



**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 EverGuard® Freedom™ TPO SA Single Ply Roofing System over Concrete Decks.**

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

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

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

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

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

This NOA renews and revises NOA No. 07-0808.06 and consists of pages 1 through 24.  
The submitted documentation was reviewed by Jorge L. Acebo.



**NOA No.: 09-0305.08  
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## ROOFING SYSTEM APPROVAL

<b>Category:</b>	Roofing
<b>Sub-Category:</b>	Self-Adhered Single Ply Roofing
<b>Material:</b>	TPO
<b>Deck Type:</b>	Concrete
<b>Maximum Design Pressure</b>	-410 psf

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

<b>Product</b>	<b>Dimensions</b>	<b>Test Specification</b>	<b>Product Description</b>
EverGuard® Freedom™ TPO SA Membrane	Various	ASTM D 6878	Self-Adhered thermoplastic olefin reinforced membrane.
EverGuard® Freedom™ HW TPO Membrane	Various	ASTM D 6878	Self-Adhered thermoplastic olefin reinforced membrane.
EverGuard® Freedom™ TPO SA Membrane with Rapid Seam	Various	ASTM D 6878	Self-Adhered thermoplastic olefin reinforced membrane with self adhering side lap.
Liberty™ Base/Ply Sheet	39.375" x 66"	ASTM D 6162 ASTM D 5147	Self-adhering, SBS modified, fiberglass reinforced membrane for base or ply sheet applications.
TPO-45 mil Utility Flashing Strips	Various	ASTM D 6878	Thermoplastic olefin reinforced flashing membrane.
EverGuard® UN-55 Detailing Membrane	Various	ASTM D 6878	Thermoplastic olefin reinforced flashing membrane.
EverGuard® Coated Metal Sheets	4' x 10' sheets	US CS-245-62	TPO membrane laminated to 25 gauge galvanized sheet metal.
EverGuard® Preformed Corners	4" x 4" with 6" Flange 20 pcs. Crtn.	ASTM D 6878	Prefabricated molded one piece corners.
EverGuard® Preformed Vent Boots	1" - 6" o.d. 6 pcs. Crtn.	ASTM D 6878	Pre molded vent pipe boots.
EverGuard® Cut Edge Sealant	1 quart squeeze tube	Proprietary	Solvent based sealant for TPO cut edges.
EverGuard® Prefabricated Expansion Joint Cover	4"-8" x 50'	Proprietary	Low profile expansion joint cover.
EverGuard® TPO Fluted Corner	8" diameter nominal .05" non-reinforced		Flashing outside corners of base and curb flashing.



