

# Ruberoid<sup>®</sup> Modified Bitumen Roof Systems for Steel Decks

## Miami-Dade County Notice of Acceptance (NOA)

Updated: 6/10



*Quality You Can Trust...From  
North America's Largest Roofing Manufacturer!™*

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**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 Materials 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 Steel Decks.**

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

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

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

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

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

This NOA revises NOA No. 09-0423.03 and consists of pages 1 through 22.  
The submitted documentation was reviewed by Jorge L. Acebo.



**NOA No.: 10-0125.05  
Expiration Date: 11/06/13  
Approval Date: 06/30/10  
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## ROOFING SYSTEM APPROVAL

<b>Category:</b>	Roofing
<b>Sub-Category:</b>	Modified Bitumen
<b>Material:</b>	SBS/APP
<b>Deck Type:</b>	Steel
<b>Maximum Design Pressure</b>	-120 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>
LeakBuster™ Matrix™ 103 Cold Process Adhesive	5 gallons	ASTM D3019	Surface coating for smooth surfaced and mineral surfaced roofs.
LeakBuster™ Matrix™ 201 Premium SBS Flashing Cement	5 gallons	ASTM D3019	Cold Applied Modified SEBS Asphalt Adhesive – Flashing Grade.
LeakBuster™ Matrix™ 202 SBS Flashing Cement	5 gallons	ASTM D4586	Cold Applied Modified SEBS Asphalt Adhesive – Flashing Grade.
LeakBuster™ Matrix™ 203 Plastic Roof Cement	5 gallons	ASTM D4586	Standard Plastic Asphalt Roofing Cement.
LeakBuster™ Matrix™ 204 Wet/Dry Roof Cement	3, 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.
LeakBuster™ Matrix™ 303 Premium Fibered Aluminum Roof Coating	3, 5 gallons	ASTM D2824	Fibered aluminum coating.
LeakBuster™ Matrix™ 304 Non-Fibered Aluminum Coating	5 gallons	ASTM D2824, Type I	Non-fibered. Aluminum pigmented, asphalt roof coating.
LeakBuster™ Matrix™ 305 Fibered Asphalt Emulsion	5 gallons	ASTM D1227	Surface coating for smooth surfaced roofs.
LeakBuster™ Matrix™ 306	55 gallons	ASTM D1227	Asphalt emulsion fibered.
LeakBuster™ Matrix™ 307 Premium Asphalt Primer	5, 55 gallons	ASTM D41	Asphalt concrete primer used to promote adhesion of asphalt in built-up roofing.
LeakBuster™ Matrix™ 322 Elastomeric Roof Coating	55 gallons	ASTM D1653 ASTM D12 ASTM E470 ASTM D6038	Surface coating for smooth surfaced and mineral surfaced roofs.
TOPCOAT® FireShield® SB	5, 55 gallons	ASTM D412 ASTM D21 ASTM D1475 ASTM E1644	Elastomeric roofing membrane.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
TOPCOAT® Surface Seal SB	5 gallons	Proprietary	Surface coating for smooth surfaced and mineral surfaced roofs.
TOPCOAT® EnergyCote™ Elastomeric Coating	2, 5 gallons	ASTM D2196 ASTM D1475 ASTM E1644 ASTM C1549 ASTM E408	Highly reflective elastomeric coating.
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.
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® FlexPly™ 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.
GAFGLAS® EnergyCap™ BUR 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® Stratavent® Eliminator™ Perforated Venting Base Sheet	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™ Nailable Venting Base Sheet	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.
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.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
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	Non-Woven Polyester mat coated with fire retardant polymer modified asphalt and surfaced with mineral granules and EnergyCote.
Ruberoid® EnergyCap™ 30 FR SBS	1 meter (39.37") wide	ASTM D6163	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.
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 Smooth 1.5	39.37" Wide	ASTM D6164 ASTM D5147	Non-woven polyester mat coated with polymer-modified asphalt and smooth surfaced <b>for use only as a base/ply sheet.</b>
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 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® Mop 170 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® 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.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Ruberoid® EnergyCap™ Torch Plus FR	39.37" (1 meter) Wide	ASTM D6222	APP modified cap membrane with a torch grade bottom surface and a mineral granular top surface coated with TOPCOAT® EnergyCote™ elastomeric coating.
Ruberoid® EnergyCap™ Torch Granule FR	39.37" (1 meter) Wide	ASTM D6222	APP modified cap membrane with a torch grade bottom surface and a mineral granular top surface coated with TOPCOAT® EnergyCote™ elastomeric coating.
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.
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® 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 D5147	Non-woven polyester and fiberglass mat coated with fire retardant, polymer-modified asphalt and surfaced with mineral granules.
Ruberoid® Dual Smooth	39.37" (1 meter) Wide	ASTM D5147 ASTM D6162, Type II	Fiberglass/polyester/composite mat that is coated with an SBS polymer-modified asphalt and is smooth-surfaced <b>for use only as a base/ply sheet.</b>
RoofMatch™ SBS Modified Granular	107 sq. ft. (9.9 m2)	ASTM D5147	Non-woven polyester mat coated with polymer modified asphalt and surfaced with colored mineral granules.
RoofMatch™ APP Modified Granular	107 sq. ft. (9.9 m2)	ASTM D5147	Non-woven polyester mat coated with polymer modified asphalt and surfaced with colored 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



