MIAMI-DADE

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 High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: GAF Ruberoid® Modified Bitumen Roof System for Poured Gypsum Decks.

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

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

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

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

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

This NOA renews NOA #01-0712.16 and consists of pages 1 through 27.
The submitted documentation was reviewed by Frank Zuloaga, RRC.

PRODUCT CONTROL ACCEPTED

ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: SBS/APP, Modified Bitumen
Deck Type: Poured Gypsum
Maximum Design Pressure -75 psf
Fire Classification: See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
GAF Asphalt Concrete Primer (Matrix™ 307 Primer)	5, 55 gallons	ASTM D 41	Asphalt concrete primer used to promote adhesion of asphalt in built-up roofing.
GAF Mineral Shield® Granules	60 lb. Bags 100 lb. bags	ASTM D 1863	Granules for surfacing of exposed asphalt, cold process cement or emulsion. GAF Mineral Shield® Granules shall be used for flashing applications only.
GAF WeatherCoat® Emulsion (Matrix™ Fibered 305 Emulsion)	5 gallons	ASTM 1227	Surface coating for smooth surfaced roofs.
GAF Premium Fibered Aluminum Roof Coating (Matrix™ System Pro Aluminum Roof Coating Fibered 301)	1, 5 gallons	ASTM D 2824	Fibered aluminum coating.
GAF Jetblack All Weather Plastic Cement (Matrix™ Standard Wet/Dry Roof Cement 204)	1, 5 gallons	ASTM D 3019 ASTM D 3409	Refined asphalt blended with a mineral stabilizer and fibers. Permits adhesion to wet and dry surfaces.
GAFGLAS #75®	39.37" (1 meter) Wide	ASTM D 4601	Asphalt impregnated and coated glass mat base sheet.
GAFGLAS #80 Ultima™ Base Sheet	39.37" (1 meter) Wide	ASTM D4601	Asphalt impregnated and coated, fiberglass base sheet
GAFGLAS Flex Ply™ 6	39.37" (1 meter) Wide	ASTM D 2178	Type VI asphalt impregnated glass felt with asphalt coating.
GAFGLAS Ply 4®	39.37" (1 meter) Wide	ASTM D 2178	Type IV asphalt impregnated glass felt with asphalt coating.
GAFGLAS®Mineral Surfaced Cap Sheet	39.37" (1 meter) Wide	ASTM D 3909	Asphalt coated, glass fiber mat cap sheet surfaced with mineral granules.
GAFGLAS® STRATAVENT® Eliminator Perforated	39.37" (1 meter) Wide	ASTM D3672 ASTM D 4897	Fiberglass base sheet coated on both sides with asphalt. Surfaced on the bottom side with mineral granules embedded in asphaltic coating with factory perforations.

Product	Dimensions	Test Specification	Product Description
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 D 4897	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 D-6164	Non-Woven Polyester mat coated with polymer-modified asphalt and smooth surfaced.
RUBEROID® SBS Heat-Weld™ Granule	1 meter (39.37") wide	ASTM D-6164	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 D-6164	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 D-6164	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 D-6164	Non-Woven Polyester mat coated with fire retardant polymer modified asphalt and surfaced with mineral granules.
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 D-6164	Non-Woven Polyester mat coated with polymer-modified asphalt and smooth surfaced.
Ruberoid® Mop Granule	39.37" (1 meter) Wide	ASTM D 6222 ASTM D 5147	Non-woven polyester mat coated with polymer modified asphalt and surfaced with mineral granules.
RUBEROID MOP Smooth	1 sq. roll 87 lbs.	ASTM D 6298 ASTM D 5147	Non-woven polyester mat coated with polymer-modified asphalt and smooth surfaced.
RUBEROID MOP PLUS	39.37" (1 meter) Wide	ASTM D 6164 ASTM D 5147	Non-woven polyester mat coated with polymer modified asphalt and surfaced with mineral granules.
RUBEROID MOP 170FR	39.37" (1 meter) Wide	ASTM D 6164 ASTM D 5147	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 D 6164 ASTM D 5147	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 D 6222 ASTM D 5147	Heavy duty, polyester reinforced, asphalt modified bitumen membrane, smooth surface.