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<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
EverGuard® Preformed Split Pipe Boot	Various		Split boots to accommodate most pipes and conduits.
EverGuard® Corner Curb Wrap	Various		Flash curbs
EverGuard® Square Tube Wrap	Various		Square tube wrap
EverGuard® Inside Corner	6" x 6" x 5¼"		Inside corners of base and curb flashings.
EverGuard® UU 55 T-Joint Cover Patches	100 patches per box		Conforming membrane seal for use over T-joint in 60 and 80 mil membrane applications.
RTS Strip	6" x 100' roll		Reinforced TPO membrane with pressure sensitive adhesive.
EverGuard® TPO Cover Tape	6" x 100' roll		.045" TPO membrane laminated to white butyl tape.
EverGuard® Coated Metal Sheets	4' x 10' sheets	US CS-245-62	TPO membrane laminated to 25 Ga. galvanized sheet metal.
EverGuard® Expansion Joint Cover	Various		.045" and .060" thick TPO reinforced membrane
Freedom 5' -0" Duel HW (Heat weld) Flashing	5' x 50'		.060" thick TPO reinforced membrane
EverGuard® UN-55 Detailing Membrane	Various	ASTM D 6878	55 mil un-reinforced flashing membrane.
EverGuard® Self-Adhering Standing Seam Architectural Profiles	30 per carton 10' length		TPO Standing seam Batten Strips adhered to EverGuard® TPO membrane to simulate the appearance of a metal standing seam roof.
EverGuard® Pourable Sealer Pocket	9" x 6" x 4" oval with 3" base flange		Pourable sealer.
EverGuard® Drain	Various		Spun aluminum drain Preflashed with 55 mil unreinforced TPO membrane.
EverGuard® Scupper	4" x 6" x 12" 8" x 10" x 12"		TPO coated metal 55 mil unreinforced membrane
EverGuard® Vent			Vent manufactured out of reinforced 45 mil TPO membrane and galvanized steel.
EverGuard® Lip Termination Bar	10' bar length, 3/4" width	TAS 114	Lip termination bar.
EverGuard Standard Walkway	1/8" x 30" x 36"		Standard duty walkway pad.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
EverGuard Heavy Duty Walkway	1/4" x 30" x 36"		Heavy-duty walkway pad.
TOPCOAT® Precote	1 gallon	Proprietary	Clear, solvent-based liquid applied as a primer/sealer coat.
Walkway Pads & Rolls.	Pads - 1/8" x 30" x 36", Rolls - 1/8"x30"x50'	Proprietary	Standard duty walkway pads & rolls.
EverGuard® Self-Adhering Standing Seam Architectural Profiles	30 per carton 10' length		TPO Standing seam Batten Strips adhered to EverGuard® TPO membrane to simulate the appearance of a metal standing seam roof.
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.
TOPCOAT® Fireshield SB	5, 55 gallons	ASTM D 412 ASTM D 21-96 ASTM D 1475 ASTM E 1644	Elastomeric roofing membrane
Olybond500™		ASTM D 1622 ASTM D 1621 ASTM D 1623 ASTM D 2843 ASTM D 2856	Polyurethane adhesive
GAFGLAS® #75 Base Sheet	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 D 4601	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.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
GAFGLAS® STRATAVENT® Eliminator™ Nailable	39.37" (1 meter) wide	ASTM D 3672 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® Mop Smooth	1 meter (39.37") wide	ASTM D 6298 ASTM D 5147	Non-woven polyester mat coated with polymer-modified asphalt and smooth surfaced.
RUBEROID® 20	39.37" (1 meter) wide	ASTM D 6163 ASTM D 5147	SBS modified asphalt base sheet reinforce with a glass fiber mat.
TOPCOAT® Precote	2, 5 gallons	Proprietary	Solvent-based primer/sealer

### APPROVED INSULATIONS:

TABLE 2

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
EnergyGuard™ PolyIso, RA, Ultra	Polyisocyanurate foam insulation	BMCA
EnergyGuard™ High Density Fiberboard	High density wood fiberboard insulation.	BMCA
EnergyGuard™ Perlite	Perlite insulation board.	BMCA
EnergyGuard™ Composite, RA,	Polyisocyanurate foam insulation with high density fiberboard or perlite insulation.	BMCA
Dens Deck®, Dens Deck Prime™	Water-resistant gypsum board	Georgia Pacific
Securock®	Fiber reinforced roof board	USG Corporation
Structodek®	Insulation board	Knight-Celotex

### APPROVED FASTENERS:

TABLE 3

<u>Fastener Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Dimensions</u>	<u>Manufacturer (With Current NOA)</u>
1.	Drill-Tec™ #14 HD Roofing Fasteners	Insulation fastener for steel, wood & concrete decks.	Various	BMCA
2.	Drill-Tec™ Extra Heavy Duty # 15 Roofing Fastener (XHD)	Self tapping coated screw w/#3 Phillips head.	Various	BMCA



**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>
3.	Drill-Tec™ Super Extra Heavy Duty # 21 Roofing Fastener (SXHD)	Self tapping coated carbon steel screw w/#3 Phillips head.	Various	BMCA
4.	Drill-Tec™ Spikes	Insulation fastener for concrete decks.	Various	BMCA
5.	Drill-Tec™ Extra Heavy Duty ASAP	AZ55 Galvalume coated barber steel plate used with fastener.	Plate Diameter: 2- <sup>3</sup> / <sub>8</sub> "	BMCA
6.	Drill-Tec™ HD Plate	AZ55 Galvalume coated barber steel plate used with fastener.	Plate Diameter: 2"	BMCA
7.	Drill-Tec™ Plastic Plates	Round plastic plate.	Plate Diameter: 3"	BMCA
8.	Drill-Tec™ Metal Plates	Round Galvalume plate.	Plate Diameter: 3"	BMCA
9.	Drill-Tec™ Membrane Plates	Round nylon reinforced seam plate.	Plate Diameter: 2"	BMCA.
11.	OlyBond Adhesive Fastener	Dual component adhesive fastener	N/A	Olympic Mfg. Group, Inc.
12.	Drill-Tec™ AccuTrac Plate or Drill-Tec™ Steel Plates	Square or Round Galvalume® coated steel plates	Plate Diameter: 3" and 3 ½"	GAF Materials Corp.

