FR, RUBEROID® 30 FR or RUBEROID® Mop FR or RUBEROID® ULTRACLAD® SBS in Leak Buster™ Matrix™ 102 SBS Adhesive at an application rate of 1-2 gal./sq.

**Surfacing:**

(Optional, required if RUBEROID® MOP Smooth or RUBEROID® 20 is top membrane) Install one of the following:

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. or applied in a flood coat of Leak Buster™ Matrix™ 103 Cold Process Adhesive applied at a rate of 3 gal./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, GAFGLAS® Energy Cap Mineral Surfaced Capsheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Leak Buster™ Matrix™ 303 Premium Fibered Aluminum Roof Coating, at 1.5 gal./sq.
4. Leak Buster™ Matrix™ 715, Leak Buster™ Matrix™ 322, TOPCOAT® MB+, TOPCOAT® Fireshield Elastomeric Roofing Membrane, applied at 1 to 1.5 gal./sq.
5. Leak Buster™ Matrix™ 602 MB Xtra Elastomeric Roofing Membrane, EnergyCote® roof coating applied at 1 to 1.5 gal./sq.
6. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.
7. Advance Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.

**Maximum Design**

**Pressure:**

**See Fastening above**



- Membrane Type:** APP/SBS Heat Weld
- Deck Type 1I:** Wood, Insulated
- Deck Description:**  $\frac{19}{32}$ " or greater plywood or wood plank
- System Type D(2):** Insulation and Base sheet simultaneously attached

**All General and System Limitations shall apply.**

One or more layers of any of the following insulations.

<b>Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™, EnergyGuard™ RA, EnergyGuard™ Composite,</b> Minimum 1.3" thick	N/A	N/A
<b>Structodek®, Structodek® TD, EnergyGuard™ Fiberboard</b> Minimum 1" thick	N/A	N/A

**Fire Barrier:** FireOut™ Fire Barrier Coating, VersaShield® Non-Asphaltic Fiberglass-Based Underlayment or Securock™.

**Base Sheet:** Install one ply of GAFGLAS® #75, GAFGLAS® #80 ULTIMA™ Base Sheet, GAFGLAS® STRATAVENT® Eliminator™ Perforated or RUBEROID® 20 base sheet applied over the loose laid insulation with 2" side laps mechanically fastened to deck as described below;

**Fastening Options:** Drill-Tec™ #12 standard, #14 or # 15 Screws and 3" Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates are installed through the base sheet and insulation in 3 rows 12" o.c. One row is in the 2" side lap. The other rows are equally spaced approximately 12" o.c. in the field of the sheet.

*(Maximum Design Pressure –45 psf, See General Limitation #7)*

GAFGLAS® #80 ULTIMA™, RUBEROID® 20, RUBEROID® Mop Smooth, base sheet attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the 4" lap staggered and in two rows 9" o.c. in the field.

*(Maximum Design Pressure –60 psf, See General Limitation #7)*

Drill-Tec™ #12 standard, #14 or # 15 Screws and 3" Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates in 4 rows 12" o.c. One row is in the 2" side lap. The other rows are equally spaced approximately 9" o.c. in the field of the sheet.

*(Maximum Design Pressure –60 psf, See General Limitation #7)*

Drill-Tec™ #12 standard, #14 or # 15 Screws and 3" Plates are installed through the base sheet and insulation in 4 rows 8" o.c. One row is in the 2" side lap. The other 3 rows are equally spaced approximately 9" o.c. in the field of the sheet.

*(Maximum Design Pressure –75 psf, See General Limitation #7)*

**Ply Sheet:** (Optional, required when using RUBEROID® 20) One or more plies GAFGLAS® PLY 4, GAFGLAS® Flex Ply™ 6 sheet or GAFGLAS® #80 ULTIMA™ adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.



**Membrane:**

One ply of RUBEROID® Torch Smooth, RUBEROID® Torch Granule, Roof Match™ APP Torch Granule, RUBEROID® EnergyCap™ Torch Granule FR, RUBEROID® Torch Plus Granule, RUBEROID® EnergyCap™ Torch Plus FR, or RUBEROID® Torch FR torch applied according to manufacturer's application instructions.