**APPROVED INSULATIONS:**

**TABLE 2**

<b>Product Name</b>	<b>Product Description</b>	<b>Manufacturer (With Current NOA)</b>
EnergyGuard™ Polyiso Insulation	Polyisocyanurate foam insulation	GAF Materials Corp.
EnergyGuard™ RA Polyiso Insulation	Polyisocyanurate foam insulation	GAF Materials Corp.
EnergyGuard™ RN Polyiso Insulation	Polyisocyanurate foam insulation	GAF Materials Corp.
EnergyGuard™ RA Composite	Polyisocyanurate foam insulation with high density fiberboard or Permalite perlite insulation.	GAF Materials Corp.
EnergyGuard™ Fiberboard	Fiberboard insulation.	GAF Materials Corp.
EnergyGuard™ Perlite Roof Insulation	Perlite insulation board.	GAF Materials Corp.
EnergyGuard™ Perlite Recover Board	Perlite recover board	GAF Materials Corp.
EnergyGuard™ Tapered Edge Strip	Tapered perlite board	GAF Materials Corp.
DensDeck® Roof Board	Water-resistant gypsum board	G-P Gypsum Corp.
DensDeck® Prime® Roof Board	Water-resistant gypsum board	G-P Gypsum Corp.
DensDeck® Dura Guard® Roof Board	Water-resistant gypsum board	G-P Gypsum Corp.
Securock® Gypsum-Fiber Roof Board	Fiber-reinforced insulation	USG Corp.
Structodek®	Wood fiber insulation board	Blue Ridge FiberBoard, Inc.



**APPROVED FASTENERS:**

**TABLE 3**

<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 Fastener	Insulation fastener and Base Ply fastener for steel & wood decks.	various	GAF Materials Corp.
2.	Drill-Tec™ #14 Fastener	Insulation fastener and Base Ply fastener for steel	various	GAF Materials Corp.
3	Drill-Tec™ ASAP	Pre-assembled Drill-Tec™ Fasteners and metal and plastic plates.	various	GAF Materials Corp.
4	Drill-Tec™ Base Sheet Fastener	Base sheet fastening assembly.	1.2 and 1.7	GAF Materials Corp.
5	Drill-Tec™ AccuTrac® Plate	Square Galvalume stress plates.	3" and 3 ½"	GAF Materials Corp.
6	Drill-Tec™ Plastic Plate	Round polypropylene stress plates.	3" and 3 ½"	GAF Materials Corp.
7	Drill-Tec™ Steel Plates	Round Galvalume stress plates.	3" and 3 ½"	GAF Materials Corp.
8.	Drill-Tec™ Standard Steel Plate	Galvalume coated steel membrane plate	2" -2-¾"	GAF Materials Corp.

**APPROVED SURFACING/COATING OPTIONS:**

**TABLE 4**

<b>System Number</b>	<b>Application</b>
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**Surfacing is Optional on granular surfaced membranes but required for smooth membranes.**

**Chosen components must be applied according to manufacturer's application instructions.**

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq. or applied in a flood coat of LeakBuster™ Matrix™ 103 Cold Process Adhesive applied at a rate of 3 gal./sq.
2. GAFGLAS® Mineral Surfaced Cap Sheet, GAFGLAS® EnergyCap™ BUR 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. LeakBuster™ Matrix™ 303 Premium Fibered Aluminum Roof Coating, at 1.5 gal./sq.
4. LeakBuster™ Matrix™ 322, TOPCOAT® MB Plus, TOPCOAT® FireShield® MB Elastomeric Roofing Membrane, applied at 1 to 1.5 gal./sq.
5. TOPCOAT® EnergyCote™ roof coating applied at 1 to 1.5 gal./sq.
6. TOPCOAT® Surface Seal SB, 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.



