Product Evaluation

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-467

Effective Date: November 1, 2015
Re-evaluation Date: October 2019

Product Name: EverGuard® PVC Single Ply Roofing Systems

Manufacturer: GAF
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General Description:
EverGuard® PVC Smooth membranes are nominal 50-mil (1.27 mm), 60-mil (1.52 mm), or 80-mil (2.0 mm) thick, internally reinforced thermoplastic polyvinyl chloride 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® PVC XK membranes are nominal 50-mil (1.27 mm), 60-mil (1.52 mm) or 80-mil (2.0 mm) thick, internally reinforced thermoplastic polyvinyl chloride roof covers manufactured with DuPont® Elvaloy KEE. Side and end laps are sealed using hot air welding. The roof cover is mechanically attached or fully-adhered to approved substrates.

EverGuard® PVC XK Fleeceback membranes are nominal 60-mil (1.52 m) or 80-mil (2.0 mm) thick, internally reinforced thermoplastic polyvinyl chloride roof covers manufactured with DuPont® Elvaloy KEE and 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.

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

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

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

For All applications: The roof shall have a minimum slope of 1/4:12.

Surfacing (Optional): TopCoat Membrane applied at a rate of 1 to 1.5 gallons per square.

System 1- Wood Deck with Mechanically Attached Roof Cover							
System No.	**Deck**	**Insulation Layers**		**Roof Cover**			
		Type	**Attach**	**Base**	**Ply**	**Cap**	**Fastener**
1	Min. 19/32" APA wood structural panel sheathing, Exposure 1, 40/20 (optional) TopCoat FireOut Fire Barrier Coating applied at 1 gallon per square or mechanically fasten VersaShield Solo Fire-Resistant Slip Sheet	(optional: one or more of the following, any combination) Min. 0.5" thick EnergyGuard Polyiso Insulation, EnergyGuard RA, or RN Polyiso Insulation, EnergyGuard Perlite Roof Insulation, Structodek High Density Fiberboard Roof Insulation, min. 0.25" thick SECUROCK Gypsum-Fiber Roof Board, DensDeck, or DensDeck Prime Roof Board, 0.5" thick EnergyGuard HD Polyiso Insulation, EnergyGuard HD Plus Polyiso Insulation	Preliminary attach each insulation board with a minimum of four, 11 gauge, galvanized ring shank nails per board. The nails must penetrate the plywood deck a minimum of 3/16".	NA	NA	EverGuard® PVC Smooth, EverGuard® PVC XK, or EverGuard® PVC XK Fleeceback, mechanically attached	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**					
-45.0		8" o.c. in rows spaced 55" o.c. The outside 1.5" of the 5" lap is heat welded.					

System 2 - 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**	**Base**	**Ply**	**Cap**	**Adhered**
2	Min. 15/32" APA wood structural panel sheathing, Exposure 1, 40/20	Min. 2.0" EnergyGuard Polyiso Insulation	Drill-Tec #14 Fasteners and Drill-Tec 3" Steel Plates, 3" Standard Steel Plates, or AccuTrac Flat Plates,16 fasteners per board (every 2.0 ft^2)	Min. 0.25 in. SECUROCK Gypsum-Fiber Roof Board	Cover board is adhered to the insulation with OlyBond 500, OlyBond 500 Green, or LRF Adhesive M applied in 0.75 – 1.0" ribbons spaced 12.0" o.c. or GAF 2-Part Roofing Adhesive applied in 2.5" ribbons spaced 12" o.c.	NA	NA	EverGuard® PVC Smooth, EverGuard® PVC XK, or EverGuard® PVC XK Fleeceback	EverGuard® PVC Smooth and EverGuard® PVC XK with EverGuard TPO #2331 Bonding Adhesive. EverGuard PVC XK Fleeceback with GAF 2-Part Roofing Adhesive
Design Pressure (psf)		**Roof Cover Attachment**							
-52.5		EverGuard® PVC Smooth and EverGuard® PVC XK fully adhered with EverGuard TPO #2331 Bonding Adhesive applied at 1.67 – 1.8 gal/sq with half of the adhesive applied to the substrate and half is applied to the back of the roof cover. The side laps are min. 3" wide and sealed with min 1.5" wide heat welds (robotic welder) or with min. 2" wide heat welds (hand welding).							
		EverGuard® PVC XK Fleeceback adhered with GAF 2-Part Roofing Adhesive applied in a “spatter pattern” at 3.75 lbs/sq with all of the adhesive applied to the substrate and the membrane is installed into the adhesive. The side laps are min. 3" wide and sealed with min. 1.5" wide heat welds (robotic welder) or with min. 2" wide heat welds (hand welding).							

System 3 - Wood Deck with Roof Covers Bonded to RhinoBond Plates							
System No.	**Deck**	**Insulation Layers**		**Roof Cover**			
		Type	**Attach**	**Base**	**Ply**	**Cap**	**Attach**
3	Min. 15/32" APA wood structural panel sheathing, Exposure 1, 40/20 (optional) TopCoat FireOut Fire Barrier Coating applied at 1 gallon per square or mechanically fasten VersaShield Solo Fire-Resistant Slip Sheet	(optional: one or more of the following, any combination) Min. 0.25" thick Dens Deck, SECUROCK Gypsum-Fiber Roof Board, or SECUROCK Glass-Mat Roof Board, min. 0.5" thick Structodek High Density Fiberboard Roof Insulation, 0.5" thick EnergyGuard HD Polyiso Insulation, EnergyGuard HD Plus Polyiso Insulation, EnergyGuard Polyiso Insulation	Insulation is loose-laid over the deck when the optional cover board is present or preliminarily secured when the optional cover board is not present	NA	NA	EverGuard® PVC Smooth or EverGuard® PVC XK	Drill-Tec #14 Fasteners and Drill-Tec RhinoBond PVC XHD Plates
Design Pressure (psf)		**Roof Cover Attachment**					
-82.5		Drill-Tec fasteners and plates spaced 18" o.c. along each joist (joists spaced maximum 24" O.C.). The underside of the membrane is bonded to the plates using the OMG RhinoBond tool.					

System 4- Wood Deck with Roof Covers Bonded to RhinoBond Plates							
System No.	**Deck**	**Insulation Layers**		**Roof Cover**			
		Type	**Attach**	**Base**	**Ply**	**Cap**	**Attach**
4	Min. 19/32" APA wood structural panel sheathing, Exposure 1, 40/20 (optional) TopCoat FireOut Fire Barrier Coating applied at 1 gallon per square or mechanically fasten VersaShield Solo Fire-Resistant Slip Sheet	(optional: one or more of the following, any combination) Min. 0.25" thick Dens Deck, SECUROCK Gypsum-Fiber Roof Board, or SECUROCK Glass-Mat Roof Board, min. 0.5" thick Structodek High Density Fiberboard Roof Insulation, 0.5" thick EnergyGuard HD Polyiso Insulation, EnergyGuard HD Plus Polyiso Insulation, EnergyGuard Polyiso Insulation	Drill-Tec #14 Fasteners and Drill-Tec RhinoBond PVC XHD Plates, 12 fasteners per 4' x 8' board (every 2.67 ft^2)	NA	NA	EverGuard® PVC Smooth or EverGuard® PVC XK	Drill-Tec #14 Fasteners and Drill-Tec RhinoBond PVC XHD Plates
Design Pressure (psf)		**Roof Cover Attachment**					
-52.5		The underside of the membrane is bonded to the plates using the OMG RhinoBond tool.					

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.