Or

One or more plies of RUBEROID® SBS Heat-Weld™ PLUS, RUBEROID® SBS Heat-Weld™ PLUS FR, RUBEROID® SBS Heat-Weld™ 170 FR, RUBEROID® EnergyCap SBS Heat-Weld™ PLUS FR, RUBEROID® SBS Heat-Weld™, RUBEROID® SBS Heat-Weld™ Smooth, RUBEROID® ULTRACLAD® SBS and RUBEROID® SBS Heat-Weld™ 25 applied according to manufacturer's application instructions.

**Surfacing:**

(Optional, required if RUBEROID® MOP Smooth or RUBEROID® 20 is top membrane) Install one of the following:

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. or applied in a flood coat of Leak Buster™ Matrix™ 103 Cold Process Adhesive applied at a rate of 3 gal./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, GAFGLAS® Energy Cap Mineral Surfaced Capsheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Leak Buster™ Matrix™ 303 Premium Fibered Aluminum Roof Coating, at 1.5 gal./sq.
4. Leak Buster™ Matrix™ 715, Leak Buster™ Matrix™ 322, TOPCOAT® MB+, TOPCOAT® Fireshield Elastomeric Roofing Membrane, applied at 1 to 1.5 gal./sq.
5. Leak Buster™ Matrix™ 602 MB Xtra Elastomeric Roofing Membrane, EnergyCote® roof coating applied at 1 to 1.5 gal./sq.
6. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq
7. Advance Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.

**Maximum Design Pressure:**

**See Fastening Above**



**Membrane Type:** SBS/SBS Cold Applied  
**Deck Type 1:** Wood, Non-insulated  
**Deck Description:**  $\frac{19}{32}$ " or greater plywood or wood plank decks  
**System Type E(1):** Base sheet mechanically fastened to roof deck.

**All General and System Limitations shall apply.**

**Fire Barrier:** FireOut™ Fire Barrier Coating, VersaShield® Non-Asphaltic Fiberglass-Based Underlayment or Securock™.  
**(optional)**

**Base sheet:** GAFGLAS® #80 ULTIMA™ Base Sheet, STRATAVENT® Eliminator™ Nailable, RUBEROID® Modified Base Sheet, RUBEROID® 20, RUBEROID® SBS Heat-Weld™ Smooth or RUBEROID® SBS Heat-Weld™ 25 base sheet mechanically fastened to deck as described below;

**Fastening Options:** GAFGLAS® Ply 4, GAFGLAS® Flex Ply™ 6, GAFGLAS® #75 Base Sheet or any of above Base sheets attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the lap staggered and in two rows 12" o.c. in the field.

*(Maximum Design Pressure –45 psf, See General Limitation #7)*

GAFGLAS® Ply 4, GAFGLAS® Flex Ply™ 6, GAFGLAS® #75 Base Sheet or any of above Base sheets attached to deck with Drill-Tec™ #12 standard, #14 or # 15 Screws and 3" Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates, 12" o.c. in 3 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 12" o.c. in the field of the sheet.

*(Maximum Design Pressure –45 psf, See General Limitation #7)*

GAFGLAS® Flex Ply™ 6, GAFGLAS® #75 Base Sheet or any of above Base sheets attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the 4" lap staggered and in two rows 9" o.c. in the field.

*(Maximum Design Pressure –52.5 psf, See General Limitation #7)*

GAFGLAS® #80 ULTIMA™, RUBEROID® 20, RUBEROID® Mop Smooth, base sheet attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the 4" lap staggered and in two rows 9" o.c. in the field.

*(Maximum Design Pressure –60 psf, See General Limitation #7)*

GAFGLAS® #75 Base Sheet or any of above Base sheets attached to deck with Drill-Tec™ #12 standard, #14 or # 15 Screws and 3" Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates, 12" o.c. in 4 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 9" o.c. in the field of the sheet.

*(Maximum Design Pressure –60 psf, See General Limitation #7)*

Any of above Base sheets attached to deck approved annular ring shank nails and 3" inverted Drill-Tec™ insulation plates at a fastener spacing of 9" o.c. at the 4" lap staggered in two rows 9" in the field.