Product	Dimensions	Test Specification	Product Description
RUBEROID TORCH Granule	39.37" (1 meter) Wide	ASTM D 6222 ASTM D 5147	Heavy duty, polyester reinforced, asphalt modified bitumen membrane, granule surface.
RUBEROID TORCH PLUS	39.37" (1 meter) Wide	ASTM D 6222 ASTM D 5147	Heavy duty, polyester reinforced, asphalt modified bitumen membrane, granule surface
RUBEROID TORCH FR	39.37" (1 meter) Wide	ASTM D 6222 ASTM D 5147	Heavy duty, polyester reinforced, coated with fire retardant asphalt modified bitumen membrane, granule surface.
RUBEROID 170FR TORCH	39.37" (1 meter) Wide	ASTM D 6222 ASTM D 5147	Heavy duty, polyester reinforced, coated with fire retardant asphalt modified bitumen membrane, granule surface.
Ruberoid® 20	39.37" (1 meter) Wide	ASTM D 6163 ASTM D 5147	SBS modified asphalt base sheet reinforce with a glass fiber mat.
Ruberoid® 30	39.37" (1 meter) Wide	ASTM D 6163 ASTM D 5147	Non woven fiberglass mat coated with polymer modified asphalt and surfaced with mineral granules.
Ruberoid® 30 FR	39.37" (1 meter) Wide	ASTM D 6298 ASTM D 5147	Non woven fiberglass mat coated with fire retardant, polymer modified asphalt and surfaced with mineral granules.1
RUBEROID® ULTRACLAD® SBS	39.37" (1 meter) Wide	ASTM D 6163 ASTM D 5147	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 D 6164 ASTM D 5147	Non-woven polyester and fiberglass mat coated with file retardant, polymer modified asphalt and surfaced with mineral granules.
Vent Stacks (metal and plastic)		PA 100(A) ASTM D 1929 ASTM D 635	One-way valve vent used to relieve built-up pressure within the roof system. GAF Vent Stacks are available in metal or plastic.
GAF Aluminum Emulsion	5 gallons	None	Mineral colloidal bituminous emulsion with reflective aluminum flakes
GAF Aluminum Roof Paint (Matrix™ System Pro Aluminum Roof Coating Fibered 302)	5 gallons	ASTM D2824, Type I	Non-fibered. Aluminum pigmented, asphalt roof coating
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 (Matrix 602 SB Coating)	5 gallons		Surface coating for smooth surfaced and mineral surfaced roofs.
GAF WeatherCote® MB+(Matrix 715 MB Coating)	5 gallons		Surface coating for smooth surfaced and mineral surfaced roofs.

Product	Dimensions	Test Specification	Product Description
TopCoat MB+(Matrix 715 MB Coating)	5 gallons		Surface coating for smooth surfaced and mineral surfaced roofs.
WeatherCote™ (Matrix 531 WeatherCote® Elastomeric Flashing Grade)	5 gallons		Surface coating for smooth surfaced and mineral surfaced roofs.
Matrix Low VOC	5 gallons		Surface coating for smooth surfaced and mineral surfaced roofs.
Matrix 101 System Pro SBS Adhesive	5 gallons	ASTM D3019	Cold Applied Modified SEBS Asphalt Adhesive
(Ruberoid®MB) Matrix 201 System Pro SBS Flashing	5 gallons	ASTM D3019	Cold Applied Modified SEBS Asphalt Adhesive – Flashing Grade.
(Ruberoid®MB) Matrix 102 Select SBS Adhesive	5 gallons	ASTM D3019	Cold Applied Modified SEBS Asphalt Adhesive.
(Ruberoid®MB) Matrix 202 Select SBS Flashing	5 gallons	ASTM D4586	Cold Applied Modified SEBS Asphalt Adhesive – Flashing Grade.
Matrix 203 Standard Plastic Cement	5 gallons	ASTM D4586	Standard Plastic Asphalt Roofing Cement
Matrix 213 Gun Grade Plastic Cement	5 gallons	ASTM D4586	Standard Plastic Asphalt Roofing Cement Caulk Grade.
Matrix 103 Cold Adhesive	5 gallons	ASTM D3019	Cold Applied Asphalt Adhesive.
Matrix 303 Select Fibered Aluminum	5 gallons	ASTM D 2824	Fibered aluminum coating.
Matrix 304 Select Non-Fibered	5 gallons	ASTM D2824, Type I	Non-fibered. Aluminum pigmented, asphalt roof coating.
RUBEROID® Modified Bitumen Adhesive	5 gallons	ASTM D 3019 Type III	Fiber reinforced, rubberized Adhesive

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
GAFTEMP Isotherm R, RA, RN & Composite, EnergyGuard RA	Polyisocyanurate foam insulation	GAF Materials Corp.
GAFTEMP® Composite A & N	Polyisocyanurate foam insulation with high density fiberboard or Permalite perlite insulation.	GAF Materials Corp.
(BMCA)GAFTEMP® Fiberboard	Fiberboard insulation.	GAF Materials Corp.
GAFTEMP® Permalite	Perlite insulation board.	GAF Materials Corp.
GAFTEMP GAFCANT™	Cut perlite board	GAF Materials Corp.
GAFTEMP Permalite Recover Board	Perlite recover board	GAF Materials Corp.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
GAFTEMP GAFEDGE™ Tapered Edge Strip	Tapered perlite board	GAF Materials Corp.
(BMCA) GAFTEMP® High Density Fiberboard	High density wood fiberboard insulation.	GAF Materials Corp.
BMCA EnergyGuard, EnergyGuard RA	Polyisocynurate foam insulation	BMCA
BMCA Composite EnergyGuard, RA	Polyisocynurate/wood fiberboard composite	BMCA
PYROX	Polyisocyanurate foam insulation	Apache Products Co.
White Line	Polyisocyanurate foam insulation	Apache Products Co.
ACFoam I, II & Composite	Polyisocyanurate foam insulation	Atlas Energy Products
ISO 95+	Polyisocyanurate foam insulation	Firestone Building Products, Inc.
ISO 95+ Composite	Polyisocyanurate/perlite ridged insulation	Firestone Building Products, Inc.
EPS	Extruded polystyrene insulation	Generic
Wood Fiber	Wood fiber insulation board	Generic
High Density Wood Fiberboard	Wood fiber insulation board	Generic
Pelite/Urethane Composite	Perlite / urethane composite board insulation	Generic
Perlite Insulation	Perlite insulation board	Generic
Dens Deck	Water resistant gypsum board	G-P Gypsum Corp.
E'NRG'Y-2 & E'NRG'Y-2 PLUS, UltraGard Gold	Polyisocyanurate foam insulation	Johns Manville
FiberGlass Roof Insulation	Glass fiber/Mineral fiber insulation	Johns Manville
ISORoc	Polyisocyanurate foam / rockwool composite insulation	Johns Manville
Structodek	Wood fiber insulation board	Masonite.
Multi-Max & FA	Polyisocyanurate roof insulation	RMax, Inc.
Paroc Base Board Paroc Cap Board	Rockwool insulation	Partek, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Drill-Tec NTB	Glass reinforced Nylon insulation fastener for gypsum & CWF decks with barbs.		BMCA
2.	Drill-Tec NTB Plate	Galvalume stress plate	3" round	BMCA
3.	Drill-Tec CR 1.2 Base Sheet Fastener	Base sheet fastening only		BMCA

