

Product Evaluation

RC122 | 0422

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: RC-122

Effective Date: April 1, 2022

Re-evaluation Date: April 2026

Product Name: EverGuard® TPO Single Ply Roofing Systems and EverGuard® Freedom™ TPO Self-Adhering Roofing Systems

Manufacturer: GAF
1 Campus Drive
Parsippany, NJ 08054
(877)-423-7663
technicalquestions@gaf.com

General Description:

EverGuard® TPO membranes are nominal 45-mil, 60-mil, or 80-mil thick internally reinforced thermoplastic polyolefin roof covers. Side and end laps are sealed using hot air welding. The roof cover is mechanically attached or fully adhered to approved substrates.

EverGuard Extreme® TPO membranes are nominal 50-mil, 60-mil, 70-mil, or 80-mil thick, internally reinforced thermoplastic polyolefin roof covers. Side and end laps are sealed using hot air welding. The roof cover is mechanically attached or fully adhered to approved substrates. EverGuard Extreme® TPO membranes are designed for advanced protection against heat aging and UV degradation.

EverGuard® TPO Fleece-Back Membrane (formerly known as EverGuard® TPO FB Ultra) membranes are nominal 45-mil, 60-mil or 80-mil thick internally reinforced thermoplastic

polyolefin roof covers with a polyester fleece backing. Side and end laps are sealed using hot air welding. The roof cover is mechanically attached or fully adhered to approved substrates.

EverGuard Extreme® TPO Fleece-Back Membrane (formerly known as EverGuard Extreme® TPO FB Ultra) membranes are nominal 50-mil, 60-mil or 80-mil thick, internally reinforced thermoplastic polyolefin roof covers with a polyester fleece backing. Side and end laps are sealed using hot air welding. The roof cover is mechanically attached or fully adhered to approved substrates. EverGuard Extreme® TPO Fleece-Back membranes are designed for advanced protection against heat aging and UV degradation.

EverGuard® Freedom™ TPO HW membranes are nominal 45-mil or 60-mil thick, internally reinforced thermoplastic (TPO) roof covers with a self-adhering backing. EverGuard® Freedom™ TPO HW laps are sealed using hot air welding. The roof cover is self-adhered to approved substrates.

Limitations and Installation

General Installation Requirements: All International Residential Code (IRC) and the International Building Code (IBC) requirements must be satisfied, and manufacturer's installation instructions followed, unless otherwise specified by this product evaluation.

New Roof Deck Attachment: The wood deck must meet or exceed the uplift requirements of the IRC or IBC and must be installed as required for resistance to wind loads.

Fastener Penetration: Fasteners specified in the assemblies listed in this evaluation report must be long enough to penetrate through the roof deck.

Roof Framing Members: The roof wood framing members must be spaced a maximum of 24" o.c.

For All Applications: The roof must have positive drainage with a minimum slope of 1/4:12.

Insulation Options: The following products are acceptable alternates for each specified insulation within the scope of this product evaluation:

Product	Alternates
EnergyGuard™ Polyiso Insulation	EnergyGuard™ Tapered Polyiso Insulation EnergyGuard™ Ultra Polyiso Insulation EnergyGuard™ NH Polyiso Insulation
EnergyGuard™ Tapered Polyiso Insulation	EnergyGuard™ NH Tapered Polyiso Insulation
EnergyGuard™ Ultra Polyiso Insulation	EnergyGuard™ Ultra Tapered Polyiso Insulation EnergyGuard™ NH Ultra Polyiso Insulation
EnergyGuard™ Ultra Tapered Polyiso Insulation	EnergyGuard™ NH Ultra Tapered Polyiso Insulation
EnergyGuard™ NH Polyiso Insulation	EnergyGuard™ NH Tapered Polyiso Insulation
EnergyGuard™ NH Ultra Polyiso Insulation	EnergyGuard™ NH Ultra Tapered Polyiso Insulation
EnergyGuard™ HD Polyiso Cover Board	EnergyGuard™ HD Plus Polyiso Cover Board EnergyGuard™ NH HD Polyiso Cover Board
EnergyGuard™ HD Plus Polyiso Cover Board	EnergyGuard™ NH HD Plus Polyiso Cover Board
EnergyGuard™ NH HD Polyiso Cover Board	EnergyGuard™ NH HD Plus Polyiso Cover Board

Fastener Options: The following products are acceptable alternates for each specified fastener within the scope of this Product Evaluation:

Product	Decking	Alternates
Drill-Tec #12 Fastener	33 ksi Steel Deck	Drill-Tec #12 DP Fastener, Drill-Tec #15 EHD Fastener, Drill-Tec XHD Fastener
Drill-Tec XHD		Drill-Tec #15 EHD Fastener
Drill-Tec #12 Fastener	80 ksi Steel Deck	Drill-Tec #15 EHD Fastener, Drill-Tec XHD Fastener, TruFast #15 EHD
Drill-Tec XHD		Drill-Tec #15 EHD Fastener, TruFast #15 EHD Fastener
Drill-Tec #12 Fastener	15/32" APA CDX Plywood	TruFast #12 DP Fastener, TruFast #14 HD Fastener, TruFast #15 EHD Fastener, Drill-Tec #14 Fastener
Drill-Tec #14 Fastener		TruFast #12 DP Fastener, TruFast #14 HD Fastener, TruFast #15 EHD Fastener
Drill-Tec XHD Fastener	15/32" OSB	TruFast #15 EHD Fastener
Drill-Tec #14 Fastener	Structural Concrete	Drill-Tec #14 HD Fastener

Fastener and Plate Combinations: The following products are acceptable pairings of fasteners and plates for insulation and membrane attachment:

Fasteners	Insulation Plates	Membrane Plates
Drill-Tec™ #12 Fastener, Drill-Tec™ #14 Fastener, Drill-Tec™ XHD Fastener	Drill-Tec™ 3" Standard Steel Plate, Drill-Tec™ 3" Steel Plate, Drill-Tec™ 3 in. Ribbed Galvalume Plate (Flat), Drill-Tec™ AccuTrac Flat Plate, Drill-Tec™ AccuTrac Recessed Plate	Drill-Tec™ 2" Double Barbed XHD Plate, Drill-Tec™ 2-3/8" Barbed XHD Plate, Drill-Tec™ 2-3/4" Barbed SXHD Plate, Drill-Tec™ Eyehook AccuSeam Plate
Drill-Tec™ #12 DP Fastener, Drill-Tec™ #14 HD Fastener, Drill-Tec™ #15 EHD Fastener	Drill-Tec™ 3" Flat Steel Plate, Drill-Tec™ 3" Recessed Steel Plate	Drill-Tec™ 2.4" Barbed Seam Plate, Drill-Tec™ 2.4" Scoop Seam Plate

For Wood Deck Systems (Optional): FireOut™ Fire Barrier Coating may be applied to the wood deck at 1 gallon per square, or VersaShield® Solo™ Fire-Resistant Slip Sheet may be mechanically fastened to the wood deck.