**EVIDENCE SUBMITTED:**

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Factory Mutual Research Corp.	FMRC 1996	Current Insulation Attachment Requirements	01/01/96
Factory Mutual Research Corp.	J.I. 1B9A8.AM	FMRC 4470 - TAS 114	09/04/97
Factory Mutual Research Corp.	J.I. 3D4Q2.AM	FMRC 4470 - TAS 114	04/30/97
Factory Mutual Research Corp.	3001276	Class 4470	01/28/99
	3007500		06/15/00
	3011140		08/14/01
	3013788		01/10/03
	3014547		05/22/03
Factory Mutual Research Corp	3017250	Class 4470	04/05/04
	3033719		12/24/08
	3032811		12/11/08
	3035864		06/03/09
Factory Mutual Research Corp	3023458	Class 4450	07/18/06
IRT	04-0041	TAS-114	01/26/04
Trinity Engineering	4483.04 97-1	Wind Uplift PA 114	06/06/97
Trinity   ERD	G6850.08.07-1	ASTM D3909	08/13/07
	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
	G31360.03.10	ASTM D6164	03/31/2010
Momentum Technologies, Inc	AX04C9A	ASTM D6162	06/05/09



**APPROVED ASSEMBLIES**

- Membrane Type:** APP/SBS Heat-Weld
- Deck Type 2I:** Steel, Insulated
- Deck Description:** 18-22 ga. steel
- System Type B(1):** One or more layers of insulation is mechanically attached, perforated base sheet loose laid over the insulation.

**All General and System limitations apply.**

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard™ RA Polyiso Insulation Minimum 2" thick	2	1:1.5 ft <sup>2</sup>

**Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

- Base Sheet:** One ply of GAFGLAS® Stratavent® Eliminator™ Perforated Venting Base Sheet loose laid dry with 2" side laps.
- Ply Sheet:** (Optional, required for torch applied Ruberoid® membranes) One or more plies of GAFGLAS® Ply 4, GAFGLAS® FlexPly™ 6 ply sheet, Ruberoid® 20, Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Dual Smooth or GAFGLAS #80 Ultima™ Base 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® Torch Smooth, Ruberoid® Torch Granule, RoofMatch™ APP Granule, Ruberoid® EnergyCap™ Torch Granule FR, Ruberoid® Torch Plus, Ruberoid® Torch FR, Ruberoid® Torch 180, Ruberoid® EnergyCap™ Torch Plus FR, torch applied according to manufacturer's application instructions.  
Or  
One or more plies of Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ Plus FR, Ruberoid® EnergyCap™ SBS Heat-Weld Plus FR Ruberoid® Dual FR or Ruberoid® Ultraclad® SBS torch applied or applied with an approved hot air welder according to manufacturer's application instructions.

**Surfacing: (Optional)**  
Apply any surfacing/coating option listed in Table 4.

**Note: Surfacing is optional on granular surfaced membranes but required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

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



- Membrane Type:** APP/SBS  
**Deck Type 2I:** Steel, Insulated  
**Deck Description:** 18-22 ga. steel Type B Grade E steel decking attached to steel supports spaced 6 ft. o.c. with Buildex Traxx/4 or 5 fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached with Buildex Traxx/1 fasteners spaced at max. of 30" o.c.  
**System Type B(2):** Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard™ RA Polyiso Insulation Minimum 2" thick	1, 2, & 7	1:1.45 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. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard™ Perlite Roof Insulation, EnergyGuard™ Fiberboard Minimum 1" thick	N/A	N/A

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

- Base Sheet:** One ply of GAFGLAS® #75 Base Sheet, GAFGLAS® Ply 4, GAFGLAS® FlexPly™ 6, GAFGLAS® #80 Ultima™ Base Sheet 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.
- Ply Sheet:** (Optional) one or more plies of GAFGLAS® Ply 4, GAFGLAS® FlexPly™ 6 Ply Sheet or GAFGLAS® #80 Ultima™ Base 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® Torch Smooth, Ruberoid® Torch Granule, Roof Match™ APP Granule, Ruberoid® EnergyCap™ Torch Granule FR, Ruberoid® Torch Plus or Ruberoid® Torch FR, Ruberoid® EnergyCap™ Torch Plus FR, torch applied according to manufacturer's application instructions.  
 OR  
 Ruberoid® Mop Smooth, Ruberoid® Mop Granule, RoofMatch™ SBS Modified Granular, Ruberoid® Mop 170 FR, Ruberoid® Mop Plus and Ruberoid® Mop FR, Ruberoid® 20, Ruberoid® 30, Ruberoid® 30 FR, Ruberoid® EnergyCap™ 30 FR SBS, Ruberoid® Ultraclad SBS, Ruberoid® Dual FR, Ruberoid® adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. according to manufacturer's application instructions.