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
4.	NTB Magnum	Glass reinforced Nylon insulation fastener for gypsum & CWF decks with barbs.		Olympic Mfg. Group, Inc.
5.	NTB Plate	Galvalume stress plate	3" round	Olympic Mfg. Group, Inc.
6.	Olympic CR 1.2 Base Sheet Fastener	Base sheet fastening only		Olympic Mfg. Group, Inc.
7.	Twin Loc-Nail	Base sheet fastener with intergrated Plate.	1.8" long w/ 2.7" dia. plate	ES Products, Inc.
8.	Powerlite	Insulation fastener for CWF and Gypsum decks.		Powers Fasteners, Inc.
9.	Powerlite Plates	3" round galvalume AZ55 steel plate	3" round	Powers Fasteners, Inc.
10.	Powerlite Lap Plates	2" round galvalume AZ55 steel plate	2" round	Powers Fasteners, Inc.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Factory Mutual Research Corporation	FMRC 1996	Current Insulation Attachment Requirements	01.01.96
Factory Mutual Research Corp.	J.I. 0D0A8.AM	Wind Uplift, FMRC 4470 - PA 114	07.09.97
Factory Mutual Research Corp.	J.I. 2B8A4.AM	Wind Uplift, FMRC 4470 - PA 114	07.02.97
Exterior Research & Design, LLC Trinity Engineering	#4482.10.97-1 #4483.04.97-1	Wind Uplift	06-06-97
IRT-Arcon, Inc.	02-011	Wind Uplift PA 114	02/26/02
IRT-Arcon, Inc.	02-015	Wind Uplift PA 114	03/26/02

APPROVED ASSEMBLIES

Membrane Type: APP/SBS Heat Weld

Deck Type 6I: Poured Gypsum, Insulated

Deck Description: Poured Gypsum Concrete

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^2
ACFoam-I **Minimum 1.2" thick**	**N/A**	**N/A**
Pyrox, White Line, UltraGard Gold, GAFTEMP® Isotherm R, GAFTEMP Isotherm RA, GAFTEMP Isotherm RN, BMCA EnergyGuard **Minimum 1.3" thick**	**N/A**	**N/A**
ISO-95, Composite Plus, GL, GW, E'NRG'Y-2, PSI-25, BMCA EnergyGuard, EnergyGuard RA **Minimum 1.4" thick**	**N/A**	**N/A**
ACFoam Composite, GAFTEMP® Composite, GAFTEMP Composite A, GAFTEMP Composite N, Barrier Board Plus, E'NRG'Y-1 Plus, E'NRG'Y-2 Plus, GAFTEMP Composite N, BMCA EnergyGuard Composite, BMCA EnergyGuard RA Composite **Minimum 1.5" thick**	**N/A**	**N/A**
ACFoam-II, GAFTEMP Isotherm RA, BMCA EnergyGuard RA **Minimum 1.75" thick**	**N/A**	**N/A**
GAFTEMP® High Density Fiberboard, GAFTEMP® Fiberboard, GAFTEMP® PERMALITE® Recover Board, Gypsum Board **Minimum ½" thick**	**N/A**	**N/A**
Fiberglas **Minimum $^{15}/_{16}$" 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^2. 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 GAFTEMP® PERMALITE or wood fiber overlay board on all isocyanurate applications.