*(Maximum Design Pressure –60 psf, See General Limitation #7)*



GAFGLAS® #75 Base Sheet or any of above Base sheets attached to deck with Drill-Tec™ #12 standard, #14 or # 15 Screws and 3” Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates, 8” o.c. in 4 rows. One row is in the 2” side lap. The other rows are equally spaced approximately 9” o.c. in the field of the sheet.  
*(Maximum Design Pressure –75 psf, See General Limitation #7)*

**Ply Sheet:** (Optional) One or more plies GAFGLAS® PLY 4, GAFGLAS® Flex Ply™ 6, GAFGLAS® #80, RUBEROID® MOP Smooth or RUBEROID® 20 sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Membrane:** One or more plies of RUBEROID® MOP Smooth, RUBEROID® Mop 170 FR, RUBEROID® Mop Granule, Roof Match™ SBS Mop Granule, RUBEROID® Mop Plus Granule, RUBEROID® 20, RUBEROID® 30, RUBEROID® EnergyCap SBS 30 FR RUBEROID® 30 FR or RUBEROID® Mop FR or RUBEROID ULTRACLAD® SBS in adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Or,

One or more plies of RUBEROID® MOP Smooth, RUBEROID® Mop Granule, Roof Match™ SBS Mop Granule, RUBEROID® Mop 170 FR, RUBEROID® Mop Plus Granule, RUBEROID® 20, RUBEROID® 30, RUBEROID® EnergyCap SBS 30 FR, RUBEROID® 30 FR or RUBEROID® Mop FR or RUBEROID® ULTRACLAD® SBS in Leak Buster™ Matrix™ 102 SBS Adhesive at an application rate of 1-2 gal./sq.

**Surfacing:** (Optional, required if RUBEROID® MOP Smooth or RUBEROID® 20 is top membrane) Install one of the following:

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. or applied in a flood coat of Leak Buster™ Matrix™ 103 Cold Process Adhesive applied at a rate of 3 gal./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, GAFGLAS® Energy Cap Mineral Surfaced Capsheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Leak Buster™ Matrix™303 Premium Fibered Aluminum Roof Coating, at 1.5 gal./sq.
4. Leak Buster™ Matrix™ 715, Leak Buster™ Matrix™ 322, TOPCOAT® MB+, TOPCOAT® Fireshield Elastomeric Roofing Membrane, applied at 1 to 1.5 gal./sq.
5. Leak Buster™ Matrix™ 602 MB Xtra Elastomeric Roofing Membrane, EnergyCote® roof coating applied at 1 to 1.5 gal./sq.
6. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1to 1.5 gal./sq
7. Advance Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer’s specifications and applicable Building Codes.

**Maximum Design Pressure:**

See Fastening above



**Membrane Type:** APP/SBS Heat Weld  
**Deck Type 1:** Wood, Non-insulated  
**Deck Description:**  $\frac{19}{32}$ " or greater plywood or wood plank decks  
**System Type E(2):** Base sheet mechanically fastened.

**All General and System Limitations shall apply.**

**Fire Barrier:** FireOut™ Fire Barrier Coating, VersaShield® Non-Asphaltic Fiberglass-Based Underlayment or Securock™.  
**(optional)**

**Base sheet:** GAFGLAS® #80 ULTIMA™ Base Sheet, STRATAVENT® Eliminator™ Nailable, RUBEROID® Modified Base Sheet, RUBEROID® MOP Smooth, RUBEROID® 20, RUBEROID® SBS Heat-Weld™ Smooth or RUBEROID® SBS Heat-Weld 25 base sheet mechanically fastened to deck as described below;

**Fastening Options:** GAFGLAS® Ply 4, GAFGLAS® Flex Ply™ 6, GAFGLAS® #75 Base Sheet or any of above Base sheets attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the lap staggered and in two rows 12" o.c. in the field.

*(Maximum Design Pressure –45 psf, See General Limitation #7)*

GAFGLAS® Ply 4, GAFGLAS Flex Ply™ 6, GAFGLAS® #75 Base Sheet or any of above Base sheets attached to deck with Drill-Tec™ #12 standard, #14 or # 15 Screws and 3" Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates, 12" o.c. in 3 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 12" o.c. in the field of the sheet.

*(Maximum Design Pressure –45 psf, See General Limitation #7)*

GAFGLAS® Flex Ply™ 6, GAFGLAS® #75 Base Sheet or any of above Base sheets attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the 4" lap staggered and in two rows 9" o.c. in the field.