**Surfacing:** (Optional)

Apply any surfacing/coating option listed in Table 4.

**Note:** Surfacing is optional on granular surfaced membranes but required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.

**Maximum Design**

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



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- Membrane Type:** APP/SBS Heat-Weld
- Deck Type 2I:** Steel, Insulated
- Deck Description:** 18-22 ga. steel Type B Grade 80 steel decking attached to steel supports spaced 6 ft. o.c. with Buildex Traxx/4 or 5 fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached with Buildex Traxx/1 fasteners spaced at max. of 24" o.c.
- System Type B(3):** Base layer of insulation mechanically fastened, membrane adhered with approved asphalt.

**All General and System limitations apply.**

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 2" thick	1, 2 & 7	1:1.45 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. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

**Base Sheet:** One ply of GAFGLAS® Stratavent™ Eliminator™ Perforated Venting Base Sheet loose laid dry, with 2" side laps.

**Ply Sheet:** (Optional, required if Ruberoid® Torch membranes or SBS Heat-Weld™ membranes are used) One or more plies of GAFGLAS® Ply 4, GAFGLAS® FlexPly™ 6 Ply Sheet or GAFGLAS® #80 Ultima™ Base 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® Torch Smooth, Ruberoid® Torch Granule, RoofMatch™ APP Modified Granular, Ruberoid® EnergyCap™ Torch Granule FR, Ruberoid® Torch FR, Ruberoid® Torch 180, Ruberoid® EnergyCap™ Torch Plus FR torch applied according to manufacturer's application instructions.

Or

One or more plies of Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ Plus FR, Ruberoid® EnergyCap™ SBS Heat-Weld Plus FR or Ruberoid® Ultraclad® SBS applied with an approved hot air welder according to manufacturer's application instructions.

**Surfacing: (Optional)**

Apply any surfacing/coating option listed in Table 4.

**Note:** Surfacing is optional on granular surfaced membranes but required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.

**Maximum Design**

**Pressure:** -67.5 psf (See General Limitation #7.)



- Membrane Type:** SBS
- Deck Type 2I:** Steel, Insulated
- Deck Description:** 18-22 ga. steel Type B Grade 80 steel decking attached to steel supports spaced 6 ft. o.c. with Buildex Traxx/4 or 5 fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached with Buildex Traxx/1 fasteners spaced at max. of 24" o.c.
- System Type B(4):** Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick	2	1:1.3 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. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard™ Perlite Roof Insulation, EnergyGuard™ Fiberboard Minimum ½" thick	N/A	N/A

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

- Base Sheet:** One ply of GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet 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.
- Ply Sheet:** (Optional) one or more plies of GAFGLAS® Ply 4, GAFGLAS® FlexPly™ 6 Ply Sheet, GAFGLAS® #80 Ultima™ Base Sheet 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® 20, Ruberoid® 30, Ruberoid® 30 FR, Ruberoid® EnergyCap™ SBS 30 FR, Ruberoid® Mop Smooth, Ruberoid® Mop Granule, RoofMatch™ SBS Modified Granular, Ruberoid® Mop 170 FR, Ruberoid® Mop Plus, Ruberoid® Mop FR, Ruberoid® Dual FR or Ruberoid® Ultraclad® SBS adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional)

Apply any surfacing/coating option listed in Table 4.

**Note:** Surfacing is optional on granular surfaced membranes but required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.

Maximum Design

Pressure: -90 psf (See General Limitation #7.)



**Membrane Type:** SBS/SBS Heat-Weld  
**Deck Type 2I:** Steel, Insulated  
**Deck Description:** 18-22 ga. steel Type B Grade 33 steel decking attached to steel supports spaced 6 ft. o.c. with Buildex Traxx/4 or 5 fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached with Buildex Traxx/1 fasteners spaced at max. of 24" o.c.  
**System Type C(1):** Base sheet loose laid dry ; both layers of insulation simultaneously fastened.