Anchor sheet: One ply of #75 Base Sheet, GAFGLAS #80 Ultima™ Base Sheet, STRATAVENT® Eliminator Perforated Nailable, RUBEROID Modified Base Sheet or RUBEROID® 20 mechanically fastened as described below:

Fastening Options:	(GAFTITE) Drill-Tec CR 1.2" Base Sheet fasteners at a 2" side lap 9" o.c. and in two rows staggered in the center of the sheet 12" o.c.; ***(Maximum Design Pressure –50 psf, See General Limitation #9)***
	(GAFTITE) Drill-Tec CR 1.2" Base Sheet fasteners at a 2" side lap 9" o.c. and in three rows staggered in the center of the sheet 9" o.c.; ***(Maximum Design Pressure –57.5 psf, See General Limitation #9)***
	(GAFTITE) Drill-Tec CR 1.2" Base Sheet fasteners at a 4" side lap 7" o.c. and in three rows staggered in the center of the sheet 7" o.c.; ***(Maximum Design Pressure –52.5 psf, See General Limitation #7)***
	ES Twin Loc-Nail fasteners at a 4" side lap 9" o.c. and in two rows staggered in the center of the sheet 12" o.c.; ***(Maximum Design Pressure –75 psf, See General Limitation #7)***
Base Sheet:	One or more plies of GAFGLAS® Ply 4, STRATAVENT® Eliminator Perforated laid dry, GAFGLAS® Ply 6®, GAFGLAS FlexPly™6 or GAFGLAS® #75, GAFGLAS #80 ULTIMA™ Base Sheet, RUBEROID Modified Base Sheet adhered to the insulation in a full mopping of an approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. (See General Limitation #4)
Ply Sheet:	(Optional, required if used with RUBEROID 20 or perforated STRATAVENT®) one or more plies of GAFGLAS® PLY 4®, GAFGLAS® FlexPly™ 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® Torch Smooth, Ruberoid® Torch Granule, Ruberoid® Torch Plus Granule 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® 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 Heat-Weld Smooth or Heat-Weld 25) Install one of the following: 1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq. 2. GAF Premium Fibered Aluminum Roof Coating, at 1.5 gal. /sq. or GAF WeatherCoat® Emulsion at 3 gal./sq. (Torch Smooth applications only) 3. GAF Weathercote® MB+(Matrix 715 MB Coating), Applied at 1 to 1.5 gal./sq. 4. Top Coat® Surface Seal SB(Matrix 602 SB Coating), Applied at 1 to 1.5 gal./sq.
Maximum Design Pressure:	See Fastening above.

Membrane Type: SBS

Deck Type 6I: Poured Gypsum, Insulated

Deck Description: Poured Gypsum Concrete

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.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-I **Minimum 1.2" thick**	**N/A**	**N/A**
Isotherm R, GAFTEMP® Isotherm R, Pyrox, White Line, UltraGard Gold, BMCA EnergyGuard, EnergyGuard RA **Minimum 1.3" thick**	**N/A**	**N/A**
E'NRG'Y-2, PSI-25, ISO-95, GL, GW Composite Plus, GAFTEMP Isotherm RN **Minimum 1.4" thick**	**N/A**	**N/A**
E'NRG'Y-1 Plus, E'NRG'Y-2 Plus, GAFTEMP® Composite, GAFTEMP Composite A, GAFTEMP Composite N, ACFoam Composite, BMCA EnergyGuard Composite, BMCA EnergyGuard RA Composite **Minimum 1.5" thick**	**N/A**	**N/A**
ACFoam-II, GAFEMP Isotherm RA, BMCA EnergyGuard RA **Minimum 1.75" thick**	**N/A**	**N/A**
Gypsum Board, GAFTEMP® Fiberboard, GAFTEMP® High Density Fiberboard, GAFTEMP® PERMALITE, GAFTEMP Recover Board **Minimum ½" thick**	**N/A**	**N/A**
Fiberglas **Minimum $^{15}/_{16}$" thick**	**N/A**	**N/A**

Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Dens Deck **Minimum ¼" thick**	**N/A**	**N/A**
GAFTEMP® High Density Fiberboard, GAFTEMP® Fiberboard, GAFTEMP® PERMALITE,GAFTEMP Recover Board **Minimum ½" 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^2. 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 GAFTEMP® PERMALITE or wood fiber overlay board on all isocyanurate applications.

Anchor sheet:	One ply of #75 Base Sheet, GAFGLAS #80 Ultima™ Base Sheet, STRATAVENT® Nailable, RUBEROID Modified Base Sheet or RUBEROID® 20 mechanically fastened as described below:
Fastening Options:	(GAFTITE) Drill-Tec CR 1.2" Base Sheet fasteners at a 2" side lap 9" o.c. and in two rows staggered in the center of the sheet 12" o.c.; ***(Maximum Design Pressure –50 psf, See General Limitation #9)***
	(GAFTITE) Drill-Tec CR 1.2" Base Sheet fasteners at a 2" side lap 9" o.c. and in three rows staggered in the center of the sheet 9" o.c.; ***(Maximum Design Pressure –57.5 psf, See General Limitation #9)***
	(GAFTITE) Drill-Tec CR 1.2" Base Sheet fasteners at a 4" side lap 7" o.c. and in three rows staggered in the center of the sheet 7" o.c.; ***(Maximum Design Pressure –52.5 psf, See General Limitation #7)***
	ES Twin Loc-Nail fasteners at a 4" side lap 9" o.c. and in two rows staggered in the center of the sheet 12" o.c.; ***(Maximum Design Pressure –75 psf, See General Limitation #7)***
Base Sheet:	One ply of GAFGLAS® Ply 4, STRATAVENT® Eliminator Perforated laid dry, GAFGLAS FlexPly™6 or GAFGLAS® #75, GAFGLAS #80 ULTIMA™ Base Sheet, RUBEROID Modified Base Sheet or RUBEROID 20 adhered to the insulation in a full mopping of an approved 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 of GAFGLAS® PLY 4®, GAFGLAS®FlexPly™ 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, Ruberoid® Mop Plus Granule, Ruberoid® 20, Ruberoid® 30 or Ruberoid® 30 FR or Ruberoid® Mop FR, RUBEROID Dual 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, RUBEROID® Mop 170 FR, RUBEROID® Mop Plus Granule, RUBEROID® 30, RUBEROID® 30 FR, RUBEROID® Mop FR or RUBEROID Dual FR in RUBEROID Modified Bitumen 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 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. GAFGLAS Mineral Surfaced Cap Sheet in an approved asphalt at an application rate of 25 lb./sq. ± 15%.
3. GAF Weathercote® MB+(Matrix 715 MB Coating), Applied at 1 to 1.5 gal./sq.
4. Top Coat® Surface Seal SB(Matrix 602 SB Coating), Applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: See Fastening above.

