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 Florida Building Code and the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: GAF Liberty™ SBS Self-Adhering Modified Bitumen Roofing Systems Over Steel Decks

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

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

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

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

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

This NOA consists of pages 1 through 9.
The submitted documentation was reviewed by Jorge L. Acebo.

PRODUCT CONTROL ACCEPTED

NOA No: 06-1215.01
Expiration Date: 02/22/12
Approval Date: 02/22/07

ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Self-Adhering, SBS Modified Bitumen

Deck Type: Steel
Maximum Design Pressure -97.5 psf
Fire Classification: See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Liberty™ SBS Self-Adhering Base/Ply Sheet	39.375" x 66'	ASTM D 5147	Self-Adhered, SBS modified, fiberglass reinforced membrane for base or ply sheet applications.
Liberty™ MA Mechanically Attached Base Sheet	39.375" x 66'	ASTM D 4601, Type II	Mechanically attached, SBS modified, fiberglass reinforced base sheet.
Liberty™ SBS Self-Adhering Cap Sheet	39.375" x 34'	ASTM D 5147	Self-adhering, SBS modified, polyester / fiberglass composite reinforced cap sheet
Liberty™ FR SBS Self-Adhering Cap Sheet	39.375" x 34'	ASTM D 5147	Self-adhering, SBS modified, polyester / fiberglass composite reinforced cap sheet with fire retardants.
Ruberoid® SBS Heat-Weld™ Granule	39.37" (1 meter) wide	ASTM D-6164	Non-Woven Polyester mat coated with polymer modified asphalt and surfaced with mineral granules.
Ruberoid® SBS Heat-Weld™ Smooth	39.37" (1 meter) wide	ASTM D-6164	Non-Woven Polyester mat coated with polymer modified asphalt and smooth surfaced.
Ruberoid® SBS Heat-Weld™ 170 FR	39.37" (1 meter) 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	39.37" (1 meter) wide	ASTM D-6164	Non-Woven Polyester mat coated with polymer modified asphalt and surfaced with mineral granules.

Product	Dimensions	Test Specification	Product Description
Ruberoid® SBS Heat-Weld™ Plus FR	39.37" (1 meter) wide	ASTM D-6164	Non-Woven Polyester mat coated with fire retardant polymer modified asphalt and surfaced with mineral granules.
Ruberoid® SBS Heat-Weld™ 25	39.37" (1 meter) wide	ASTM D-6164	Non-Woven Polyester mat coated with polymer modified asphalt and smooth surfaced.
Ruberoid® Torch Smooth	39.37" (1 meter) wide	ASTM D 5147	Heavy duty, polyester reinforced, asphalt modified bitumen membrane.
Ruberoid® Torch Granule	39.37" (1 meter) wide	ASTM D 6222 ASTM D 5147	Asphalt impregnated, coated felt, surfaced with mineral granules.
Ruberoid® Torch 170 FR	39.37" (1 meter) wide	ASTM D 6222 ASTM D 5147	Non-woven polyester mat coated with fire retardant polymer modified asphalt surfaced with mineral granules.
Ruberoid® Torch FR	39.37" (1 meter) wide	ASTM D 6222 ASTM D 5147	Non-woven polyester mat coated with fire retardant polymer modified asphalt surfaced with mineral granules.
Ruberoid® Torch Plus	39.37" (1 meter) wide	ASTM D 6222 ASTM D 5147	Heavy duty, polyester reinforced, asphalt modified bitumen membrane.
Ruberoid® EnergyCap™ APP 250 FR	39.6" (1 meter) wide	ASTM D 6222 ASTM D 5147 ASTM E 903 ASTM E 408	Fire-retarding modified bitumen membrane with a factory applied layer of Topcoat® EnergyCote™ elastomeric 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® EnergyCap™ BUR Mineral Surfaced Cap Sheet	39.4" (1 meter) wide	ASTM D 3909 ASTM E 903 ASTM E 508	Mineral surfaced cap sheet surfaced with extra fine granules and a factory applied layer of Topcoat® EnergyCote™ elastomeric Coating.
Matrix™ 322 Elastomeric Roof Coating	5, 55 gallons	ASTM D 2824, Type I	Styrene, acrylic based roof coating.

