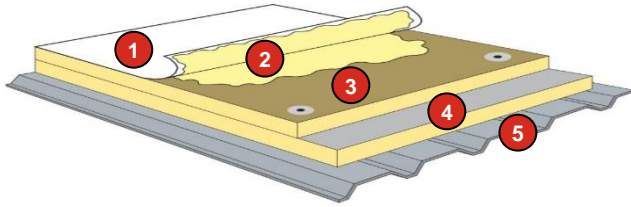




Firestone Building Products

Factory Mutual Very Severe Hail Assembly Requirements Adhered UltraPly™ TPO and UltraPly TPO XR Membrane



1. Firestone UltraPly TPO or TPO XR Membrane**
2. Adhered with Approved Adhesive
3. Mechanically Attached or Adhered Cover Board**
4. Mechanically Attached or Adhered Insulation**
5. Deck**

NOTE: See below for limitations on product use and application.

Consult Factory Mutual (FM) for a complete list of approved Firestone assemblies at: www.roofnav.com**

Consult Firestone Technical Specifications, Guides and Details at: www.firestonebpc.com

Slope Requirements

Positive Slope Required for Warranty.

Construction Type

New construction, Complete tear-off or recover with any wet or damaged materials removed prior to installation.

Building Height Limitation

Firestone UltraPly TPO Adhered Systems are limited to buildings 250' (76.2 m) or less.

Base Tie-Ins

Must be attached to substrates which provide a minimum of 200 lbf (1 kN) in any direction.

Increased Wind Speed and Codes

Any wind speed coverage exceeding 55mph (88 km/h) or projects with code requirements must be reviewed by a Firestone Roof System Advisor.

Deck Requirements

See approved deck types listed within the RoofNav tested assembly.

Cover Board and/or Insulation Types

See approved thickness listed within the RoofNav tested assembly.

Firestone HailGard

Oriented Strand Board (OSB) (APA Rated)

NOTE: The Cover Board/Insulation types listed above are the only approved boards for use within the VSH rated assemblies.

Cover Board and/or Insulation Attachment Type

See approved Cover Board and/or Insulation fastener and/or adhesive types listed within the RoofNav tested assembly.

NOTE: Max 4' x 4' boards must be used when attaching insulation(s) with adhesives. Cleaning of metal deck may be required to remove processing oils from the manufacturing process.

Membrane Requirements

See approved membrane types listed within the RoofNav tested assembly.

UltraPly TPO XR 115

UltraPly TPO XR 135

UltraPly TPO 80 mil

NOTE: UltraPly TPO Flex Adhered TPO and UltraPly TPO SA are not approved for use with VSH rated assemblies

Seaming Requirements

See seaming requirements listed within the approved RoofNav assembly.

Membrane Adhesive Requirements

See approved membrane adhesive types and rates listed within the RoofNav tested assembly.

XR Stick Bonding Adhesive (TPO XR Only)

Single-Ply LVOC Bonding Adhesive

Single-Ply LVOC Bonding Adhesive 1168

UltraPly Bonding Adhesive

Water Based Bonding Adhesive (15 yr max)

Edge Metal Requirements

Firestone AnchorGard™ System

Firestone EdgeGard™ System

Detail Descriptions

Wall Terminations	Firestone Termination Bar with AP Sealant applied along the caulk lip. Surface mounted or inserted counter flashing may also be used in accordance with current Firestone details.
Curb & Wall Flashings	Curbs, walls and expansion joints must be anchored with appropriate base tie-in detail, using appropriate membrane and attachment methods. See current Firestone details for appropriate application methods.
Corners	UltraPly TPO Inside/Outside Corners or UltraPly TPO QuickSeam Corner Flashing.
Roof Edges/Parapets	Firestone AnchorGard or EdgeGard Fascia or Drain Bar Systems. Factory Mutual and ANSI/SPRI ES-1 approved metals and detailing must be used. Nailers and other areas of securements must be installed per ANSI/SPRI requirements.
Penetrations	Flashing with UltraPly QuickSeam or UltraPly Pipe Flashing (weldable), UltraPly TPO Penetration Pocket, or field fabricated with UltraPly TPO Unsupported Flashing.

NOTE:

1. The use of Very Severe Hail (VSH) rated assemblies by Factory Mutual does not grant the proposed assembly warranted hail coverage
2. The addition of hail coverage may require additional assembly enhancements.
3. The addition of increased wind speed coverage may require additional assembly enhancements
4. A documented pull/adhesion test is required when using fasteners/plates or adhesives in a recover/reroof scenario.
5. Only Firestone brand products are covered in a Red Shield Warranty.
6. Refer to the Firestone website at www.firestonebpc.com or contact your Firestone Representative for additional information.
7. It is the installing contractor's responsibility to follow applicable building codes and/or specification compliance.
8. All proposed assemblies should be validated by a Firestone Representative for warranty terms prior to installation or bidding.
9. When tested assemblies or warranty documents conflict the more stringent assembly requirements should be followed.