Membrane Type: APP/SBS Heat Weld

Deck Type 6I: Poured Gypsum, Insulated

Deck Description: Poured Gypsum Concrete

System Type B: Base layers of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-I **Minimum 1.3" thick**	**8**	**1:3 ft^2**
E'NRG'Y 2, GAFTEMP Isotherm RN, BMCA EnergyGuard **Minimum 1.25" thick**	**8**	**1:3 ft^2**
E'NRG'Y 2 Plus, GAFTEMP Composite N, BMCA EnergyGuard Composite **Minimum 1.5" thick**	**8**	**1:4 ft^2**
AC-Foam II, GAFTEMP Isotherm A, BMCA EnergyGuard RA **Minimum 1.3" thick**	**8**	**1:2.67 ft^2**
GAFTEMP® PERMALITE **Minimum 1" thick**	**8**	**1:2 ft^2**
Fiberglas **Minimum $^{15}/_{16}$" thick**	**8**	**1:2.67 ft^2**

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.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Any of the above base layer insulations		
GAFTEMP® PERMALITE, GAFTEMP Recover Board, GAFTEMP® High Density Fiberboard, GAFTEMP® Fiberboard **Minimum ½" thick**	**N/A**	**N/A**
Fiberglas **Minimum $^{15}/_{16}$" thick**	**N/A**	**N/A**
GAFTEMP® Composite, GAFTEMP Composite A, GAFTEMP Composite N, BMCA EnergyGuard Composite **Minimum 1.5" thick**	**N/A**	**N/A**

Note: Apply top layer of insulation in a full mopping of any approved mopping hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. 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® Perforated laid dry, or a layer of GAFTEMP® PERMALITE® or wood fiber overlay board on all isocyanurate applications.

Base Sheet:	One ply of GAFGLAS® Ply 4, STRATAVENT® Eliminator Perforated laid dry, GAFGLAS FlexPly™ 6, GAFGLAS® #75, GAFGLAS #80 ULTIMA™ Base Sheet, RUBEROID Modified Base Sheet or adhered to the insulation in a full mopping of an approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. See General Limitation #4
Ply Sheet:	(Optional, required STRATAVENT® Eliminator Perforated) One or more plies of GAFGLAS® PLY 4®, GAFGLAS®FlexPly™ 6 or GAFGLAS #80 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, Ruberoid® Torch Plus Granule 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® 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 Heat-Weld Smooth or Heat-Weld 25) Install one of the following: 1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq. 2. GAF Premium Fibered Aluminum Roof Coating, at 1.5 gal. /sq. or GAF WeatherCoat® Emulsion at 3 gal./sq. (Torch Smooth applications only) 3. GAF Weathercote® MB+(Matrix 715 MB Coating), Applied at 1 to 1.5 gal./sq. 4. Top Coat® Surface Seal SB(Matrix 602 SB Coating), Applied at 1 to 1.5 gal./sq.
Maximum Design Pressure:	**-45 psf (See General Limitation #9)**

Membrane Type:	SBS
Deck Type 6I:	Poured Gypsum, Insulated
Deck Description:	Poured Gypsum Concrete
System Type B:	Base layers of insulation mechanically fastened, Optional top layer adhered with approved asphalt.

All General and System Limitations apply.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-I Minimum 1.3" thick	**8**	**1:3 ft^2**
E'NRG'Y 2, GAFTEMP Isotherm RN, BMCA EnergyGuard Minimum 1.25" thick	**8**	**1:3 ft^2**
E'NRG'Y 2 Plus, GAFTEMP Composite N, BMCA EnergyGuard Composite Minimum 1.5" thick	**8**	**1:4 ft^2**
AC-Foam II, GAFTEMP Isotherm RA, BMCA EnergyGuard RA Minimum 1.3" thick	**8**	**1:4 ft^2**
GAFTEMP® PERMALITE Minimum 1" thick	**8**	**1:2 ft^2**
Fiberglas Minimum $^{15}/_{16}$" thick	**8**	**1:2.67 ft^2**

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.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
GAFTEMP® PERMALITE, GAFTEMP Recover Board, GAFTEMP® High Density Fiberboard, GAFTEMP® Fiberboard, Minimum ½" thick	**N/A**	**N/A**
Fiberglas Minimum $^{15}/_{16}$" thick	**N/A**	**N/A**
GAFTEMP® Composite, GAFTEMP Composite A, GAFTEMP Composite N, BMCA EnergyGuard Composite Minimum 1.5" thick	**N/A**	**N/A**

Note: Apply top layer of insulation in a full mopping of any approved mopping hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. 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® Perforated laid dry, or a layer of GAFTEMP® PERMALITE® or wood fiber overlay board on all isocyanurate applications.