**All General and System limitations apply.**

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

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

<b>Top Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>DensDeck Roof Board Minimum ¼" thick</b>	1 & 8	1:1 ft <sup>2</sup>

**Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density.**

**Base Sheet:** One ply of GAFGLAS® Stratavent® Eliminator™ Perforated Venting Base Sheet loose laid dry with 2" side laps.

**Ply Sheet:** (Optional, required when Ruberoid® SBS Heat-Weld™ membranes are used) One or more plies of GAFGLAS® Ply 4, GAFGLAS® FlexPly™ 6 Ply Sheet Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Dual Smooth, Ruberoid® 20 or GAFGLAS® #80 Ultima™ Base 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® 20, Ruberoid® 30, Ruberoid® 30 FR, Ruberoid® EnergyCap™ 30 FR SBS, Ruberoid® Mop Smooth, Ruberoid® Mop Granule, RoofMatch™ SBS Modified Granular, Ruberoid® Mop 170 FR, Ruberoid® Mop Plus, Ruberoid® Mop FR, Ruberoid® Dual FR or Ruberoid® Ultraclad® SBS 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® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® EnergyCap™ SBS Heat-Weld Plus FR or Ruberoid® SBS Heat-Weld™ Plus FR torch applied or applied with an approved hot air welder according to manufacturer's application instructions.

**Surfacing: (Optional)**

Apply any surfacing/coating option listed in Table 4.

**Note: Surfacing is optional on granular surfaced membranes but required for smooth membranes.**

**Chosen components must be applied according to manufacturer's application instructions.**

**Maximum Design**

**Pressure:** -82.5 psf (See General Limitation #7.)



- Membrane Type:** SBS/SBS Heat-Weld  
**Deck Type 2I:** Steel, Insulated  
**Deck Description:** Minimum 22 gauge steel non-vented B-deck was attached to 5' o.c., bar joist with puddle welds and washers at 6"o.c., and tech screws at 12"o.c.  
**System Type C(2):** Base sheet loose laid; insulation mechanically fastened.

**All General and System limitations apply.**

One or more layers of the following:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard™ Polyiso Insulation Minimum 1.5" thick	1 & 7	1:1.45 ft <sup>2</sup>

**Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

- Base Sheet:** GAFGLAS® Stratavent® Eliminator™ Perforated Venting Base Sheet loose laid dry with 2 in side laps .
- Ply Sheet:** One or more plies Ruberoid® 20. Ply 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® 30, Ruberoid® 30 FR, Ruberoid® EnergyCap™ 30 FR SBS, Ruberoid® Mop Granule, RoofMatch™ SBS Modified Granular, Ruberoid® Mop 170 FR, Ruberoid® Mop FR, Ruberoid® Mop Plus, Ruberoid® Dual FR, Ruberoid® 20, Ruberoid® Ultraclad® SBS, Ruberoid® Mop Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq according to manufacturer's application instructions.
- Or
- One or more plies of Ruberoid® SBS Heat-Weld 25™, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld Plus FR, Ruberoid® Ultraclad® SBS, Ruberoid® Dual FR torch applied according to manufacturer's application instructions.
- Or
- GAFGLAS® Mineral Surfaced Cap Sheet, GAFGLAS® EnergyCap™ BUR 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.

**Surfacing: (Optional)**

Apply any surfacing/coating option listed in Table 4.

**Note: Surfacing is optional on granular surfaced membranes but required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

**Maximum Design**

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



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

**Deck Type 2I:** Steel, Insulated

**Deck Description:** Minimum 22 gauge steel secured to minimum. ¼ in. (6 mm) thick steel structural supports, 6 ft (1.8m) o.c., with ITW Buildex TRAXX/5 fasteners 6 in. (1.52) o.c. along the center of the supports. Deck side laps are secured 24 in.(610 mm) o.c. with ITW Buildex TRAXX/1 fasteners..

**System Type C(3):** All insulation simultaneously fastened. Base sheet adhered to insulation.

**All General and System limitations apply.**

One or more layers of the following:

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation Minimum 2" thick</b>	N/A	N/A

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

<b>Top Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>Securock® Gypsum-Fiber Roof Board Minimum ½" thick</b>	1, 2, 5, 7	1.78 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.**

**Base Sheet:** One or more plies GAFGLAS® Ply 4, GAFGLAS® FlexPly™ 6 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Ply Sheet:** One or more plies GAFGLAS® Ply 4, GAFGLAS® FlexPly™ 6 or GAFGLAS® #80 Ultima™ Base Sheet, Ruberoid 20, Ruberoid Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Dual Smooth. Ply 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® 30, Ruberoid® 30 FR, Ruberoid® EnergyCap™ 30 FR SBS, Ruberoid® Mop Granule, RoofMatch™ SBS Modified Granular, Ruberoid® Mop 170 FR, Ruberoid® Mop FR, Ruberoid® Mop Plus, Ruberoid® Dual FR, Ruberoid® 20, Ruberoid® Ultraclad® SBS, Ruberoid® Mop Smooth adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq according to manufacturer's application instructions.