**EVIDENCE SUBMITTED:**

<u>Test Agency/Identifier</u>	<u>Name</u>	<u>Report</u>	<u>Date</u>
Underwriters Laboratory, Inc. Factory Mutual Research Corp.	03CA38009	UL 790	01/21/04
	3020588	FM 4470	03/24/04
	3023458	FM 4470	07/18/06
IRT-Arcon, Inc.	04-003	TAS 114	03/09/04
	04-021	TAS 114	05/13/04
	04-022	TAS 114	05/13/04
	04-023	TAS 114	05/13/04
	04-005	TAS 114	03/19/04
Exterior Research and Design, LLC	G4280LAB.10.06	TAS 114-D	10/20/06
	01881.11.03-2		11/26/03
Atlantic & Caribbean Roof Consulting, LLC	ACRC 07-016	TAS 114 D	04/19/07
	ACRC 07-005		01/17/07
	ACRC 07-017		04/19/07
	ACRC 07-024		05/01/07
	ACRC 07-049		09/13/07
	ACRC 07-048		03/19/04



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## APPROVED ASSEMBLIES

**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete.

**System Type A(1):** All layers of insulation are adhered to the deck. Membrane fully or partially adhered.

**All General and System Limitations apply.**

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

**Note:** All insulation shall be adhered to the deck in ¾" to 1" wide beads 6" o.c. of Olympic OlyBond500™ Adhesive Fastener or OlyBond Adhesive at a rate of 1 gal./sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Or;

Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of 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.

**Membrane:** EverGuard® Freedom™ 045, 060, 080 TPO SA or Freedom™ 045, 060, 080 TPO SA with Rapid Seam adhered to insulation with a minimum 6" side lap fully self-adhered or Freedom™ HW (self-adhered) with a minimum 3" side lap heat welded with a minimum 1.75" weld.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design**

**Pressure:** -122.5 psf (For EnergyGuard™ Ultra) (See General Limitation #9.)  
-142.5 psf (For EnergyGuard™ PolyIso) (See General Limitation #9.)



**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete.

**System Type A(2):** Optional anchor sheet fully adhered. One or more layers of insulation adhered with OlyBond500™ Adhesive. Membrane fully adhered.

**All General and System Limitations apply.**

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

**Note:** All insulation shall be adhered to the deck in ¾" to 1" wide beads 6" o.c. of Olympic OlyBond500™ Adhesive Fastener or OlyBond at a rate of 1 gal./sq.. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

**Or;**

Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of 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.

**Anchor sheet:** (Optional) One or more plies of GAFGLAS® #75 Base Sheet, GAFGLAS® Ply 4, GAFGLAS® FlexPly™ 6, GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® STRATAVENT® Eliminator™ Nailable Base Sheet, Ruberoid® Mop Smooth or Ruberoid® 20 adhere to deck with approved mopping asphalt applied at a rate of 20-40 lbs./sq.

**Membrane:** EverGuard® Freedom™ 045, 060, 080 TPO SA or Freedom™ 045, 060, 080 TPO SA with Rapid Seam adhered to insulation or anchor sheet with a minimum 6" side lap fully self-adhered or Freedom™ HW (self-adhered) with a minimum 3" side lap heat welded with a minimum 1.75" weld.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design**

**Pressure:** -102.5 psf (See General Limitation #9.)



**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete or concrete plank

**System Type A(3):** Insulation is adhered to the deck with approved adhesive. Membrane is subsequently fully adhered.

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

One or more layers of any of the following insulations.

**Base Insulation Layer**

**Dens Deck®**

Minimum 1/4" thick

**Insulation Fasteners  
(Table 3)**

N/A

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

N/A

**Note: Insulation shall be adhered to the deck with OlyBond500™ adhesive applied in continuous 3/4" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

**Base Sheet:** One layer of Liberty™ Base/Ply Sheet, self-adhered

**Membrane:** EverGuard® Freedom™ 045, 060, 080 TPO SA or Freedom™ 045, 060, 080 TPO SA with Rapid Seam adhered to insulation with a minimum 6" side lap fully self-adhered or Freedom™ HW (self-adhered) with a minimum 3" side lap heat welded with a minimum 1.75" weld.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design**

**Pressure:** -122.5 psf (See General Limitation #9)



**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete or concrete plank

**System Type A(4):** Insulation adhered to deck with approved adhesive. Membrane is subsequently fully adhered.

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

One or more layers of any of the following insulations.