Installation Instructions: Follow all manufacturer's installation instructions, unless otherwise specified by this product evaluation.

Note: Keep the manufacturer's installation instructions available on the job site during the installation. All fasteners must be corrosion resistant as specified in the IRC and the IBC.

System 1- Wood Deck with Mechanically Attached Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
1	Min. 19/32"APA wood structural panel sheathing, Exposure 1, 40/20	(One or more of the following, any combination) Min. 0.5" thick EnergyGuard Polyiso Insulation, EnergyGuard RA Polyiso Insulation, or EnergyGuard RN Polyiso Insulation, EnergyGuard Perlite Roof Insulation, min. 0.25" thick SECUROCK Gypsum-Fiber Roof Board, SECUROCK Glass-Mat Roof Board, DensDeck, DensDeck Prime Roof Board, or DensDeck® StormX™ Prime Roof Board	Preliminary attach with min. four, 11-gauge, galvanized ring shank nails per board.	EverGuard TPO, EverGuard Extreme TPO, EverGuard TPO Fleeceback Membrane or EverGuard Extreme TPO Fleeceback Membrane	Drill-Tec #14 Fasteners & Drill-Tec 2-3/8" Barbed XHD Plates
Design Pressure (psf)		Roof Cover Attachment			
-45		Fasteners are spaced 6" o.c. in lap with rows spaced 55" o.c. Side laps are min. 5" wide and sealed with min. 1.5" wide heat welds.			

System 2- Wood Deck with Mechanically Attached Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
2	Min. 19/32" APA wood structural panel sheathing, Exposure 1, 40/20	(One or more of the following, any combination) Min. 0.5" thick EnergyGuard Polyiso Insulation, EnergyGuard RA Polyiso Insulation, or EnergyGuard RN Polyiso Insulation, EnergyGuard Perlite Roof Insulation, Structodek High Density Fiberboard Roof Insulation, min. 0.25" thick SECUROCK Gypsum-Fiber Roof Board, DensDeck, DensDeck Prime Roof Board, DensDeck® StormX™ Prime Roof Board or 0.5" thick EnergyGuard HD Polyiso Cover Board	Preliminary attach with min. four, 11-gauge, galvanized ring shank nails per board.	EverGuard TPO, EverGuard Extreme TPO, EverGuard TPO Fleeceback Membrane or EverGuard Extreme TPO Fleeceback Membrane	Drill-Tec #14 Fasteners & Drill-Tec 2" Double Barbed XHD Plates, Drill-Tec 2-3/8" Barbed XHD Plates, or Drill-Tec Eyehook AccuSeam Plates
Design Pressure (psf)		Roof Cover Attachment			
-52.5		Fasteners are spaced 6" o.c. in lap with rows spaced 55" o.c. Side laps are min. 5" wide and sealed with min. 1.5" wide heat welds.			

System 3- Wood Deck with Mechanically Attached Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
3	Min. 19/32" APA wood structural panel sheathing, Exposure 1, 40/20	(Optional) Min. 0.25" thick DensDeck, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, SECUROCK Glass-Mat Roof Board or min. 0.75" thick EnergyGuard Perlite Roof Insulation	Preliminary attach with min. four fasteners per board	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec #14 Fasteners & Drill-Tec 2" Double Barbed XHD Plates, Drill-Tec 2-3/8" Barbed XHD Plates, or Drill-Tec Eyehook AccuSeam Plates
		Min. 0.5" EnergyGuard Polyiso Insulation			
Design Pressure (psf)		Roof Cover Attachment			
-45		Fasteners are spaced 8" o.c. in lap with rows spaced 54" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.			

System 4-Non-Insulated Wood Deck with Mechanically Attached Roof Cover			
System No.	Deck	Roof Cover	
		Type	Attach
4	Min. 15/32" thick plywood APA Span-Rated over nominal No. 2 roof framing at 24" o.c.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec #14 Fasteners & Drill-Tec 2" Double Barbed XHD Plates
Design Pressure (psf)		Roof Cover Attachment	
-67.5		Fasteners are installed into joists at 6" o.c. in lap with rows spaced 48" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.	

System 5-Non-Insulated Wood Deck with Mechanically Attached Roof Cover			
System No.	Deck	Roof Cover	
		Type	Attach
5	Min. 15/32" thick plywood APA Span-Rated over nominal No. 2 roof framing at 24" o.c.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec XHD Fasteners & Drill-Tec 2" Double Barbed XHD Plates
Design Pressure (psf)	Roof Cover Attachment		
-52.5	Fasteners are installed into joists at 6" o.c. in lap with rows spaced 54" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.		

System 6 - Wood Deck with Mechanically Attached Insulation and Hot Applied Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
6	Min. 19/32" APA wood structural panel sheathing, Exposure 1, 40/20	Min. 0.25" SECUROCK Gypsum-Fiber Roof Board	Drill-Tec #12 Fasteners and Drill-Tec AccuTrac Flat Plates, 12 fasteners per board with a contributory area of 1.33 ft ² per fastener	EverGuard TPO Fleeceback Membrane or EverGuard Extreme TPO Fleeceback Membrane	Hot Applied Asphalt
		(Optional base layer) Min. 0.5" thick EnergyGuard Polyiso Insulation, EnergyGuard RA Polyiso Insulation, or EnergyGuard RN Polyiso Insulation			
Design Pressure (psf)		Roof Cover Attachment			
-82.5		Roof cover is adhered in asphalt applied within the EVT range and at a rate of 20-25 lbs./sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			