Base Sheet:	One ply of GAFGLAS® Ply 4, STRATAVENT® Eliminator Perforated laid dry, GAFGLAS FlexPly™ 6, GAFGLAS® #75, GAFGLAS #80 ULTIMA™ Base Sheet, RUBEROID Modified Base Sheet or RUBEROID 20 adhered to the insulation in a full mopping of an approved 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 of GAFGLAS® PLY 4®, GAFGLAS® FlexPly™ 6, GAFGLAS #80 Base Sheet, 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, Ruberoid® Mop Plus Granule, Ruberoid® 20, Ruberoid® 30 or Ruberoid® 30 FR or Ruberoid® Mop FR, RUBEROID Dual 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, RUBEROID® Mop 170 FR, RUBEROID® Mop Plus Granule, RUBEROID® 30, RUBEROID® 30 FR, RUBEROID® Mop FR or RUBEROID Dual FR in RUBEROID Modified Bitumen 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 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq. 2. GAFGLAS Mineral Surfaced Cap Sheet in an approved asphalt at an application rate of 25 lb./sq. ± 15%. 3. GAF Weathercote® MB+(Matrix 715 MB Coating), Applied at 1 to 1.5 gal./sq. 4. Top Coat® Surface Seal SB(Matrix 602 SB Coating), Applied at 1 to 1.5 gal./sq.
Maximum Design Pressure:	**-45 psf (See General Limitation #9)**

Membrane Type: APP/SBS Heat Weld

Deck Type 6I: Poured Gypsum, Insulated

Deck Description: Poured Gypsum Concrete

System Type C: All layers of insulation simultaneously fastened.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-I, BMCA EnergyGuard RA Minimum 1.3" thick	**N/A**	**N/A**
E'NRG'Y 2, GAFTEMP Isotherm R, GAFTEMP Isotherm RA, GAFTEMP Isotherm RN, BMCA EnergyGuard Minimum 1.4" thick	**N/A**	**N/A**
E'NRG'Y 2 Plus, GAFTEMP Composite, GAFTEMP Composite A, GAFTEMP Composite N, BMCA EnergyGuard RA Composite Minimum 1.5" thick	**N/A**	**N/A**
GAFTEMP® High Density Fiberboard, GAFTEMP® Fiberboard, GAFTEMP® PERMALITE, GAFTEMP Recover Board Minimum ½" thick	**N/A**	**N/A**
Fiberglas Minimum $^{15}/_{16}$" 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.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
GAFTEMP® PERMALITE, GAFTEMP Recover Board, GAFTEMP® High Density Fiberboard, GAFTEMP® Fiberboard, Minimum ½" thick	**8**	1:2 ft^2
Fiberglas Minimum $^{15}/_{16}$" thick	**8**	1:2 ft^2
GAFTEMP® Composite, GAFTEMP Composite A, GAFTEMP Composite N, BMCA EnergyGuard Composite Minimum 1.5" thick	**8**	1:2 ft^2

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. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One ply of GAFGLAS® Ply 4, STRATAVENT® Eliminator Perforated laid dry, GAFGLAS FlexPly™ 6, GAFGLAS® #75, GAFGLAS #80 ULTIMA™ Base Sheet, RUBEROID Modified Base Sheet or adhered to the insulation in a full mopping of an approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. See General Limitation #4
Ply Sheet:	(Optional, required STRATAVENT® Eliminator Perforated) One or more plies of GAFGLAS® PLY 4®, GAFGLAS® FlexPly™ 6 or GAFGLAS #80 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, Ruberoid® Torch Plus Granule 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® 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 Heat-Weld Smooth or Heat-Weld 25) Install one of the following: 1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq. 2. GAF Premium Fibered Aluminum Roof Coating, at 1.5 gal. /sq. or GAF WeatherCoat® Emulsion at 3 gal./sq. (Torch Smooth applications only) 3. GAF Weathercote® MB+(Matrix 715 MB Coating), Applied at 1 to 1.5 gal./sq. 4. Top Coat® Surface Seal SB(Matrix 602 SB Coating), Applied at 1 to 1.5 gal./sq.
Maximum Design Pressure:	**-62.5 psf (See General Limitation #9)**

