

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION RC-208

Effective August 1, 2009

*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 shall be subject to reevaluation **August 2013**.*

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.

Firestone UltraPly TPO and UltraPly TPO (MD) Roofing Systems manufactured by

Firestone Building Products
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Indianapolis, IN 46240
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will be accepted in designated catastrophe zones along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

Firestone UltraPly TPO and UltraPly TPO (MD) roof membranes are nominal 0.045" to 0.080" thick flexible TPO (thermoplastic olefin) sheets.

Firestone UltraPly TPO Unsupported Flashing un-reinforced TPO

Firestone UltraPly TPO T-joint Cover un-reinforced TPO

Firestone UltraPly TPO Cut Edge Sealant synthetic rubber

Firestone Pourable Sealer S-10 Parts A & B two part polyurethane sealant

Firestone Water Block Seal (S-20) water sealant

Firestone UltraPly TPO General Purpose Sealant butyl rubber sealant

Firestone TPO QuickSeam Flashing Firestone flashing material with pre-applied adhesive

Firestone UltraPly TPO QuickPrime primer for TPO QuickSeam Flashing

Firestone UltraPly TPO Small and Large Pipe Flashing un-reinforced TPO molded TPO pipe flashing

Firestone UltraPly TPO Inside & Outside Corners un-reinforced TPO molded TPO inside and outside corners

Firestone UltraPly TPO Coated Metal TPO coated metal

Firestone Metal Insulation Plate round batten plate

Firestone Termination Bar aluminum bar for flashing terminations

Firestone Edgegard System flashing materials and assemblies

Firestone UltraPly TPO Walkway Pad recycled thermoplastic walkway pads

Firestone Splice Wash SW-100 cleaning and prep solution for TPO

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.

LIMITATIONS and INSTALLATION (Continued)

For All applications: The roof shall have a minimum slope of $\frac{1}{4}$:12.

TABLE 1: WIND UPLIFT PERFORMANCE							
ULTRAPLY TPO							
OPTIONAL INSULATION, PRELIMINARILY ATTACHED, MECHANICALLY ATTACHED ROOF COVER							
Assembly No.	Substrate	Base Insulation Layer(s)		Top Insulation Layer		Roof Cover	
		Type	Attachment	Type	Attachment	Membrane	Fasteners
1	Min. 1 ⁹ / ₃₂ " plywood fastened to supports spaced max. 24" with 10d nails spaced 4" o.c. at the perimeter of plywood and 8d nails spaced 6" o.c. at intermediate supports.	(Optional) Min. 1½" ISO 95+ GL	Loose Laid or Preliminarily fastened	(Optional) Min. ¼" thick DensDeck or Densdeck Prime or min. ½" thick FiberTop C or E, High Density Wood Fiber, or Sturdi-Top/High Density Wood Fiber	Preliminarily fastened	Firestone Ultraply TPO	# 15 Firestone HD Fasteners, min. 4 "in length and 2-3/8" HD Seam Plates with a thickness of 0.036".
Note:		Laps are sealed with a 5-inch wide heat weld, fully encapsulating the in-lap fasteners. Field rows are covered with 6-inch wide UltraPly TPO strips, sealed on both sides with 1.5-inch heat welds.					
Design Pressure (psf)		Roof Cover Attachment					
0 < P ≤ 60		6-inch o.c. within 5.5-inch wide laps spaced 90.5-inch o.c.					
60 < P ≤ 70		Lap Row: 10-inch o.c. within 5.5-inch wide laps spaced 90.5-inch o.c. Field Row: 10-inch o.c. in one intermediate row between laps.					
70 < P ≤ 80		Lap Row: 9-inch o.c. within 5.5-inch wide laps spaced 90.5-inch o.c. Field Row: 9-inch o.c. in one intermediate row between laps.					
80 < P ≤ 90		Lap Row: 8-inch o.c. within 5.5-inch wide laps spaced 90.5-inch o.c. Field Row: 8-inch o.c. in one intermediate row between laps.					
90 < P ≤ 100		Lap Row: 7-inch o.c. within 5.5-inch wide laps spaced 90.5-inch o.c. Field Row: 7-inch o.c. in one intermediate row between laps.					
100 < P ≤ 120		Lap Row: 6-inch o.c. within 5.5-inch wide laps spaced 90.5-inch o.c. Field Row: 6-inch o.c. in one intermediate row between laps.					
120 < P ≤ 130		Lap Row: 11-inch o.c. within 5.5-inch wide laps spaced 90.5-inch o.c. Field Rows: 11-inch o.c. in two, equally spaced, intermediate rows between laps.					