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>Securock®</b> Minimum 1/4" thick	N/A	N/A

**Note: Insulation shall be adhered to the deck with OlyBond500™ adhesive applied in continuous 3/4" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

**Base Sheet:** One layer of Liberty™ Base/Ply Sheet, self-adhered

**Membrane:** EverGuard® Freedom™ 045, 060, 080 TPO SA or Freedom™ 045, 060, 080 TPO SA with Rapid Seam adhered to insulation with a minimum 6" side lap fully self-adhered or Freedom™ HW (self-adhered) with a minimum 3" side lap heat welded with a minimum 1.75" weld.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design Pressure:** -270 psf (See General Limitation #9)



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**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete or concrete plank

**System Type A(5):** Insulation adhered to deck with approved adhesive. Membrane is subsequently fully adhered.

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

One or more layers of any of the following insulations.

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>DensDeck®</b> Minimum 1/4" thick	N/A	N/A

**Note: Insulation shall be adhered to the deck with OlyBond500™ adhesive applied in continuous 3/4" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation shall be primed with ASTM D-41 Asphalt Primer and allowed to dry prior to application of base sheet.**

**Base Sheet:** One layer of Liberty™ Base/Ply Sheet, self-adhered

**Membrane:** EverGuard® Freedom™ 045, 060, 080 TPO SA or Freedom™ 045, 060, 080 TPO SA with Rapid Seam adhered to insulation with a minimum 6" side lap fully self-adhered or Freedom™ HW (self-adhered) with a minimum 3" side lap heat welded with a minimum 1.75" weld.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design**

**Pressure:** -167.5 psf (See General Limitation #9)



**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete or concrete plank

**System Type A(6):** Insulation adhered to deck with approved adhesive. Membrane is subsequently fully adhered.

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

One or more layers of any of the following insulations.

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>Securock®</b> Minimum 1/4" thick	N/A	N/A

**Note: Insulation shall be adhered to the deck with OlyBond500™ adhesive applied in continuous 3/4" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation shall be primed with ASTM D-41 Asphalt Primer and allowed to dry prior to application of base sheet.**

**Base Sheet:** One layer of Liberty™ Base/Ply Sheet, self-adhered

**Membrane:** EverGuard® Freedom™ 045, 060, 080 TPO SA or Freedom™ 045, 060, 080 TPO SA with Rapid Seam adhered to insulation with a minimum 6" side lap fully self-adhered or Freedom™ HW (self-adhered) with a minimum 3" side lap heat welded with a minimum 1.75" weld.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design Pressure:** -285 psf (See General Limitation #9)



**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete or concrete plank.

**System Type A(7):** Insulation adhered to deck with approved adhesive. Membrane is subsequently fully adhered.

**All General and System Limitations apply.**

One or more layers of any of the following insulations.

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>Securock<sup>®</sup></b> Minimum 1/4" thick	N/A	N/A

**Note: Note: Insulation shall be adhered to the deck with OlyBond500™ adhesive applied in continuous 3/4" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

**Membrane:** EverGuard<sup>®</sup> Freedom™ 045, 060, 080, TPO or Freedom™ 045, 060, 080 TPO SA with Rapid Seam with a minimum 6" side lap fully self-adhered or Freedom™ HW (self-adhered) with minimum 3" side lap heat welded with a minimum 1.75" weld

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard<sup>®</sup> self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT<sup>®</sup> Surface Seal, TOPCOAT<sup>®</sup> Fireshield<sup>®</sup> SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design**

**Pressure:** -230 psf (See General Limitation #9)



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**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete or concrete plank

**System Type A(8):** Anchor sheet fully adhered to deck. One or more layers of insulation adhered with OlyBond500™ Adhesive. Membrane fully adhered.

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

One or more layers of any of the following insulations.