Product	Dimensions	Test Specification	Product Description
Matrix™ 602 MB Xtra Elastomeric Roofing Membrane	5, 55 gallons	ASTM D-412, ASTM B-117, ASTM C-794, ASTM G-21, FTMS 141.6271, ASTM D-21-96, ASTM D-1475 ASTM E-1644.	Surface coating for smooth surfaced and mineral surfaced roofs.
Matrix™ 715 MB Elastomeric Roofing Membrane	5, 55 gallons	ASTM D-412, ASTM D-21-96, ASTM D-1475, ASTM E-1644	Surface coating for smooth surfaced and mineral surfaced roofs.
Topcoat® MB Plus	5, 55 gallons	ASTM D-412, ASTM D-21-96, ASTM D-1475, ASTM E-1644	Water-based, low VOC, sprayable polymeric liquid, which cures to form a seamless rubber membrane.
Topcoat® Surface Seal SB	5, 55 gallons	ASTM D-412, ASTM B-117, ASTM C-794, ASTM G-21, FTMS141.6271, ASTM D-21-96, ASTM D-1475, ASTM E-1644	Solvent-based, sprayable thermoplastic rubber liquid, which cures to form a seamless rubber membrane.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
EnergyGuard™ PolyIso	Polyisocyanurate foam insulation	GAF
DensDeck® DuraGuard™	Modified Gypsum Roof Board	Georgia-Pacific
Dens Deck®, Dens Deck Prime™	Water-resistant gypsum board	GAF
EnergyGuard™ RA, RN, Ultra	Polyisocyanurate foam insulation	GAF

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Drill-Tec™ #12 Standard & #14 HD Roofing Fasteners	Insulation fastener for steel, wood & concrete decks.	various	BMCA.
2.	Drill-Tec™ Extra Heavy duty # 15 Roofing Fasteners (XHD)	Self tapping coated screw w/#3 Phillips head	various	BMCA.
3.	Drill-Tec™ ASAP	Pre-assembled fasteners and metal and plastic plates.	various	BMCA..
4.	Drill-Tec™ Plastic Polypropylene Plates	Round Polypropylene plate.	3" & 3-½" round	BMCA.
5.	Drill-Tec™ Metal Insulation Plates	Round galvalume plate.	3" & 3-½" round	BMCA.
6.	OlyBond500™ Adhesive Fastener	Dual component adhesive fastener	N/A	Olympic Mfg. Group, Inc.

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
Factory Mutual Research Corp.	Class FM 4470	3024805	11/20/2006

APPROVED ASSEMBLIES:

Deck Type 1I: Steel, Insulated

Deck Description: Min. 22 gauge, Type B, wide rib steel deck is secured to minimum ¼" thick structural steel supports spaced maximum 6' o.c. using two ICH Traxx/5 fasteners spaced 6" o.c. along each support. Deck side laps fastened with ICH Traxx/1 fasteners spaced maximum 24" o.c.

System Type C(1): Insulation is mechanically attached through loose laid insulation & optional thermal barrier to the deck. Membrane fully or partially adhered.

(Optional) Thermal Barrier: Min. 1/2" Dens Deck® or Min. 3/4" EnergyGuard™ Perlite is loose laid over the deck.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard™ PolyIso, EnergyGuard™ RA, EnergyGuard™ RN or EnergyGuard™ Ultra		
Minimum 2" thick	**N/A**	**N/A**

Note: Base Insulation layer & Optional thermal barrier are loose laid over the deck and simultaneously mechanically attached with the top layer of the insulation. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck® DuraGuard™ Minimum 1/4" thick	**2 & 5**	**1:1.33**

Note: Top layer of insulation is adhered to the base layer of insulation with OlyBond500™ Adhesive Fastener applied in serpentine pattern with a minimum 3/4" wide ribbons spaced max. 12" o.c. prior to the fastening of the top layer of insulation to the deck. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Liberty™ SBS Self-Adhering Base/Ply Sheet, self-adhered with minimum 3" wide laps and rolled with a weighted roller.