System 7 - Wood Deck with Self Adhered Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
7	Min. 19/32" APA wood structural panel sheathing, Exposure 1, 40/20	Min. 1.5" thick EnergyGuard Polyiso Insulation, EnergyGuard RA Polyiso Insulation or EnergyGuard RN Polyiso Insulation	Drill-Tec #12 or #14 Fasteners & Drill-Tec 3" Steel Plates, 24 fasteners per board with a contributory area of 1.3 ft ² per fastener	EverGuard Freedom TPO HW	Self-adhered to insulation
		(Optional base layer) Min. 0.5" thick EnergyGuard Polyiso Insulation, EnergyGuard RA, or EnergyGuard RN Polyiso Insulation, or min. 0.25" thick DensDeck Roof Board, DensDeck Prime Roof Board, DensDeck StormX Prime Roof Board, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, SECUROCK Glass-Mat Roof Board, 0.5" thick EnergyGuard HD Polyiso Cover Board			
Design Pressure (psf)		Roof Cover Attachment			
-52.5		EverGuard Freedom TPO HW is self-adhered and rolled with a weighted roller. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			

System 8 - Wood Deck with Self Adhered Roof Cover							
System No.	Deck	Insulation Layers		Anchor Sheet		Roof Cover	
		Type	Attach	Type	Attach	Type	Attach
8	Min. 19/32" APA wood structural panel sheathing, Exposure 1, 40/20	(Optional top layer) Min. 0.25" thick DensDeck, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, SECUROCK Glass-Mat Roof Board or min. 0.75" thick EnergyGuard Perlite Roof Insulation	Preliminary attach with min. four fasteners per board	StormSafe Anchor Sheet mechanically attached	Drill-Tec #14 Fasteners & Drill-Tec 3" Ribbed Galvalume Plates (Flat)	EverGuard Freedom TPO HW	Self-adhered
		Min. 1.0" EnergyGuard Polyiso Insulation					
Design Pressure (psf)		Roof Cover Attachment					
		EverGuard Freedom TPO HW is self-adhered and rolled with a weighted roller. Side laps are min. 3" wide and sealed with min. 1.5" heat welds.					
-60		Anchor Sheet Attachment					
		Fasteners are spaced 8" o.c. in the laps and 8" o.c. in two staggered rows in the field. Side laps are min. 4" wide to provide lap spacing of max. 44" o.c.					

System 9 - Wood Deck with Self Adhered Roof Cover							
System No.	Deck	Insulation Layers		Anchor Sheet		Roof Cover	
		Type	Attach	Type	Attach	Type	Attach
9	Min. 15/32" APA wood structural panel sheathing, Exposure 1, 40/20	(Optional top layer) Min. 0.25" thick DensDeck, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, SECUROCK Glass-Mat Roof Board or min. 0.75" thick EnergyGuard Perlite Roof Insulation	Preliminary attach with a min. of four fasteners per board	StormSafe Anchor Sheet mechanically attached	Drill-Tec #14 Fasteners & Drill-Tec 3" Ribbed Galvalume Plates (Flat) or Drill-Tec 3" Steel Plates	EverGuard Freedom TPO HW	Self-adhered
		Min. 1.0" EnergyGuard Polyiso Insulation					
Design Pressure (psf)		Roof Cover Attachment					
		EverGuard Freedom TPO HW is self-adhered and rolled with a weighted roller. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.					
-45		Base Sheet Attachment					
		Fasteners are spaced 18" o.c. in the laps and 18" o.c. in two staggered rows in the field. Side laps are min. 4" wide to provide lap spacing of max. 44" o.c.					

System 10 & 11 – Non-Insulated Wood Deck with Self Adhered Roof Cover					
System No.	Deck	Anchor Sheet		Roof Cover	
		Type	Attach	Type	Attach
10 & 11	Min. 19/32" APA wood structural panel sheathing, Exposure 1, 40/20	StormSafe Anchor Sheet	12 gauge, galvanized annular ring shank roofing nails with 1" diameter tin caps or Drill-Tec #12 Fasteners & Drill-Tec 3" Steel Plates	EverGuard Freedom TPO HW	Self-adhered
Design Pressure (psf)	Roof Cover Attachment				
	EverGuard Freedom TPO HW is self-adhered and rolled with a weighted roller. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.				
	Anchor Sheet Attachment				
-45	Tin-Cap nails are spaced 9" o.c. in the laps and 9" o.c. in two staggered rows in the field. Side laps are min. 4" wide to provide lap spacing of max. 36" o.c.				
-105	Fasteners are spaced 8" o.c. in the laps and 8" o.c. in the three staggered rows in the field. Side laps are min. 4" wide to provide lap spacing of max. 36" o.c.				

System 12 – Non-Insulated Wood Deck with Self Adhered Roof Cover					
System No.	Deck	Anchor Sheet		Roof Cover	
		Type	Attach	Type	Attach
12	Min. 19/32" APA wood structural panel sheathing, Exposure 1, 40/20	StormSafe Anchor Sheet mechanically attached	Drill-Tec #14 Fasteners & Drill-Tec 3" Ribbed Galvalume Plates (Flat)	EverGuard Freedom TPO HW	Self-adhered
Design Pressure (psf)	Roof Cover Attachment				
	EverGuard Freedom TPO HW is self-adhered and rolled with a weighted roller. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.				
	Anchor Sheet Attachment				
-67.5	Fasteners are spaced 8" o.c. in the laps and 8" o.c. in two staggered rows in the field. Side laps are min. 4" wide to provide lap spacing of max. 44" o.c.				

System 13 & 14 – Non-Insulated Wood Deck with Self Adhered Roof Cover					
System No.	Deck	Anchor Sheet		Roof Cover	
		Type	Attach	Type	Attach
13 & 14	Min. 15/32" APA wood structural panel sheathing, Exposure 1, 40/20	StormSafe Anchor Sheet mechanically attached	12-gauge, galvanized annular ring shank roofing nails with 1-5/8" diameter tin caps or Drill-Tec #14 Fasteners & Drill-Tec 3" Ribbed Galvalume Plates (Flat)	EverGuard Freedom TPO HW	Self-adhered
Design Pressure (psf)	Roof Cover Attachment				
	EverGuard Freedom TPO HW is self-adhered and rolled with a weighted roller. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.				
	Anchor Sheet Attachment				
-45	Tin cap nails are spaced 6" o.c. in the laps and 6" o.c. in two staggered rows in the field. Side laps are min. 4" wide to provide lap spacing of max. 44" o.c.				
-45	Fasteners are 18" o.c. in the laps and 18" o.c. in two staggered rows in the field. Side laps are min. 4" wide to provide lap spacing of max. 44" o.c.				