Or

One or more plies of Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld Plus FR torch applied according to manufacturer's application instructions.

**Surfacing: (Optional)**

Apply any surfacing/coating option listed in Table 4.

**Note: Surfacing is optional on granular surfaced membranes but required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

**Maximum Design**

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



**Membrane Type:** APP

**Deck Type 2I:** Steel, Insulated

**Deck Description:** 22 ga. steel deck was secured to 0.25 in. thick structural supports spaced at 6' o.c. using two ICH Traxx/5 fasteners and 0.75 in. washers spaced 6 in. o.c. along each support. The deck side laps were fastened with ICH Traxx/1 fasteners spaced at 12 in. o.c. along each side lap.

**System Type C(4):** Base insulation loose laid; top layer of insulation is mechanically fastened.

**All General and System limitations apply.**

One or more layers of each 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™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5" thick</b>	N/A	N/A

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

<b>Top Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>Securock® Gypsum-Fiber Roof Board Minimum .5" thick</b>	1 & 7	1:1 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.

**Base Sheet:** One or more plies of Ruberoid® SBS Heat-Weld™ 25, torch adhered with 3 in. wide side laps.

**Membrane:** Ruberoid® Torch Smooth, Ruberoid® Torch Granule, RoofMatch™ APP Modified Granular, Ruberoid® EnergyCap™ Torch Granule FR, Ruberoid® Torch Plus, Ruberoid® Torch FR, or Ruberoid® EnergyCap™ Torch Plus FR, torch adhered with 3 in. wide side laps

**Surfacing: (Optional)**

Apply any surfacing/coating option listed in Table 4.

**Note:** Surfacing is optional on granular surfaced membranes but required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.

**Maximum Design**

**Pressure:** -120 (See General Limitation # 7)



Membrane Type: APP/SBS Heat-Weld  
 Deck Type 2I: Steel, Insulated  
 Deck Description: 18-22 ga. steel  
 System Type D(1): Insulation and Base sheet simultaneously attached

All General and System limitations apply.

One or more layers of any of the following insulations.

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

Note: Insulation shall have preliminary attachment, prior to the installation of the base sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density.

Base Sheet: GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, Stratavent® Eliminator™ Nailable Venting Base Sheet, Ruberoid® SBS Heat-Weld™ 25 or Ruberoid® 20 base sheet applied over the loose laid insulation with 2" side laps fastened as specified below:

Fastening #1 Drill Tec™ #12 Fastener or Drill-Tec™ #14 Fastener and Drill-Tec™ 3" Steel Plate or Drill-Tec™ AccuTrac® Plates are installed through the base sheet and insulation in 3 rows 12" on center. One row is in the 2" side lap. The other two rows are equally spaced approximately 12" o.c. in the field of the sheet.

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

Fastening #2 Drill Tec™ #12 Fastener or Drill-Tec™ #14 Fastener and Drill-Tec™ 3" Steel Plate or Drill-Tec™ AccuTrac® Plates in 4 rows 12" on center. One row is in the 2" side lap. The other rows are equally spaced approximately 9 in the field of the sheet.

*(Maximum Design Pressure -60 psf; See General Limitation #7)*

Ply Sheet: (Optional) One or more plies GAFGLAS® Ply 4, GAFGLAS® FlexPly™ 6 or GAFGLAS® #80 Ultima™ Base 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® Torch Smooth, Ruberoid® Torch Granule, RoofMatch™ APP Modified Granular, Ruberoid® EnergyCap™ Torch Granule FR, Ruberoid® Torch FR, Ruberoid® Torch 180 or Ruberoid® EnergyCap™ Torch Plus FR torch applied according to manufacturer's application instructions.

Or

One or more plies of Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® EnergyCap™ SBS Heat-Weld Plus FR, Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® Ultraclad® SBS torch applied or applied with an approved hot air welder according to manufacturer's application instructions.

Surfacing: (Optional)

Apply any surfacing/coating option listed in Table 4.

Note: Surfacing is optional on granular surfaced membranes but required for smooth membranes.

Chosen components must be applied according to manufacturer's application instructions.