Ply Sheet: (Optional) One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet, self-adhered with minimum 3" wide laps and rolled with a weighted roller.

Membrane: One or more layers 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 FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® Torch Smooth, Ruberoid® Torch Granule, Ruberoid® Torch 170 FR, Ruberoid® Torch FR, Ruberoid® Torch Plus or Ruberoid® EnergyCap™ APP 250 FR, with minimum 3" wide laps and applied according to manufacturer's application instructions.

Surfacing: (Optional, required over Ruberoid® Torch Smooth, Ruberoid® SBS Heat-Weld™ 25 or Ruberoid® SBS Heat-Weld™ Smooth) Install one of the following:

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. One ply of GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within its EVT range and at a rate of 20-40 lbs./sq.
3. Matrix™ 322 Elastomeric Roof Coating, applied at 1 gal./sq. per coat.
4. Matrix™ 715 MB or Matrix™ 602 MB Xtra Elastomeric Roofing Membrane, applied at 1 to 1.5 gal./sq.
5. Topcoat® MB Plus, applied at 1-3 gal./sq or Topcoat® Surface Seal SB, applied at 1-1.5 gal./sq.

Maximum Design Pressure: -97.5 psf (See General Limitation # 7)

Deck Type 1I: Steel, Insulated

Deck Description: Min. 22 gauge, Type B, wide rib steel deck is secured to minimum ¼" thick structural steel supports spaced maximum 6' o.c. using two ICH Traxx/5 fasteners spaced 6" o.c. along each support. Deck side laps fastened with ICH Traxx/1 fasteners spaced maximum 24" o.c.

System Type C(2): Insulation is mechanically attached through loose laid insulation & optional thermal barrier to the deck. Membrane fully or partially adhered.

(Optional) Thermal Barrier: Min. 1/2" Dens Deck® or Min. 3/4" EnergyGuard™ Perlite is loose laid over the deck.

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^2
EnergyGuard™ PolyIso, EnergyGuard™ RA, EnergyGuard™ RN or EnergyGuard™ Ultra Minimum 2" thick	**1 & 5**	**1:1.45**

Note: Optional thermal barrier is loose laid over the deck and simultaneously mechanically attached with the insulation layer. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Liberty™ SBS Self-Adhering Base/Ply Sheet, self-adhered with minimum 3" wide laps and rolled with a weighted roller.

Ply Sheet: (Optional) One layer of Liberty™ SBS Self-Adhering Base/Ply Sheet, self-adhered with minimum 3" wide laps and rolled with a weighted roller.

Membrane: One or more layers 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 FR, Ruberoid® SBS Heat-Weld™ Plus, Ruberoid® Torch Smooth, Ruberoid® Torch Granule, Ruberoid® Torch 170 FR, Ruberoid® Torch FR, Ruberoid® Torch Plus or Ruberoid® EnergyCap™ APP 250 FR, with minimum 3" wide laps and applied according to manufacturer's application instructions.

Surfacing: (Optional, required over Ruberoid® Torch Smooth, Ruberoid® SBS Heat-Weld™ 25 or Ruberoid® SBS Heat-Weld™ Smooth) Install one of the following:

1. Gravel or slag applied at 400 lbs./sq. and 300 lbs./sq. respectively in a flood coat of approved asphalt at 60 lbs./sq.
2. One ply of GAFGLAS® Mineral Surfaced Cap Sheet or GAFGLAS® EnergyCap™ BUR Mineral Surfaced Cap Sheet adhered in a full mopping of approved asphalt applied within its EVT range and at a rate of 20-40 lbs./sq.
3. Matrix™ 322 Elastomeric Roof Coating, applied at 1 gal./sq. per coat.
4. Matrix™ 715 MB or Matrix™ 602 MB Xtra Elastomeric Roofing Membrane, applied at 1 to 1.5 gal./sq.
5. Topcoat® MB Plus, applied at 1-3 gal./sq or Topcoat® Surface Seal SB, applied at 1 to 1.5 gal./sq.

Maximum Design Pressure: -60 psf (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 gauge 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.)**

END OF THIS ACCEPTANCE