System 15 - Wood Deck with Mechanically Attached Insulation and Fully Adhered Roof Cover							
System No.	Deck	Base Insulation Layer(s)		Top Insulation Layer		Roof Cover	
		Type	Attach	Type	Attach	Type	Attach
15	Min. 15/32" APA wood structural panel sheathing, Exposure 1, 40/20	Min. 2.0" EnergyGuard Polyiso Insulation	Drill-Tec #14 Fasteners & Drill-Tec 3" Steel Plates, 16 fasteners per board with a contributory area of 2.0 ft ² per fastener	Min. 0.25" SECUROCK Gypsum-Fiber Roof Board or SECUROCK Ultralight Coated Glass-Mat Roof Board	Partially adhered with OlyBond 500, or LRF Adhesive M applied in 0.75-1.0" wide ribbons spaced 12" o.c.	EverGuard TPO or EverGuard Extreme TPO	Fully adhered
Design Pressure (psf)		Roof Cover Attachment					
-52.5		EverGuard TPO and EverGuard Extreme TPO fully-adhered with EverGuard TPO #1121 Bonding Adhesive applied at 1.67 – 1.8 gal/sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.					
		EverGuard TPO and EverGuard Extreme TPO fully adhered with EverGuard Low VOC Bonding Adhesive applied at 0.91 gal/sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.					
		EverGuard TPO or EverGuard Extreme TPO is adhered with EverGuard TPO Quick Spray Adhesive LV 50 applied to the substrate and to the underside of the roof cover at a total application rate of 0.837 lbs./sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.					

System 16- Wood Deck with Mechanically Attached Insulation and a Fully Adhered Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
16	15/32" thick plywood APA Span-Rated over nominal No. 2 roof framing at 24" o.c.	Min. 1.5" EnergyGuard Polyiso Insulation	Drill-Tec #12 Fasteners & Drill-Tec 3" Steel Plates, 18 fasteners per board with a contributory area of 1.78 ft ² per fastener	EverGuard TPO or EverGuard Extreme TPO	Fully Adhered
Design Pressure (psf)		Roof Cover Attachment			
-52.5		Fully adhered with GAF EverGuard #1121 Bonding Adhesive applied at 1.67 gal/sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			
		Fully adhered with EverGuard Low VOC TPO Bonding Adhesive applied at 0.91 gal/sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			
		Fully adhered with EverGuard TPO 3 Square Low VOC Bonding Adhesive applied at 1.67 gal/sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			
		Fully adhered with EverGuard TPO Quick Spray Adhesive LV 50 applied to the substrate and to the underside of the roof cover at a total application rate of 0.837 lbs./sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			
		Fully adhered with TPO Quick Spray Adhesive applied to the substrate and to the underside of the roof cover at a total application rate of 0.705 lbs./sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			

System 17- Wood Deck with Mechanically Attached Insulation and a Fully Adhered Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
17	15/32" thick plywood APA Span-Rated over nominal No. 2 roof framing at 24" o.c.	Min. 1.5" EnergyGuard Polyiso Insulation	Drill-Tec #12 Fasteners & Drill-Tec 3" Steel Plates, 20 fasteners per board with a contributory area of 1.6 ft ² per fastener	EverGuard TPO or EverGuard Extreme TPO	Fully Adhered
Design Pressure (psf)		Roof Cover Attachment			
-60		Fully adhered with EverGuard #1121 Bonding Adhesive applied at 1.67 gal/sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			
		Fully adhered with EverGuard Low VOC TPO Bonding Adhesive applied at 0.91 gal/sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			
		EverGuard TPO and EverGuard Extreme TPO fully adhered with EverGuard TPO 3 Square Low VOC Bonding Adhesive applied at 1.67 gal/sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			
		Fully adhered with EverGuard TPO Quick Spray Adhesive LV 50 applied to the substrate and to the underside of the roof cover at a total application rate of 0.837 lbs./sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			
		Fully adhered with TPO Quick Spray Adhesive applied to the substrate and to the underside of the roof cover at a total application rate of 0.705 lbs./sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			

System 18- Wood Deck with Mechanically Attached Insulation and a Fully Adhered Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
18	15/32" thick plywood APA Span-Rated over nominal No. 2 roof framing at 24" o.c.	Min. 1.0" EnergyGuard Polyiso Insulation	Partially Adhered with OlyBond 500 in 0.75-1.00" wide ribbons spaced 6" o.c.	EverGuard TPO or EverGuard Extreme TPO	Fully Adhered
Design Pressure (psf)		Roof Cover Attachment			
-75		Fully adhered with EverGuard Low VOC TPO Bonding Adhesive applied at 0.91 gal/sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			

System 19- Wood Deck with Mechanically Attached Insulation and a Fully Adhered Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
19	15/32" thick plywood APA Span-Rated over nominal No. 2 roof framing at 24" o.c.	Min. 1.0" EnergyGuard Polyiso Insulation	Partially Adhered with OlyBond 500 in 0.75-1.00" wide ribbons spaced 12" o.c.	EverGuard TPO or EverGuard Extreme TPO	Fully Adhered
Design Pressure (psf)		Roof Cover Attachment			
-67.5		Fully adhered with EverGuard Low VOC TPO Bonding Adhesive applied at 0.91 gal/sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			

System 20 - Wood Deck with Mechanically Attached Insulation and Fully Adhered Roof Cover							
System No.	Deck	Base Insulation Layer(s)		Top Insulation Layer		Roof Cover	
		Type	Attach	Type	Attach	Type	Attach
20	Min. 19/32" thick plywood APA Span-Rated over nominal No. 2 roof framing at 24" o.c.	Min. 3.0" EnergyGuard Polyiso Insulation	Drill-Tec #12 Fasteners & Drill-Tec 3" Steel Plates, 32 fasteners per board with a contributory area of with a contributory area of 1.0 ft ² per fastener	Min. 0.25" SECUROCK Gypsum-Fiber Roof Board or SECUROCK Ultralight Coated Glass-Mat Roof Board	Partially adhered with OlyBond 500, applied in 1.0" wide ribbons spaced 4.0" o.c.	EverGuard TPO Fleeceback Membrane or EverGuard Extreme TPO Fleeceback Membrane	Fully Adhered
Design Pressure (psf)		Roof Cover Attachment					
-120		Fully Adhered with OlyBond 500 applied in a "spatter pattern" at 0.325 gal/sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.					