TABLE 2: WIND UPLIFT PERFORMANCE							
ULTRAPLY TPO (MD)							
OPTIONAL INSULATION, PRELIMINARILY ATTACHED, MECHANICALLY ATTACHED ROOF COVER							
Assembly No.	Substrate	Base Insulation Layer(s)		Top Insulation Layer		Roof Cover	
		Type	Attachment	Type	Attachment	Membrane	Fasteners
2	Min. 1 ⁹ / ₃₂ " plywood fastened to supports spaced max. 24" with #8 wood screws spaced 6" o.c. at the perimeter and all intermediate supports.	(Optional) Min. 2" ISO 95+ GL	Loose Laid or Preliminarily fastened	(Optional) Min. ¼" thick DensDeck or Densdeck Prime or min. ½" thick FiberTop C or E, High Density Wood Fiber, or Sturdi-Top/High Density Wood Fiber	Preliminarily fastened	Firestone Ultraply TPO (MD)	#14 Roofgrip Screws with a length of 3.5" and ITW Buildex 2-3/8" diameter Eyehook Seam Plates with a thickness of 0.037".
Note:		Laps are sealed with a 1.5-inch wide heat weld on outside edge of lap. Field rows are covered with 6-inch wide UltraPly TPO (MD) strips, sealed on both sides with 1.5-inch heat welds.					
Design Pressure (psf)		Roof Cover Attachment					
0 < P ≤ 45		6-inch o.c. within 6-inch wide laps spaced 69-inch o.c.					
45 < P ≤ 60		Lap Row: 6-inch o.c. within 6-inch wide laps spaced 69-inch o.c. Field Row: 18-inch o.c. in one intermediate row between laps.					
60 < P ≤ 70		Lap Row: 6-inch o.c. within 6-inch wide laps spaced 69-inch o.c. Field Row: 10-inch o.c. in one intermediate row between laps.					
70 < P ≤ 80		Lap Row: 6-inch o.c. within 6-inch wide laps spaced 69-inch o.c. Field Row: 7-inch o.c. in one intermediate row between laps.					
80 < P ≤ 90		Lap Row: 6-inch o.c. within 6-inch wide laps spaced 69-inch o.c. Field Row: 6-inch o.c. in one intermediate row between laps.					
90 < P ≤ 100		Lap Row: 6-inch o.c. within 6-inch wide laps spaced 69-inch o.c. Field Rows: 9-inch o.c. in two equally spaced intermediate rows between laps.					
100 < P ≤ 110		Lap Row: 6-inch o.c. within 6-inch wide laps spaced 69-inch o.c. Field Rows: 8-inch o.c. in two equally spaced intermediate rows between laps.					
110 < P ≤ 120		Lap Row: 6-inch o.c. within 6-inch wide laps spaced 69-inch o.c. Field Rows: 7-inch o.c. in two equally spaced intermediate rows between laps.					
120 < P ≤ 130		Lap Row: 6-inch o.c. within 6-inch wide laps spaced 69-inch o.c. Field Rows: 6-inch o.c. in two equally spaced intermediate rows between laps.					

Note: The manufacturer's installation instructions shall be on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC) and the International Building Code (IBC) and the Texas Revisions.