Membrane Type: SBS

Deck Type 6I: Poured Gypsum, Insulated

Deck Description: Poured Gypsum Concrete

System Type C: All layers of insulation simultaneously fastened.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-I, BMCA EnergyGuard RA		
Minimum 1.3" thick	**N/A**	**N/A**
E'NRG'Y 2, GAFTEMP Isotherm R, GAFTEMP Isotherm RA, GAFTEMP Isotherm RN, BMCA EnergyGuard		
Minimum 1.4" thick	**N/A**	**N/A**
E'NRG'Y 2 Plus, GAFTEMP Composite, GAFTEMP Composite A, GAFTEMP Composite N, BMCA EnergyGuard RA Composite		
Minimum 1.5" thick	**N/A**	**N/A**
GAFTEMP® High Density Fiberboard, GAFTEMP® Fiberboard, GAFTEMP® PERMALITE, GAFTEMP Recover Board		
Minimum ½" thick	**N/A**	**N/A**
Fiberglas		
Minimum $^{15}/_{16}$" 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.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
GAFTEMP® PERMALITE, GAFTEMP Recover Board, GAFTEMP® High Density Fiberboard, GAFTEMP® Fiberboard,		
Minimum ½" thick	**8**	1:2 ft^2
Fiberglas		
Minimum $^{15}/_{16}$" thick	**8**	1:2 ft^2
GAFTEMP® Composite, GAFTEMP Composite A, GAFTEMP Composite N, BMCA EnergyGuard Composite		
Minimum 1.5" thick	**8**	1:2 ft^2

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. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One ply of GAFGLAS® Ply 4, STRATAVENT® Eliminator Perforated laid dry, GAFGLAS FlexPly™ 6, GAFGLAS® #75, GAFGLAS #80 ULTIMA™ Base Sheet, RUBEROID Modified Base Sheet or RUBEROID 20 adhered to the insulation in a full mopping of an approved 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 of GAFGLAS® PLY 4®, GAFGLAS®FlexPly™ 6, GAFGLAS #80 Base Sheet, 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, Ruberoid® Mop Plus Granule, Ruberoid® 20, Ruberoid® 30 or Ruberoid® 30 FR or Ruberoid® Mop FR, RUBEROID Dual 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, RUBEROID® Mop 170 FR, RUBEROID® Mop Plus Granule, RUBEROID® 30, RUBEROID® 30 FR, RUBEROID® Mop FR or RUBEROID Dual FR in RUBEROID Modified Bitumen 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 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq. 2. GAFGLAS Mineral Surfaced Cap Sheet in an approved asphalt at an application rate of 25 lb./sq. ± 15%. 3. GAF Weathercote® MB+(Matrix 715 MB Coating), Applied at 1 to 1.5 gal./sq. 4. Top Coat® Surface Seal SB(Matrix 602 SB Coating), Applied at 1 to 1.5 gal./sq.
Maximum Design Pressure:	**-62.5 psf (See General Limitation #9)**

Membrane Type: APP/SBS Heat Weld

Deck Type 6: Poured Gypsum, Insulated

Deck Description: Poured gypsum concrete.

System Type C(2): Insulation mechanically attached.

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
GAFTEMP® PERMALITE Minimum ¾" thick	**1 or 4**	**1:1 ft^2**

Base Sheet: One ply of GAFGLAS® Ply 4, STRATAVENT® Eliminator Perforated laid dry, GAFGLAS FlexPly™ 6, GAFGLAS® #75, GAFGLAS #80 ULTIMA™ Base Sheet, RUBEROID Modified Base Sheet or RUBEROID 20 adhered to the insulation in a full mopping of an approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. See General Limitation #4

Ply Sheet: (Optional, required if used with RUBEROID 20 or STRATAVENT® Eliminator Perforated) One or more plies of GAFGLAS® PLY 4®, GAFGLAS® FlexPly™ 6 or GAFGLAS #80 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, Ruberoid® Torch Plus Granule 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® 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 Heat-Weld Smooth or Heat-Weld 25) Install one of the following:

1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. GAF Premium Fibered Aluminum Roof Coating, at 1.5 gal. /sq. or GAF WeatherCoat® Emulsion at 3 gal./sq. (Torch Smooth applications only)
3. GAF Weathercote® MB+(Matrix 715 MB Coating), Applied at 1 to 1.5 gal./sq.
4. Top Coat® Surface Seal SB(Matrix 602 SB Coating), Applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: **-62.5 psf (See General Limitation #9)**

Membrane Type: SBS

Deck Type 6: Poured Gypsum, Insulated

Deck Description: Poured gypsum concrete.

System Type C(2): Insulation mechanically attached.

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
GAFTEMP® PERMALITE Minimum ¾" thick	**1 or 4**	**1:1 ft^2**

Base Sheet: One ply of GAFGLAS® Ply 4, STRATAVENT® Eliminator Perforated laid dry, GAFGLAS FlexPly™ 6, GAFGLAS® #75, GAFGLAS #80 ULTIMA™ Base Sheet, RUBEROID Modified Base Sheet or RUBEROID 20 adhered to the insulation in a full mopping of an approved 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 of GAFGLAS® PLY 4®, GAFGLAS®FlexPly™ 6, GAFGLAS #80 Base Sheet, 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, Ruberoid® Mop Plus Granule, Ruberoid® 20, Ruberoid® 30 or Ruberoid® 30 FR or Ruberoid® Mop FR, RUBEROID Dual 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, RUBEROID® Mop 170 FR, RUBEROID® Mop Plus Granule, RUBEROID® 30, RUBEROID® 30 FR, RUBEROID® Mop FR or RUBEROID Dual FR in RUBEROID Modified Bitumen 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 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. GAFGLAS Mineral Surfaced Cap Sheet in an approved asphalt at an application rate of 25 lb./sq. ± 15%.
3. GAF Weathercote® MB+(Matrix 715 MB Coating), Applied at 1 to 1.5 gal./sq.
4. Top Coat® Surface Seal SB(Matrix 602 SB Coating), Applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: **-62.5 psf (See General Limitation #9)**

Membrane Type: APPSBS Heat Weld

Deck Type 6: Poured Gypsum, Non-insulated

Deck Description: Poured gypsum concrete.