System 21, 22 & 23- Wood Deck with Roof Covers Bonded to RhinoBond Plates					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
21, 22 & 23	Min. 15/32" APA wood structural panel sheathing, Exposure 1, 40/20	(Optional) Min. 0.25" thick DensDeck, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, SECUROCK Glass-Mat Roof Board or min. 0.75" thick EnergyGuard Perlite Roof Insulation NOTE: Min. 2" thick insulation required with Drill-Tec RhinoBond TPO XHD Tread Safe Plates	Drill-Tec #14 Fasteners & Drill-Tec RhinoBond TPO XHD Plates or Drill-Tec RhinoBond TPO XHD Tread Safe Plates	EverGuard TPO or EverGuard Extreme TPO	Partially adhered to RhinoBond plates
		(Optional) Min. 0.5" EnergyGuard Polyiso Insulation NOTE: Min. 2" thick insulation required with Drill-Tec RhinoBond TPO XHD Tread Safe Plates			
Design Pressure (psf)		Roof Cover Attachment			
-52.5		Fasteners are spaced 36" o.c. along each joist. The membrane is bonded to the plates using the OMG RhinoBond tool. The side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			
-75		Fasteners are spaced 24" o.c. along each joist. The membrane is bonded to the plates using the OMG RhinoBond tool. The side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			
-82.5		Fasteners are spaced 18" o.c. along each joist. The membrane is bonded to the plates using the OMG RhinoBond tool. The side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			

System 24- Wood Deck with Roof Covers Bonded to RhinoBond Plates					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
24	Min. 15/32" APA wood structural panel sheathing, Exposure 1, 40/20	(Optional) Min. 0.25" thick DensDeck, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, SECUROCK Glass-Mat Roof Board, min. 0.75" thick EnergyGuard Perlite Roof Insulation, min. 0.5" thick Structodek High Density Fiberboard Roof Insulation, or 0.5" thick EnergyGuard HD Polyiso Cover Board NOTE: Min. 2" thick insulation required with Drill-Tec RhinoBond TPO XHD Tread Safe Plates	Drill-Tec #14 Fasteners & Drill-Tec RhinoBond TPO XHD Plates, or Drill-Tec RhinoBond TPO XHD Tread Safe Plates, 12 fasteners per board with a contributory area of 2.67 ft ² per fastener	EverGuard TPO or EverGuard Extreme TPO	Partially adhered to RhinoBond plates
		Min. 0.5" EnergyGuard Polyiso Insulation NOTE: Min. 2" thick insulation required with Drill-Tec RhinoBond TPO XHD Tread Safe Plates			
Design Pressure (psf)		Roof Cover Attachment			
-52.5		The membrane is bonded to the plates using the OMG RhinoBond tool. The side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			

System 25- Non-Insulated Wood Deck with Roof Covers Bonded to RhinoBond Plates			
System No.	Deck	Roof Cover	
		Type	Attach
25	Min. 19/32" thick plywood APA Span-Rated over nominal No. 2 roof framing at 24" o.c.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec RhinoBond TPO XHD Plate with Drill-Tec #14 Fasteners
Design Pressure (psf)		Roof Cover Attachment	
-90		The membrane is bonded to the plates using the OMG RhinoBond tool. Fasteners are spaced 9" o.c. with rows spaced 24" o.c. into joists. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.	

System 26- Wood Deck with Roof Covers Bonded to RhinoBond Plates					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
26	Min. 19/32" thick plywood APA Span-Rated over nominal No. 2 roof framing at 24" o.c.	Min. 1.0" EnergyGuard Polyiso Insulation	Drill-Tec #14 Fasteners & Drill-Tec RhinoBond TPO XHD Plates	EverGuard TPO or EverGuard Extreme TPO	Partially Adhered to RhinoBond plates
Design Pressure (psf)		Roof Cover Attachment			
-105		The membrane is bonded to the plates using the OMG RhinoBond tool. Fasteners are spaced 9" o.c. with rows spaced 24" o.c. into joists. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			

System 27- Uninsulated Wood Deck with Roof Covers Bonded to RhinoBond Plates			
System No.	Deck	Roof Cover	
		Type	Attach
27	Min. 15/32" thick plywood APA Span-Rated over nominal No. 2 roof framing at 24" o.c.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec RhinoBond TPO XHD Plate with Drill-Tec XHD Fasteners
Design Pressure (psf)		Roof Cover Attachment	
-60		The membrane is bonded to the plates using the OMG RhinoBond tool. Fasteners are installed in a 24" x 32" grid (6 per sheet of plywood). Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.	

System 28 -OSB Deck with Mechanically Attached Roof Cover			
System No.	Deck	Roof Cover	
		Type	Attach
28	Min. 15/32" thick OSB APA Span-Rated over nominal No. 2 roof framing at 24" o.c.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec XHD Fastener & Drill-Tec 2" Double Barbed XHD Plates
Design Pressure (psf)		Roof Cover Attachment	
-30		Fasteners are installed 6" o.c. in lap with rows spaced 114" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.	

System 29 - OSB Deck with Roof Covers Bonded to RhinoBond Plates			
System No.	Deck	Roof Cover	
		Type	Attach
29	Min. 15/32" thick OSB APA Span-Rated over nominal No. 2 roof framing at 24" o.c.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec XHD Fasteners & Drill-Tec RhinoBond TPO XHD Plates
Design Pressure (psf)		Roof Cover Attachment	
-37.5		The membrane is bonded to the plates using the OMG RhinoBond tool. Fasteners and plates are installed in an 18" x 24" grid. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.	

System 30- Steel Deck with Mechanically Attached Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
30	Min. 22 ga., type B, Grade 33 Steel	(One or more of the following, any combination) Min. 0.5" thick EnergyGuard Polyiso Insulation, EnergyGuard RA Polyiso Insulation, EnergyGuard RN Polyiso Insulation, or min. .75" thick EnergyGuard Perlite Roof Insulation Or Min. 0.25" thick SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, SECUROCK Glass-Mat Roof Board, DensDeck, DensDeck Prime Roof Board, or DensDeck StormX Prime Roof Board	Preliminary attached with a min. of four fasteners per board.	EverGuard TPO, EverGuard Extreme TPO, EverGuard TPO Fleeceback Membrane or EverGuard Extreme TPO Fleeceback Membrane	Drill-Tec SXHD Fasteners & Drill-Tec 2-3/4" Barbed SXHD Plates
Design Pressure (psf)		Roof Cover Attachment			
-45		Fasteners are spaced 12" o.c. in lap with rows spaced 90" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.			