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™ PolyIso, EnergyGuard™ RA, EnergyGuard™ RN, EnergyGuard™ Tapered</b> Minimum 1.5" thick	N/A	N/A
<b>Top Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>DensDeck®</b> Minimum 1/4" thick	N/A	N/A

**Note: Insulation shall be adhered to the deck with OlyBond500™ adhesive applied in continuous 3/4" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

**Anchor sheet:** One or more plies of GAFGLAS® #75 Base Sheet or GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® STRATAVENT® Eliminator™ Nailable Base Sheet, Ruberoid® Mop Smooth or Ruberoid® 20 adhered to primed concrete deck with approved mopping asphalt applied at a rate of 20-40 lbs./sq.

**Base Sheet:** One layer of Liberty™ Base/Ply Sheet, self-adhered to Top Insulation layer.

**Membrane:** EverGuard® Freedom™ 045, 060, 080 TPO SA or Freedom™ 045, 060, 080 TPO SA with Rapid Seam adhered to insulation with a minimum 6" side lap fully self-adhered or Freedom™ HW (self-adhered) with a minimum 3" side lap heat welded with a minimum 1.75" weld.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design Pressure:** -122.5 psf (See General Limitation #9)



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**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete or concrete plank

**System Type A(9):** Anchor sheet fully adhered to deck. One or more layers of insulation adhered with OlyBond500™ Adhesive. Membrane fully adhered.

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

One or more layers of any of the following insulations.

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™ PolyIso, EnergyGuard™ RA, EnergyGuard™ RN, EnergyGuard™ Tapered</b> Minimum 1.5" thick	N/A	N/A
<b>Top Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>Securock®</b> Minimum 1/4" thick	N/A	N/A

**Note: Insulation shall be adhered to the deck with OlyBond500™ adhesive applied in continuous 3/4" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

**Anchor sheet:** One or more plies of GAFGLAS® #75 Base Sheet or GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® STRATAVENT® Eliminator™ Nailable Base Sheet, Ruberoid® Mop Smooth or Ruberoid® 20 adhered to primed concrete deck with approved mopping asphalt applied at a rate of 20-40 lbs./sq.

**Base Sheet:** One layer of Liberty™ Base/Ply Sheet, self-adhered to Top Insulation layer.

**Membrane:** EverGuard® Freedom™ 045, 060, 080 TPO SA or Freedom™ 045, 060, 080 TPO SA with Rapid Seam adhered to insulation with a minimum 6" side lap fully self-adhered or Freedom™ HW (self-adhered) with a minimum 3" side lap heat welded with a minimum 1.75" weld.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design Pressure:** -270 psf (See General Limitation #9)



**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete or concrete plank

**System Type A(10):** Anchor sheet fully adhered to deck. One or more layers of insulation adhered with OlyBond500™ Adhesive. Membrane fully adhered.

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

One or more layers of any of the following insulations.

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™ PolyIso, EnergyGuard™ RA, EnergyGuard™ RN, EnergyGuard™ Tapered</b> Minimum 1.5" thick	N/A	N/A
<b>Top Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>DensDeck®</b> Minimum 1/4" thick	N/A	N/A

**Note: Insulation shall be adhered to the deck with OlyBond500™ adhesive applied in continuous ¾" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Top layer Insulation shall be primed with ASTM D-41 Asphalt Primer and allowed to dry prior to application of base sheet.**

**Anchor sheet:** One or more plies of GAFGLAS® #75 Base Sheet or GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® STRATAVENT® Eliminator™ Nailable Base Sheet, Ruberoid® Mop Smooth or Ruberoid® 20 adhered to primed concrete deck with approved mopping asphalt applied at a rate of 20-40 lbs./sq.

**Base Sheet:** One layer of Liberty™ Base/Ply Sheet self-adhered to Top Insulation layer.

**Membrane:** EverGuard® Freedom™ 045, 060, 080 TPO SA or Freedom™ 045, 060, 080 TPO SA with Rapid Seam adhered to insulation with a minimum 6" side lap fully self-adhered or Freedom™ HW (self-adhered) with a minimum 3" side lap heat welded with a minimum 1.75" weld.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design Pressure:** -167.5 psf (See General Limitation #9)



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**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete or concrete plank

**System Type A(11):** Anchor sheet fully adhered to deck. One or more layers of insulation adhered with OlyBond500™ Adhesive. Membrane fully adhered.

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

One or more layers of any of the following insulations.

