

Product Evaluation

RC578 | 0922

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-578

Effective Date: September 1, 2022

Re-evaluation Date: September 2026

Product Name: TremPly TPO Single Ply Roofing Systems

Manufacturer: Tremco CPG Inc.
3735 Green Road
Beachwood, OH 44122
(216) 752-4400

General Description:

TremPly TPO membranes are nominal 45-mil (1.1 mm), 60-mil (1.52 mm), or 80-mil (2.0 mm) 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.

TremPly Max TPO membranes are nominal 50-mil (1.27 mm), 60-mil (1.52 mm), 70-mil (1.78 mm) or 80-mil (2.0 mm) 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. Tremply Max TPO membranes are designed for advanced protection against heat aging and UV degradation.

TremPly TPO FB membranes are nominal 45-mil (1.1 mm), 60-mil (1.52 mm) or 80-mil (2.0 mm) 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.

TremPly Max TPO FB membranes are nominal 50-mil (1.27 mm), 60-mil (1.52 mm) or 80-mil (2.0 mm) 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. Tremply Max TPO FB membranes are designed for advanced protection against heat aging and UV degradation.

Limitations and Installation:

General installation Requirements: All IRC and the 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.

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

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

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

Limitations and Installation: Installation must be in accordance with the following assemblies:

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 ISO 95+GL, AC Foam-II, H-Shield, ENRGY 3, or Fesco Board, min. 0.25" thick SECUROCK Gypsum-Fiber Roof Board, SECUROCK Glass-Mat Roof Board, DensDeck or DensDeck Prime Roof Board	Preliminary attach with min. four, 11-gauge, galvanized ring shank nails per board.	TremPly TPO, TremPly Max TPO, TremPly Max TPO, TremPly TPO FB or TremPly Max TPO FB	Tremco #1410 fasteners & OMG 2-3/8" Barbed XHD Plate
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.			

Limitations and Installation (cont.):

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 ISO 95+GL,AC Foam-II, H-Shield or ENRGY 3, Fesco Board, Structodek High Density Fiberboard Roof Insulation, min. 0.25" thick SECUROCK Gypsum-Fiber Roof Board, Densdeck, Densdeck Prime Roof Board, 0.5 thick H-SHIELD HD	Preliminary attach with min. four, 11-gauge, galvanized ring shank nails per board.	TremPly TPO, TremPly Max TPO, TremPly Max TPO, TremPly TPO FB or TremPly Max TPO FB	Tremco #1410 fasteners & OMG 2-3/8" Barbed XHD Plate or 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.			

Limitations and Installation (cont.):

System 3 - Wood Deck with Mechanically Attached Insulation and Hot Applied 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	Min. 0.25" SECUROCK Gypsum-Fiber Roof Board	Tremco #1211 fasteners and AccuTrac Flat Bottom, 12 fasteners per board with a contributory area of 1.33 ft ² per fastener	TremPly TPO FB or TremPly Max TPO FB	Hot Applied Asphalt
		(Optional base layer) Min. 0.5" thick ISO 95 + GL, AC Foam II, H-Shield or ENRGY 3			
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 4 - 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
4	Min. 15/32" APA wood structural panel sheathing, Exposure 1, 40/20	Min. 2.0" ISO 95 + GL or H-Shield	Tremco #1410 fasteners and Tremco Disc 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	Partially adhered with OlyBond 500 or Tremco Low Rise Foam Insulation Adhesive (BG) applied in 0.75 – 1.0" ribbons spaced 12.0" o.c.	TremPly TPO or TremPly Max TPO	Fully adhered
Design Pressure (psf)		Roof Cover Attachment					
-52.5		TremPly TPO and TremPly Max TPO fully adhered with TremPly 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.					
		TremPly TPO and TremPly Max TPO fully adhered with TremPly TPO LV Bonding Adhesive applied at 0.91 gals per/sq. Side laps are min. 3" wide and sealed with min. 1.5" wide heat welds.					

Limitations and Installation (cont.):

System 6 - Steel Deck with Mechanically Attached Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
5	Min. 22-ga., type B, Grade 33 Steel	(One or more of the following, any combination) Min. 0.5" thick ISO + GL, AC Foam-II, H-Shield or ENRGY 3 Fesco Board, min. 0.25" thick SECUROCK Gypsum-Fiber Roof Board, SECUROCK Glass-Mat Roof Board, DensDeck or DensDeck Prime Roof Board	Preliminary attach with a min. of four fasteners per board.	TremPly TPO, TremPly Max TPO, TremPly TPO FB TremPly Max TPO FB	OMG Super XHD (#21) & OMG 2-3/4" Super XHD Barbed 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" heat welds.			

Limitations and Installation (cont.):

System 7 - Steel Deck with Mechanically Attached Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
6	Min. 22-ga., type B, Grade 33 Steel	(One or more of the following, any combination) Min. 0.5" thick , ISO + GL, AC Foam-II, H- Shield or ENRGY 3, min. 0.25" thick SECUROCK Gypsum-Fiber Roof Board, SECUROCK Glass-Mat Roof Board, DensDeck or DensDeck Prime Roof Board	Preliminary attach with a min. of four fasteners per board.	TremPly TPO, TremPly Max TPO, TremPly TPO FB or TremPly Max TPO FB	OMG XHD (#15) or OMG #15 RoofGrip fasteners with OMG 2- 3/8" Barbed XHD Plates
Design Pressure (psf)		Roof Cover Attachment			
-60		Fasteners are spaced 6" o.c. in the lap with rows spaced 90" o.c. Side laps are min. 6" wide and sealed with min. 1.5" wide heat welds.			

Limitations and Installation (cont.):

System 8 - Steel Deck with Mechanically Attached Roof Cover					
System No.	Deck	Insulation Layers		Roof Cover	
		Type	Attach	Type	Attach
7	Min. 22-ga., type B, Grade 33 Steel	(One or more of the following, any combination) Min. 0.5" thick , ISO 95 + GL, AC Foam-II, H-Shield or ENRGY 3, min. 0.25" thick SECUROCK Gypsum-Fiber Roof Board, SECUROCK Glass-Mat Roof Board, DensDeck or DensDeck Prime Roof Board, Fesco Board	Preliminary attach with a min. of four fasteners per board.	TremPly TPO, TremPly Max TPO, TremPly TPO FB or TremPly Max TPO FB	OMG XHD (#15) or OMG #15 RoofGrip fasteners with OMG 2-3/4" Super XHD Barbed Plates
Barbed plates		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 and sealed with 1.5" wide heat welds.			