System 31- Steel Deck with Mechanically Attached Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
31	Min. 22 ga., type B, Grade 33 Steel	(One or more of the following, any combination) Min. 0.5" thick EnergyGuard Polyiso Insulation, EnergyGuard RA Polyiso Insulation, EnergyGuard RN Polyiso Insulation, or min. .75" thick EnergyGuard Perlite Roof Insulation Or Min. 0.25" thick SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, SECUROCK Glass-Mat Roof Board, DensDeck, DensDeck Prime Roof Board, or DensDeck StormX Prime Roof Board	Preliminary attached with a min. of four fasteners per board.	EverGuard TPO, EverGuard Extreme TPO, EverGuard TPO Fleeceback Membrane or EverGuard Extreme TPO Fleeceback Membrane	Drill-Tec XHD Fasteners & Drill-Tec 2-3/8" Barbed XHD Plates
Design Pressure (psf)		Roof Cover Attachment			
-60		Fasteners are spaced 6" o.c. in lap with rows spaced 90" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.			

System 32- Steel Deck with Mechanically Attached Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
32	Min. 22 ga., type B, Grade 33 Steel	(One or more of the following, any combination) Min. 0.5" thick EnergyGuard Polyiso Insulation, EnergyGuard RA Polyiso Insulation, EnergyGuard RN Polyiso Insulation, or min. .75" thick EnergyGuard Perlite Roof Insulation Or Min. 0.25" thick SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, SECUROCK Glass-Mat Roof Board, DensDeck, DensDeck Prime Roof Board, or DensDeck StormX Prime Roof Board	Preliminary attached with a min. of four fasteners per board.	EverGuard TPO, EverGuard Extreme TPO, EverGuard TPO Fleeceback Membrane or EverGuard Extreme TPO Fleeceback Membrane	Drill-Tec XHD Fasteners & Drill-Tec 2-3/4" Barbed SXHD Plates
Design Pressure (psf)		Roof Cover Attachment			
-67.5		Fasteners are spaced 6" o.c. in the lap with rows spaced 114" o.c. Side Laps are min. 6" wide side and sealed with min. 1.5" wide heat welds.			

System 33- Steel Deck with Mechanically Attached Roof Cover						
System No.	Deck	Insulation Layers			Roof Cover	
		Type	Cover Board	Attach	Type	Attach
33	Min. 22 ga., type B, Grade 33 Steel	Min. 1.0" EnergyGuard Polyiso Insulation or Min. 1.5" EnergyGuard RN Polyiso Insulation	(Optional) Min. 0.5" thick EnergyGuard HD Polyiso Cover Board, EnergyGuard HD Plus Polyiso Cover Board, or EnergyGuard Perlite Recover Board Or Min. 0.5" thick Structodek High Density Fiberboard Roof Insulation Or Min. 0.25" thick DensDeck, DensDeck Prime, DensDeck StormX Prime Roof Board, SECUROCK Glass- Mat Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, SECUROCK Gypsum-Fiber Roof Board Or Min. 0.75" thick EnergyGuard Perlite Roof Insulation	Preliminary attached with a min. of four fasteners per board.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec XHD Fasteners & Drill-Tec 2-3/4" Barbed SXHD Plates
Design Pressure (psf)		Roof Cover Attachment				
-45		Fasteners are spaced 12" o.c. in the lap with rows spaced 114" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.				

System 34- Steel Deck with Mechanically Attached Roof Cover						
System No.	Deck	Insulation Layers			Roof Cover	
		Type	Cover Board	Attach	Type	Attach
34	Min. 22 ga., type B, Grade 33 Steel	Min. 1.0" EnergyGuard Polyiso Insulation EnergyGuard RA Polyiso Insulation, or EnergyGuard RA Tapered Polyiso Insulation	(Optional) Min. 0.25" DensDeck, DensDeck Prime, DensDeck StormX Prime Roof Board, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, or SECUROCK Glass-Mat Roof Board Or Min. 0.5" Structodek High Density Fiber Board Roof Insulation Or Min. 0.5" EnergyGuard Perlite Recover Board or EnergyGuard HD Polyiso Cover Board Or Min. 0.75" thick EnergyGuard Perlite Roof Insulation	Preliminary attached with a min. of four fasteners per board.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec SXHD Fasteners & Drill-Tec 2-3/4" Barbed SXHD plates
Design Pressure (psf)		Roof Cover Attachment				
-30		Fasteners are spaced 12" o.c. in the lap with rows spaced 138" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.				

System 35- Steel Deck with Mechanically Attached Roof Cover						
System No.	Deck	Insulation Layers			Roof Cover	
		Type	Cover Board	Attach	Type	Attach
35	Min. 22 ga., type B, Grade 80 Steel	Min. 1.0" EnergyGuard Polyiso Insulation EnergyGuard RA Polyiso Insulation, or EnergyGuard RA Tapered Polyiso Insulation	(Optional) Min. 0.25" DensDeck, DensDeck Prime, DensDeck StormX Prime Roof Board, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, or SECUROCK Glass-Mat Roof Board Or Min. 0.5" Structodek High Density Fiber Board Roof Insulation Or Min. 0.5" EnergyGuard Perlite Recover Board or EnergyGuard HD Polyiso Cover Board Or Min. 0.75" thick EnergyGuard Perlite Roof Insulation	Preliminary attached with a min. of four fasteners per board.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec SXHD Fasteners & Drill-Tec 2-3/4" Barbed SXHD Plates
Design Pressure (psf)		Roof Cover Attachment				
-37.5		Fasteners are spaced 12" o.c. in the lap with rows spaced 138" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.				

System 36- Steel Deck with Mechanically Attached Roof Cover						
System No.	Deck	Insulation Layers			Roof Cover	
		Type	Cover Board	Attach	Type	Attach
36	Min. 22 ga., type B, Grade 80 Steel	Min. 1.0". EnergyGuard Polyiso Insulation, EnergyGuard RA Polyiso Insulation, or EnergyGuard RA Tapered Polyiso Insulation	(Optional) Min. 0.25" DensDeck, DensDeck Prime, DensDeck StormX Prime Roof Board, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, or SECUROCK Glass-Mat Roof Board Or Min. 0.5" Structodek High Density Fiber Board Roof Insulation Or Min. 0.5" EnergyGuard Perlite Recover Board or EnergyGuard HD Polyiso Cover Board Or Min. 0.75" thick EnergyGuard Perlite Roof Insulation	Preliminary attached with a min. of four fasteners per board.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec XHD Fasteners or Drill-Tec SXHD Fasteners & Drill-Tec 2-3/8" Barbed XHD Plates, Drill-Tec 2" Double Barbed XHD Plates, Drill-Tec Eye Hook AccuSeam Plate or Drill-Tec 2 3/4" Barbed SXHD Plates
Design Pressure (psf)		Roof Cover Attachment				
-45		Fasteners are spaced 6" o.c. in the lap with rows spaced 138" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.				