System Type E: Base sheet mechanically fastened.

All General and System Limitations shall apply.

Base sheet: One ply of #75 Base Sheet, GAFGLAS #80 Ultima™ Base Sheet, STRATAVENT® Eliminator Perforated Nailable, RUBEROID Modified Base Sheet or RUBEROID® 20 mechanically fastened as described below:

Fastening Options: (GAFTITE) Drill-Tec CR 1.2" Base Sheet fasteners at a 2" side lap 9" o.c. and in two rows staggered in the center of the sheet 12" o.c.; ***(Maximum Design Pressure –50 psf, See General Limitation #9)***

(GAFTITE) Drill-Tec CR 1.2" Base Sheet fasteners at a 2" side lap 9" o.c. and in three rows staggered in the center of the sheet 9" o.c.; ***(Maximum Design Pressure –57.5 psf, See General Limitation #9)***

(GAFTITE) Drill-Tec CR 1.2" Base Sheet fasteners at a 4" side lap 7" o.c. and in three rows staggered in the center of the sheet 7" o.c.; ***(Maximum Design Pressure –52.5 psf, See General Limitation #7)***

ES Twin Loc-Nail fasteners at a 4" side lap 9" o.c. and in two rows staggered in the center of the sheet 12" o.c.; ***(Maximum Design Pressure –75 psf, See General Limitation #7)***

Ply Sheet: (Optional, required if used with RUBEROID 20 or perforated STRATAVENT®) one or more plies of GAFGLAS® PLY 4®, GAFGLAS® FlexPly™ 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® Torch Smooth, Ruberoid® Torch Granule, Ruberoid® Torch Plus Granule 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® 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 Heat-Weld Smooth or Heat-Weld 25) Install one of the following:

1. Gravel or slag applied at 400 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. GAF Premium Fibered Aluminum Roof Coating, at 1.5 gal. /sq. or GAF WeatherCoat® Emulsion at 3 gal./sq. (Torch Smooth applications only)
3. GAF Weathercote® MB+(Matrix 715 MB Coating), Applied at 1 to 1.5 gal./sq.
4. Top Coat® Surface Seal SB(Matrix 602 SB Coating), Applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: See Fastening above.

Membrane Type: SBS

Deck Type 6: Poured Gypsum, Non-insulated

Deck Description: Poured gypsum concrete.

System Type E: Base sheet mechanically fastened.

All General and System Limitations shall apply.

Base sheet: One ply of #75 Base Sheet, GAFGLAS #80 Ultima™ Base Sheet, STRATAVENT® Nailable, RUBEROID Modified Base Sheet or RUBEROID® 20 mechanically fastened as described below:

Fastening Options: (GAFTITE) Drill-Tec CR 1.2" Base Sheet fasteners at a 2" side lap 9" o.c. and in two rows staggered in the center of the sheet 12" o.c.; ***(Maximum Design Pressure –50 psf, See General Limitation #9)***

(GAFTITE) Drill-Tec CR 1.2" Base Sheet fasteners at a 2" side lap 9" o.c. and in three rows staggered in the center of the sheet 9" o.c.; ***(Maximum Design Pressure –57.5 psf, See General Limitation #9)***

(GAFTITE) Drill-Tec CR 1.2" Base Sheet fasteners at a 4" side lap 7" o.c. and in three rows staggered in the center of the sheet 7" o.c.; ***(Maximum Design Pressure –52.5 psf, See General Limitation #7)***

ES Twin Loc-Nail fasteners at a 4" side lap 9" o.c. and in two rows staggered in the center of the sheet 12" o.c.; ***(Maximum Design Pressure –75 psf, See General Limitation #7)***

Ply Sheet: (Optional), one or more plies of GAFGLAS® PLY 4®, GAFGLAS®FlexPly™ 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, Ruberoid® Mop Plus Granule, Ruberoid® 20, Ruberoid® 30 or Ruberoid® 30 FR or Ruberoid® Mop FR, RUBEROID Dual 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, RUBEROID® Mop 170 FR, RUBEROID® Mop Plus Granule, RUBEROID® 30, RUBEROID® 30 FR, RUBEROID® Mop FR or RUBEROID Dual FR in RUBEROID Modified Bitumen 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 lb./sq. and 300 lb./sq. respectively in a flood coat of approved asphalt at 60 lb./sq.
2. GAFGLAS Mineral Surfaced Cap Sheet in an approved asphalt at an application rate of 25 lb./sq. ± 15%.
3. GAF Weathercote® MB+(Matrix 715 MB Coating), Applied at 1 to 1.5 gal./sq.
4. Top Coat® Surface Seal SB(Matrix 602 SB Coating), Applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: See Fastening above.

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 sidelap 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. **(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