*(Maximum Design Pressure –52.5 psf, See General Limitation #7)*

GAFGLAS® #80 ULTIMA™, RUBEROID® 20, RUBEROID® Mop Smooth, base sheet attached to deck with approved annular ring shank nails and tin caps at a fastener spacing of 9" o.c. at the 4" lap staggered and in two rows 9" o.c. in the field.

*(Maximum Design Pressure –60 psf, See General Limitation #7)*

GAFGLAS® #75 Base Sheet or any of above Base sheets attached to deck with Drill-Tec™ #12 standard, #14 or # 15 Screws and 3" Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates, 12" o.c. in 4 rows. One row is in the 2" side lap. The other rows are equally spaced approximately 9" o.c. in the field of the sheet.

*(Maximum Design Pressure –60 psf, See General Limitation #7)*

Any of above Base sheets attached to deck approved annular ring shank nails and 3" inverted Drill-Tec™ insulation plates at a fastener spacing of 9" o.c. at the 4" lap staggered in two rows 9" in the field.

*(Maximum Design Pressure –60 psf, See General Limitation #7)*

GAFGLAS® #75 Base Sheet or any of above Base sheets attached to deck with Drill-Tec™ #12 standard, #14 or # 15 Screws and 3” Drill-Tec™ steel plate or Drill-Tec™ AccuTrac Plates, 8” o.c. in 4 rows. One row is in the 2” side lap. The other rows are equally spaced approximately 9” o.c. in the field of the sheet. *(Maximum Design Pressure –75 psf, See General Limitation #7)*

**Ply Sheet:**

(Optional except over RUBEROID® Modified Base Sheet, RUBEROID® MOP Smooth, RUBEROID® 20, RUBEROID® SBS Heat-Weld™ Smooth or RUBEROID® SBS Heat-Weld™) One or more plies GAFGLAS® PLY 4 or GAFGLAS® Flex Ply™ 6 sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or RUBEROID® Torch Smooth torch applied according to manufacturer’s application instructions.

**Membrane:**

One ply of RUBEROID® Torch Smooth, RUBEROID® Torch Granule, Roof Match™ APP Torch Granule, RUBEROID® EnergyCap™ Torch Granule FR, RUBEROID® Torch Plus Granule, RUBEROID® EnergyCap™ Torch Plus FR, or RUBEROID® Torch FR torch applied according to manufacturer's application instructions.

Or

One or more plies of RUBEROID® SBS Heat-Weld™ PLUS, RUBEROID® SBS Heat-Weld™ PLUS FR, RUBEROID® SBS Heat-Weld™ 170 FR, RUBEROID® EnergyCap™ SBS Heat-Weld™ Plus FR, RUBEROID® SBS Heat-Weld™, RUBEROID® SBS Heat-Weld™ Smooth, RUBEROID® ULTRACLAD® SBS and RUBEROID® SBS Heat-Weld™ 25 applied according to manufacturer's application instructions.

**Surfacing:**

(Optional, required if RUBEROID® MOP Smooth or RUBEROID® 20 is top membrane) Install one of the following:

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. or applied in a flood coat of Leak Buster™ Matrix™ 103 Cold Process Adhesive applied at a rate of 3 gal./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, GAFGLAS® Energy Cap Mineral Surfaced Capsheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
3. Leak Buster™ Matrix™ 303 Premium Fibered Aluminum Roof Coating, at 1.5 gal./sq.
4. Leak Buster™ Matrix™ 715, Leak Buster™ Matrix™ 322, TOPCOAT® MB+, TOPCOAT® Fireshield Elastomeric Roofing Membrane, applied at 1 to 1.5 gal./sq.
5. Leak Buster™ Matrix™ 602 MB Xtra Elastomeric Roofing Membrane, EnergyCote® roof coating applied at 1 to 1.5 gal./sq.
6. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.
7. Advance Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer’s specifications and applicable Building Codes.

**Maximum Design Pressure:**

See Fastening Above



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Approval Date: 04/08/09  
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## WOOD DECK SYSTEM LIMITATIONS:

1. A slip sheet is required with Ply 4 and Flex Ply™ 6 when used as a mechanically fastened base or anchor sheet.
2. Minimum ¼" Dens Deck or ½" Type X gypsum board is acceptable to be installed directly over the wood deck.

## 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 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 9B-72 of the Florida Administrative Code.

**END OF THIS ACCEPTANCE**



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