System 37- Steel Deck with Mechanically Attached Roof Cover						
System No.	Deck	Insulation Layers			Roof Cover	
		Type	Cover Board	Attach	Type	Attach
37	Min. 18 ga., type B, Grade 33 Steel	Min. 1.0". EnergyGuard Polyiso Insulation, EnergyGuard RA Polyiso Insulation, or EnergyGuard RA Tapered Polyiso Insulation	(Optional) Min. 0.25" DensDeck, DensDeck Prime, DensDeck StormX Prime Roof Board, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, or SECUROCK Glass-Mat Roof Board Or Min. 0.5" Structodek High Density Fiber Board Roof Insulation Or Min. 0.5" EnergyGuard Perlite Recover Board or EnergyGuard HD Polyiso Cover Board Or Min. 0.75" thick EnergyGuard Perlite Roof Insulation	Preliminary attached with a min. of four fasteners per board.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec XHD Fasteners or Drill-Tec SXHD Fasteners & Drill-Tec 2-3/8" Barbed XHD Plates, Drill-Tec 2" Double Barbed XHD Plates, Drill-Tec Eye Hook AccuSeam Plates
Design Pressure (psf)		Roof Cover Attachment				
-45		Fasteners are spaced 6" o.c. in the lap with rows spaced 138" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.				

System 38- Steel Deck with Mechanically Attached Roof Cover						
System No.	Deck	Insulation Layers			Roof Cover	
		Type	Cover Board	Attach	Type	Attach
38	Min. 22 ga., type B, Grade 80 Steel	Min. 1.0" EnergyGuard Polyiso Insulation, EnergyGuard RA Polyiso Insulation or EnergyGuard RA Tapered Polyiso Insulation	(Optional) Min. 0.25" DensDeck, DensDeck Prime, DensDeck StormX Prime Roof Board, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, or SECUROCK Glass-Mat Roof Board Or Min. 0.5" Structodek High Density Fiber Board Roof Insulation Or Min. 0.5" EnergyGuard Perlite Recover Board or EnergyGuard HD Polyiso Cover Board Or Min. 0.75" thick EnergyGuard Perlite Roof Insulation	Preliminary attached with a min. of four fasteners per board.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec XHD Fasteners or Drill-Tec SXHD Fasteners & Drill-Tec 2-3/4" Barbed SXHD Plates
Design Pressure (psf)		Roof Cover Attachment				
-52.5		Fasteners are spaced 6" o.c. in the lap with rows spaced 138" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.				

System 39- Steel Deck with Mechanically Attached Roof Cover						
System No.	Deck	Insulation Layers			Roof Cover	
		Type	Cover Board	Attach	Type	Attach
39	Min. 22 ga., type B, Grade 80 Steel	Min. 1.0" EnergyGuard Polyiso Insulation, EnergyGuard RA Polyiso Insulation or EnergyGuard RA Tapered Polyiso Insulation	(Optional) Min. 0.25" DensDeck, DensDeck Prime, DensDeck StormX Prime Roof Board, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, or SECUROCK Glass-Mat Roof Board Or Min. 0.5" Structodek High Density Fiber Board Roof Insulation Or Min. 0.5" EnergyGuard Perlite Recover Board or EnergyGuard HD Polyiso Cover Board Or Min. 0.75" thick EnergyGuard Perlite Roof Insulation Min. 0.75" thick EnergyGuard Perlite Roof Insulation	Preliminary attached with a min. of four fasteners per board.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec XHD Fasteners or Drill-Tec SXHD Fasteners & Drill-Tec 2-3/4" Barbed SXHD Plates
Design Pressure (psf)		Roof Cover Attachment				
-30		Fasteners are spaced 12" o.c. in the lap with rows spaced 138" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.				

System 40, 41, 42, 43- Steel Deck with Mechanically Attached Roof Cover						
System No.	Deck	Insulation Layers			Roof Cover	
		Type	Cover Board	Attach	Type	Attach
40, 41, 42, 43	Steel Deck, Recover	Max. 1.0" EnergyGuard Polyiso Insulation, EnergyGuard RA Polyiso Insulation or EnergyGuard RA Tapered Polyiso Insulation	(Optional) Min. 0.25" DensDeck, DensDeck Prime, DensDeck StormX Prime Roof Board, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, or SECUROCK Glass-Mat Roof Board Or Min. 0.5" Structodek High Density Fiber Board Roof Insulation Or Min. 0.5" EnergyGuard Perlite Recover Board or EnergyGuard HD Polyiso Cover Board Or Min. 0.75" thick EnergyGuard Perlite Roof Insulation	Preliminary attached with a min. of four fasteners per board.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec XHD Fasteners or Drill-Tec SXHD Fasteners & Drill-Tec 2-3/8" Barbed XHD Plates, Drill-Tec 2" Double Barbed XHD Plates, Drill-Tec 2-3/4" Barbed SXHD Plates or Drill-Tec Eye Hook AccuSeam Plates
Design Pressure (psf)		Roof Cover Attachment				
-30		Fasteners are spaced 12" o.c. in the lap with rows spaced 138" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.				
-37.5		Fasteners are spaced 12" o.c. in the lap with rows spaced 138" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.				
-45		Fasteners are spaced 6" o.c. in the lap with rows spaced 138" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.				
-52.5		Fasteners are spaced 6" o.c. in the lap with rows spaced 138" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.				

System 44 & 45- Steel Deck with Fully Adhered Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
44 & 45	Min. 22 ga., Steel	Min. 2.0" EnergyGuard RA Polyiso Insulation	Drill-Tec #12 Fasteners & Drill-Tec 3" Steel Plates, Drill-Tec 3" Standard Steel Plates or Drill-Tec AccuTrac Flat Plates, 22 fasteners per board with a contributory area of 1.45 ft ² per fastener	EverGuard TPO or EverGuard Extreme TPO	Fully Adhered
Design Pressure (psf)		Roof Cover Attachment			
-60		EverGuard TPO or EverGuard Extreme TPO is adhered with EverGuard TPO Quick Spray Adhesive LV 50 applied to the substrate and to the underside of the roof cover at a total application rate of 0.837 lbs./sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			
-75		EverGuard TPO or EverGuard Extreme TPO is adhered with TPO Quick Spray Adhesive applied to the substrate and to the underside of the roof cover at a total application rate of 0.705 lbs./sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			