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™ PolyIso, EnergyGuard™ RA, EnergyGuard™ RN, EnergyGuard™ Tapered</b> Minimum 1.5" thick	N/A	N/A
<b>Top Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>Securock®</b> Minimum 1/4" thick	N/A	N/A

**Note: Insulation shall be adhered to the deck with OlyBond500™ adhesive applied in continuous 3/4" to 1" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Top layer Insulation shall be primed with ASTM D-41 Asphalt Primer and allowed to dry prior to application of base sheet.**

**Anchor sheet:** One or more plies of GAFGLAS® #75 Base Sheet or GAFGLAS® #80 Ultima™ Base Sheet, GAFGLAS® STRATAVENT® Eliminator™ Nailable Base Sheet, Ruberoid® Mop Smooth or Ruberoid® 20 adhered to primed concrete deck with approved mopping asphalt applied at a rate of 20-40 lbs./sq.

**Base Sheet:** One layer of Liberty™ Base/Ply Sheet, self-adhered to Top Insulation layer.

**Membrane:** EverGuard® Freedom™ 045, 060, 080 TPO SA or Freedom™ 045, 060, 080 TPO SA with Rapid Seam adhered to insulation with a minimum 6" side lap fully self-adhered or Freedom™ HW (self-adhered) with a minimum 3" side lap heat welded with a minimum 1.75" weld.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design Pressure:** -285 psf (See General Limitation #9)



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**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 3000 psi structural concrete.

**System Type A(12):** Membrane fully adhered to insulation adhered to concrete deck.

**All General and System Limitations apply.**

One or more layers of any of the following insulations.

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>Structodek<sup>®</sup></b> Minimum 1/2" thick	N/A	N/A

**Note: All insulation shall be adhered to the deck in 3/4" to 1" wide beads thick beads and spaced 12" o.c. of Olympic OlyBond500™ Adhesive Fastener. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

**Membrane:** One ply of GAF EverGuard<sup>®</sup> Freedom 045, 060, 080 TPO SA with Rapid Seam self adhered to insulation with a minimum 6" side lap fully self-adhered.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard<sup>®</sup> self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT<sup>®</sup> Surface Seal, TOPCOAT<sup>®</sup> Fireshield<sup>®</sup> SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design**

**Pressure:** -50 psf. (See General Limitation #9)



**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete.

**System Type A(13):** Membrane fully adhered to insulation which is adhered to a vapor barrier over a primed concrete deck.

**All General and System Limitations apply.**

**Vapor Barrier:** Two plies of GAFGLAS® Ply 4 adhered with asphalt at a rate of 25 lbs/sq to the concrete deck previously primed with ASTM D 41 primer and allowed to dry prior to application of the vapor barrier.

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

**Note: All insulation shall be adhered to the vapor barrier in ¾" to 1" wide beads thick beads and spaced 6" o.c. of Olympic OlyBond500™ Adhesive Fastener. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

**Membrane:** One ply of GAF EverGuard® Freedom 045, 060, 080 TPO SA with Rapid Seam self adhered to insulation with a minimum 6" side lap fully self-adhered.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design**

**Pressure:** -125 psf. (See General Limitation #9)



**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete.

**System Type B(1):** Base layer of insulation mechanically attached to roof deck. Any subsequent layers are then adhered to base layer of insulation. Membrane is subsequently adhered to insulation.

**All General and System Limitations apply.**

One or more layers of any of the following insulations.

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™ PolyIso or EnergyGuard RA Minimum 2" thick</b>	<b>1, 2 or 3</b>	<b>1:2 ft<sup>2</sup></b>

**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.**

<b>Top Insulation Layer (Optional)</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™ PolyIso or EnergyGuard RA Minimum 1.5" thick</b>	<b>N/A</b>	<b>N/A</b>

**Note: Apply optional top layer of insulation in ¾" to 1" wide beads 6" o.c. of Olympic OlyBond500™ Adhesive Fastener or OlyBond Adhesive at a rate of 1 gal./sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

**Membrane:** EverGuard® Freedom™ 045, 060, 080 TPO SA or Freedom™ 045, 060, 080 TPO SA with Rapid Seam adhered to insulation with a minimum 6" side lap fully self-adhered or Freedom™ HW (self-adhered) with a minimum 3" side lap heat welded with a minimum 1.75" weld.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design**

**Pressure:** -52.5 psf (See General Limitation #7.)



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**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3I:** Concrete Decks, Insulated

**Deck Description:** 2500 psi structural concrete.

**System Type B(2):** Base layer of insulation mechanically attached to roof deck. Any subsequent layers are then adhered to base layer of insulation. Membrane is subsequently adhered to insulation.