Maximum Design

Pressure: See Fastening Options Above



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**Membrane Type:** SBS/SBS Cold Applied  
**Deck Type 2I:** Steel, Insulated  
**Deck Description:** 18-22 ga. steel  
**System Type D(2):** Insulation and Base sheet simultaneously attached  
**All General and System limitations apply.**

One or more layers of any of the following insulations.

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

**Note: Insulation shall have preliminary attachment, prior to the installation of the base sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density.**

**Base Sheet:** GAFGLAS® #75 Base Sheet, GAFGLAS® #80 Ultima™ Base Sheet, Stratavent® Eliminator™ Nailable Venting Base Sheet, Ruberoid® SBS Heat-Weld™ 25 or Ruberoid® 20, base sheet applied over the loose laid insulation with 2" side laps fastened as specified below:

**Fastening #1** Drill-Tec™ #12 Fastener or Drill-Tec™ #14 Fastener and Drill-Tec™ 3" Steel Plate or Drill-Tec™ AccuTrac® Plates are installed through the base sheet and insulation in 3 rows 12" on center. One row is in the 2" side lap. The other two rows are equally spaced approximately 12" o.c. in the field of the sheet.

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

**Fastening #2** Drill-Tec™ #12 Fastener or Drill-Tec™ #14 Fastener and Drill-Tec™ 3" Steel Plate or Drill-Tec™ AccuTrac® Plates in 4 rows 12" on center. One row is in the 2" side lap. The other rows are equally spaced approximately 9" in the field of the sheet.

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

**Ply Sheet:** (Optional) One or more plies GAFGLAS® Ply 4, GAFGLAS® FlexPly™ 6 Ply Sheet or GAFGLAS® #80 Ultima™ Base 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, RoofMatch™ SBS Modified Granular, Ruberoid® Mop Granule FR Plus, Ruberoid® 20, Ruberoid® 30 or Ruberoid® 30 FR, Ruberoid® EnergyCap™ 30 FR SBS, Ruberoid® Mop FR or Ruberoid® Dual FR is 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, RoofMatch™ SBS Modified Granular, Ruberoid® Mop 170 FR, Ruberoid® Mop Plus Granule, Ruberoid® 20, Ruberoid® 30, Ruberoid® 30 FR, Ruberoid® Mop FR or Ruberoid® Dual FR in LeakBuster™ Matrix 102 SBS Membrane Adhesive at an application rate of 1-2 gal./sq.

**Surfacing: (Optional)**

Apply any surfacing/coating option listed in Table 4.

**Note: Surfacing is optional on granular surfaced membranes but required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

**Maximum Design**

**Pressure:** See Fastening Option Above



- Membrane Type:** SBS Cold Applied
- Deck Type 2I:** Steel, Insulated
- Deck Description:** 18, 20, 22 ga. type B, wide rib, 1.5 in. deep new steel deck is secured to minimum 0.25 in. thick structural supports spaced 6' o.c. at maximum with Teks 4, Teks 5, ICH Traxx/4 or ICH Traxx/5 fasteners spaced maximum 6 in. o.c. along each support. Deck side laps are fastened with Stitch Teks 1 or ICH Traxx/1 fasteners spaced 24 in o.c. at maximum.
- System Type D(3):** Insulation is loose laid; base sheet is mechanically fastened through insulation to the roof deck.

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

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1.5" thick	N/A	N/A

**Note: Insulation shall have preliminary attachment, prior to the installation of the base sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density.**

**Base Sheet:** GAFGLAS® #80 Ultima™ Base Sheet or GAFGLAS® Stratavent® Eliminator™ Nailable Venting Base Sheet mechanically attached through the insulation to the steel deck with Drill-Tec™ #12 Fasteners or Drill-Tec™ #14 Fasteners and Drill-Tec™ AccuTrac® Flat Plates AccuTrac® Recessed Plates, Drill-Tec™ 3" Standard Steel Plates, or Drill-Tec™ 3" Steel Plates spaced 6 in. o.c. within the minimum 3.5 in. wide side laps and 12 in. o.c. in the field of the sheet in three staggered rows. Base sheet side laps and fastener rows are perpendicular to the direction of the steel deck ribbing.

**Ply Sheet :** One or more plies of Ruberoid® 20 is adhered to the base sheet with minimum 4.0 in. wide laps with LeakBuster™ Matrix 102 SBS Membrane Adhesive applied at total rate of 2.0 gal/sq. The base ply/adhesive/base sheet combination is permitted to cure over night.