System 46 & 47- Steel Deck with Fully Adhered Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
46 & 47	Min. 22 ga., Steel	Min. 2.0" EnergyGuard Polyiso Insulation	Drill-Tec #12 Fasteners & Drill-Tec 3" Steel Plates, Drill-Tec 3" Standard Steel Plates or Drill-Tec AccuTrac Flat Plates, 22 fasteners per board with a contributory area of 1.45 ft ² per fastener	EverGuard TPO or EverGuard Extreme TPO	Fully Adhered
Design Pressure (psf)		Roof Cover Attachment			
-82.5		EverGuard TPO or EverGuard Extreme TPO is adhered with EverGuard TPO Quick Spray Adhesive LV 50 applied to the substrate and to the underside of the roof cover at a total application rate of 0.837 lbs./sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			
		EverGuard TPO or EverGuard Extreme TPO is adhered with TPO Quick Spray Adhesive applied to the substrate and to the underside of the roof cover at a total application rate of 0.705 lbs./sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			

System 48- Steel Deck with Fully Adhered Roof Cover						
System No.	Deck	Insulation Layers			Roof Cover	
		Type	Attach	Cover Board	Type	Attach
48	Min. 22 ga., Steel	Min. 2.0" EnergyGuard Polyiso Insulation or EnergyGuard RA Polyiso Insulation	Loose Laid	Min. 0.25" thick SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, DensDeck Prime or DensDeck StormX Prime Roof Board Drill-Tec #12 Fasteners & Drill-Tec 3" Standard Steel Plates or Drill-Tec AccuTrac Flat Plates , 22 fasteners per board with a contributory area of 1.45 ft ² per fastener	EverGuard TPO or EverGuard Extreme TPO	Fully-Adhered
Design Pressure (psf)		Roof Cover Attachment				
-82.5		EverGuard TPO or EverGuard Extreme TPO is adhered with EverGuard TPO Quick Spray Adhesive LV 50 applied to the substrate and to the underside of the roof cover at a total application rate of 0.837 lbs./sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.				

System 49-Steel Deck with Roof Covers Bonded to RhinoBond Plates					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
49	Min. 22 ga., type B, Grade 33 Steel	Min. 2.0" EnergyGuard Polyiso Insulation	Drill-Tec XHD Fasteners and Drill-Tec RhinoBond TPO XHD Plate installed in an 18" x 16" grid	EverGuard TPO or EverGuard Extreme TPO	Partially Adhered to RhinoBond plates
Design Pressure (psf)		Roof Cover Attachment			
-105		The membrane is bonded to the plates using the OMG RhinoBond tool. Grids are staggered 6" o.c. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			

System 50-Steel Deck with Roof Covers Bonded to RhinoBond Plates					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
50	Min. 22 ga., type B, Grade 33 Steel	(Optional) Min. 0.25" thick DensDeck, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, SECUROCK Glass-Mat Roof Board, min. 0.75" thick EnergyGuard Perlite Roof Insulation, min. 0.5" thick Structodek High Density Fiberboard Roof Insulation, or min. 0.5" thick EnergyGuard HD Polyiso Cover Board NOTE: Min. 2" thick insulation required with Drill-Tec RhinoBond TPO XHD Tread Safe Plates	Drill-Tec XHD Fasteners & Drill-Tec RhinoBond TPO XHD Plates or Drill-Tec RhinoBond TPO XHD Tread Safe Plates, 12 fasteners per board with a contributory area of 2.67 ft ² per fastener	EverGuard TPO or EverGuard Extreme TPO	Partially Adhered to RhinoBond plates
		Min. 1.0" EnergyGuard Polyiso Insulation NOTE: Min. 2" thick insulation required with Drill-Tec RhinoBond TPO XHD Tread Safe Plates			
Design Pressure (psf)		Roof Cover Attachment			
-67.5		The membrane is bonded to the plates using the OMG RhinoBond tool. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			

System 51-Steel Deck with Roof Covers Bonded to RhinoBond Plates					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
51	Min. 22 ga., type B, Grade 33 Steel, New or Recover	Min. 1.0" EnergyGuard Polyiso Insulation Or Min. 1.5" EnergyGuard RA Polyiso Insulation or EnergyGuard RN Polyiso Insulation	Drill-Tec RhinoBond TPO XHD Plates & Drill-Tec XHD Fasteners installed in a 24" x 24" grid.	EverGuard TPO or EverGuard Extreme TPO	Partially Adhered to RhinoBond plates
Design Pressure (psf)		Roof Cover Attachment			
-60		The membrane is bonded to the plates using the OMG RhinoBond tool. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.			

System 52-Recover Steel Deck with Mechanically Attached Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
52	Min. 22 ga., type B, Grade 33 Steel, Recover	Min. 0.5" thick EnergyGuard HD Polyiso Cover Board or EnergyGuard Perlite Recover Board Or Min. 0.5" thick Structodek High Density Fiberboard Roof Insulation Or Min. 0.25" thick DensDeck, DensDeck Prime, DensDeck StormX Prime Roof Board, SECUROCK Glass- Mat Roof Board, SECUROCK Ultralight Coated Glass-Mat Roof Board, or SECUROCK Gypsum-Fiber Roof Board Or Min. 0.75" thick EnergyGuard Perlite Roof Insulation Or Min. 0.5" EnergyGuard Polyiso Insulation or EnergyGuard RN Polyiso Insulation	Preliminary attached with a min. of four fasteners per board.	EverGuard TPO or EverGuard Extreme TPO	Drill-Tec XHD Fasteners & Drill-Tec 2-3/4" Barbed SXHD Plates
Design Pressure (psf)		Roof Cover Attachment			
-45		Fasteners are spaced 12" o.c. in lap with rows spaced 114" o.c. Side laps are min. 6" wide and sealed with min. 1.5" heat welds.			

System 53-Non-Insulated Structural Concrete Deck with Roof Cover Fully Adhered			
System No.	Deck	Roof Cover	
		Type	Attach
53	Structural Concrete (New or Reroof)	EverGuard TPO Fleeceback Membrane or EverGuard Extreme TPO Fleeceback Membrane	Fully-Adhered
Design Pressure (psf)		Roof Cover Attachment	
-60		Fully-adhered with LRF Adhesive O, LRF Adhesive M or Millennium One-Step Foamable Adhesive in 0.75" – 1.0" thick ribbons spaced 12 o.c. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.	
		Fully-adhered with OlyBond 500 Adhesive Fastener applied in a spatter pattern at 0.318 gal./sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.	