**All General and System Limitations apply.**

One or more layers of any of the following insulations.

<b>Base Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>EnergyGuard™ RA or EnergyGuard™ RN Minimum 2" thick</b>	<b>1</b>	<b>1:6 ft<sup>2</sup></b>

**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.

<b>Top Insulation Layer</b>	<b>Insulation Fasteners (Table 3)</b>	<b>Fastener Density/ft<sup>2</sup></b>
<b>Securock™ Minimum 1/4" thick</b>	<b>N/A</b>	<b>N/A</b>

**Note:** Top layer of insulation shall be adhered OlyBond 500™ Adhesive Fastener applied in continuous 3/4" wide beads at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

**Membrane:** EverGuard® Freedom™ 45 mil, 60 mil, 80 mil TPO SA or EverGuard® Freedom™ with RapidSeam™ TPO adhered to insulation with a minimum 6" side lap fully self-adhered

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer's specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer's specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design**

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



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**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3:** Concrete Decks, Non-insulated

**Deck Description:** 2500 psi structural concrete.

**System Type F(1):** Membrane fully adhered directly to deck.

**All General and System Limitations apply.**

**Primer:** TOPCOAT® Precote at an application rate of 1gal./100 ft<sup>2</sup>.

**Membrane:** EverGuard® Freedom™ 045, 060, 080 TPO SA or Freedom™ 045, 060, 080 TPO SA with Rapid Seam adhered to the substrate with a minimum 6” side lap fully self-adhered or Freedom™ HW (self-adhered) with a minimum 3” side lap heat welded with a minimum 1.75” weld.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer’s specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer’s specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design**

**Pressure:** -242.5 psf. (See General Limitation #9)

**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3:** Concrete Decks, Non-insulated

**Deck Description:** 2500 psi structural concrete.

**System Type F(2):** Membrane fully adhered directly to the primed deck.

**All General and System Limitations apply.**

**Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.**

**Base Sheet:** One layer of Liberty™ Base/Ply Sheet, self-adhered

**Membrane:** EverGuard® Freedom™ 045, 060, 080 TPO SA or Freedom™ 045, 060, 080 TPO SA with Rapid Seam adhered to insulation with a minimum 6” side lap fully self-adhered or Freedom™ HW (self-adhered) with a minimum 3” side lap heat welded with a minimum 1.75” weld.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer’s specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer’s specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design**

**Pressure:** -220 psf. (See General Limitation #9)



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**Membrane Type:** Single Ply, Thermoplastic, TPO, Self-Adhered

**Deck Type 3:** Concrete Decks, Non-insulated

**Deck Description:** 2500 psi structural concrete.

**System Type F(3):** Membrane fully adhered directly to the primed deck.

**All General and System Limitations apply.**

**Membrane:** EverGuard® Freedom 045, 060, 080 TPO SA with Rapid Seam with a minimum 6” side lap fully adhered to a structural concrete deck primed with GAF TOPCOAT Surface Seal SB applied at the rate of 1 to 1-1/2 gallons per square.

Or;

EnergyGuard™ Freedom HW (self-adhered) 045, 060, 080 TPO SA with a minimum 3” side lap heat welded with a minimum 1.75” weld.

**Surfacing: (Optional)**

1. Advanced Green Technologies Photovoltaic Laminate solar energy collector auxiliary roof equipment installed in compliance with manufacturer’s specifications and applicable Building Codes.
2. EverGuard® self-adhering Standing Seam Architectural Profiles installed in compliance with manufacturer’s specifications and applicable Building Codes.
3. TOPCOAT® Surface Seal, TOPCOAT® Fireshield® SB Solvent based Elastomeric Roofing Membrane applied at 1 to 1.5 gal./sq.

**Maximum Design**

**Pressure:** -410 psf. (See General Limitation #9)



## CONCRETE SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117 and/or RAS 137; calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.

## 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 and/or RAS 137. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.  
**(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners).  
**(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9B-72 of the Florida Administrative Code.

**END OF THIS ACCEPTANCE**



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