**Membrane:** One or more plies of Ruberoid® 30, Ruberoid® 30 FR, Ruberoid® EnergyCap™ SBS 30 FR, Ruberoid® Mop Granule, RoofMatch™ SBS Modified Granular, Ruberoid® Mop 170 FR, Ruberoid® Mop FR, Ruberoid® Dual FR is adhered to the base ply with LeakBuster™ Matrix 102 SBS Membrane adhesive applied at a total rate of 2.0 gal/sq. The side laps are minimum 3.75 in. wide and sealed with minimum 3.75 in. wide heat welds positioned on the outer edge of the laps. The end laps are minimum 6.0 in wide and sealed with LeakBuster™ Matrix 102 SBS Membrane Adhesive applied at a total rate of 2.0 gal/sq .

**Surfacing: (Optional)**  
Apply any surfacing/coating option listed in Table 4.

**Note: Surfacing is optional on granular surfaced membranes but required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

**Maximum Design Pressure:** -82.5 psf (See General Limitation #7)



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**Membrane Type:** SBS HW

**Deck Type 2I:** Steel

**Deck Description:** Minimum 22 ga. type B, wide rib steel deck, grade 33 was secured to 0.25 in (6.4 mm) thick structural supports spaced at 6' o.c. using Traxx/5 screws spaced at 6 in o.c. and with side laps secured with Traxx/1 screws spaced at 24 in. o.c.

**System Type D(4):** Insulation is loose laid; preliminary attached to deck.

**All General and System limitations apply.**

One or more layers of the following insulations.

**Insulation Layer**

**Insulation Fasteners  
(Table 3)**

**Fastener  
Density/ft<sup>2</sup>**

**EnergyGuard™ Polyiso Insulation , EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation**

**Minimum 1.5" thick**

N/A

N/A

**Note: Insulation shall have preliminary attachment, prior to the installation of the base sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density.**

**Base Ply:** One of the following Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Dual Smooth fastened to the deck with Drill-Tec™ AccuTrac® Flat Plates and Drill-Tec™ 3" Standard Steel Plates with Drill-Tec™ #12 Fasteners spaced 6.0 in o.c. through the minimum 3.25 in wide side laps.

**Membrane:** One or more plies of Ruberoid® SBS Heat-Weld™ Granule, Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld Plus FR torched adhered or applied with an approved hot air welder with minimum 3 in wide laps.

**Note: Surfacing is optional on granular surfaced membranes but required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

**Maximum Design**

**Pressure:** -112.5 (See General Limitation # 7)



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**Membrane Type:** SBS HW

**Deck Type 2I:** Steel

**Deck Description:** Minimum 22 ga. type B, wide rib steel deck, grade 33 was secured to 0.25 in (6.4 mm) thick structural supports spaced at 6' o.c. using Traxx/5 screws spaced at 6 in o.c. and with side laps secured with Traxx/1 screws spaced at 24 in. o.c.

**System Type D(5):** Insulation is loose laid; preliminary attached to deck.

**All General and System limitations apply.**

One or more layers of the following insulations.

<b>Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation</b>		
<b>Minimum 1.5" thick</b>	N/A	N/A

**Note: Insulation shall have preliminary attachment, prior to the installation of the base sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density.**

**Base Ply:** One of the following Ruberoid® Mop Smooth, Ruberoid® Mop Smooth 1.5, Ruberoid® Dual Smooth fastened to the deck with Drill-Tec™ AccuTrac® Flat and Drill-Tec™ 3" Standard Steel Plates with Drill-Tec™ #12 Fasteners spaced 12 in o.c. through the minimum 3.5 in wide side laps.

**Plates**

**Membrane:** One or more plies of Ruberoid® SBS Heat-Weld™ Granule Ruberoid® SBS Heat-Weld™ Smooth, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® SBS Heat-Weld™ 170 FR, Ruberoid® SBS Heat-Weld™ Plus FR or Ruberoid® EnergyCap™ SBS Heat-Weld Plus FR torched adhered or applied with an approved hot air welder with minimum 3 in wide laps.

**Note: Surfacing is optional on granular surfaced membranes but required for smooth membranes. Chosen components must be applied according to manufacturer's application instructions.**

**Maximum Design Pressure:** -52.5 (See General Limitation # 7)



## STEEL DECK SYSTEM LIMITATIONS:

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

## GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.  
**Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered 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 9B-72 of the Florida Administrative Code.

## END OF THIS ACCEPTANCE



NOA No.: 10-0125.05  
Expiration Date: 11/06/13  
Approval Date: 06/30/10  
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