

TremPly® HP 4510

A High Performance CSPE Single Ply Roof Membrane System

Composition: TremPly® HP 4510 is a single ply roof membrane which is compounded from CSPE (chloro-sulfonated polyethylene) elastomers and laminated to a high strength polyester reinforcing scrim. TremPly HP 4510 is asbestos free.

Basic Uses: TremPly HP 4510 an elastomeric membrane that accepts roof movement and thermal shock. It can be used in a variety of single ply roof system configurations, such as mechanically attached, fully adhered, and ballasted. TremPly HP 4510 is lapped and seamed using either hot air heat welding equipment or contact cement.

TremPly HP 4510 can be used in situations where other roof systems are not practical due to weight or slope considerations. TremPly HP 4510 provides excellent resistance to fire exposure in a variety of roof system configurations. It also offers chemical resistance to a wide range of chemicals found in industrial environments.

Both sides of TremPly HP 4510 are suitable for exposure to weathering.

Energy Star qualification is valid for Roofing products in the United States but not in Canada. Natural Resources Canada (NRCAN) has implemented an Energy Star Program which currently does not include roofing products.

Limitations:

- Do not remove roll from plastic wrapper until installation. Protect unused roll from direct sunlight and high temperatures.
- Positive drainage is required. Minimum slope of 1/2:12 (4%). Not intended to perform under ponding conditions.
- Perimeter mechanical attachment is required.

Dimensions: TremPly HP 4510 is a 45 mil (1.14 mm) thick membrane. Roll dimensions are 6.5' X 120' (1537 mm X 36.5 mm). As applied, with a 4.5" (114 mm) side lap, roll covers 164 sq ft (52.4 m²). Each roll weighs approximately 175 lbs. (79.4 kg.).

Packaging: TremPly HP 4510 is available in individually wrapped rolls or by the pallet, with 12 rolls/pallet.

Membrane Color: White one side; black other side.

Storage Life: 1 year in unopened factory wrapper, at warehouse temperatures under 80°F (27°C).

References:

Factory Mutual Loss Prevention Data Sheets:

- 1-28 Design Wind Loads
- 1-29 Roof Deck Securement and Above Deck Roof Components
- 1-49 Perimeter Flashing

APPLICATION DATA:

Roof replacement usually involves more complexities than new construction roofing. Contingencies such as rusted or deteriorated decks, rotted wood components, rooftop equipment which cannot be moved or shut down, and numerous other conditions are often encountered.

The following application information is designed to serve as a general guide. Your local Tremco Representative will prepare detailed specifications based on the condition of your roof.

Structural Deck: Deck must be properly designed and structurally sound.

Drainage: Ponding conditions are unacceptable and will adversely affect performance of any roofing system. Where positive drainage does not exist, water removal from roof surface must be facilitated by lowering drains, and/or installing additional drains, tapered insulation, or an approved cellular concrete slope system.

Insulation: Insulation must be dry and kept dry. No more insulation shall be installed than can be covered in that day. Use of FAS-n-FREE® Adhesive for solvent free, fastener free insulation attachment is the preferred method of securement unless otherwise specified.


General Installation Procedures: According to job specifications, prepare the surface to be covered:

- Remove loose aggregate.
- Replace areas of wet insulation, deteriorated deck and wood components.
- Provide air seal at perimeter, curbs, and penetration flashings.
- Attach new roof insulation according to job specifications.
- Clean insulation surface of loose dust/debris.

Membrane Placement: Plan the placement of TremPly HP 4510 to facilitate the fabrication of the least number of seams. Ensure that water flows over or along, but not against, the exposed edges.

Installation of Mechanically Attached System:

- Start at the low point of the roof and position a half-width (30" or 762mm) roll of HP 4510 square with the roof edge. Avoid wrinkles. Reposition when necessary.
- Install a second half width roll of HP 4510. Overlap at side lap and end lap: 4.5" (114 mm) minimum.
- The minimum number of half-width rolls required at the perimeter is 2. Consult your Tremco Representative for further information.

Product Advantages	
Features	Benefits
Excellent lap strength	• Long trouble-free service life
Chemically resistant	• Resists chemicals, acid rains, and fumes
Polyester reinforcement	• Strong - puncture and tear resistant
UL classified 	• Fire protection

- Mechanically attach underlying sheet at the lap to the structural deck with fasteners and 2" (51 mm) diameter barbed membrane plates spaced at 6" (153 mm) on center down the entire lap with the disc centered 1-1/8" (29 mm) from the sheet edge.

- Install the required number of half-width rolls along the roof edges perpendicular to the roll direction in the field of the roof.

Installation of Fully Adhered System:

- Start at low point of the roof and position the roll square with the roof edge.
- Squeegee HP 4510 Adhesive LV in a uniform continuous application onto substrate at 15 to 20 mil (0.4-0.5 mm) thickness or 80-100 sq ft/gal (2.0-2.5 m²/L).
- Allow adhesive to dry to slight tack for 15 minutes minimum at 77°F (25°C). Adjust time according to ambient conditions.
- Place membrane into adhesive. Broom immediately.
- Install second and succeeding rolls in the same manner. Overlap at side lap and end lap: 4-1/2" (114 mm) minimum.

Membrane Seaming:

- Wipe all surfaces to be seamed with Toluene.
- For heat welding, allow the hot air welder to warm up. Insert the nozzle tip of the hot air welder into seam area. Move nozzle at a steady speed along the seam area, immediately applying pressure behind the air nozzle with a steel roller or weighted wheel to ensure positive contact of the heated HP 4510 lap. Minimum width of welded lap shall be 2" (51 mm).
- Field test heat welded laps to assure proper construction. Perform field test after lap area cools to ambient temperatures. Properly constructed laps will not separate at the lap interface when tested. Consult your Tremco representative for additional information.
- For adhesive bonding, brush or roller apply Tremply Lap Adhesive to each lap surface at 250 sq ft/gal (6.25 m²/L). Allow adhesive to dry to slight tack. Broom across seams to join the lap; remove wrinkles/entrapped air. Hand roll across seams with a steel roller to assure positive contact.

Lap Sealant: Seal the outside edge of all membrane seams with TremSEAL S. Wipe surface with toluene prior to the caulk application of TremSEALS to edge of lap seam. Tool sealant to a 1/8" X 1/2" (3 mm X 13 mm) cove bead. Sealant coverage: 300 lineal ft/gal (24.2 m/L).

Perimeter/Projection Attachment: Provide mechanical attachment of roofing membrane at roof perimeter, walls, expansion joints, and all other projections. Follow the recommendations of Factory Mutual Loss Prevention Data Sheets 1-28, 1-29, and 1-49.

For all HP 4510 roof systems, additional mechanical attachment is recommended in roof areas subject to high wind uplift pressures, such as roof corners and perimeters. Consult your Tremco Representative for additional information.

Precautions: Users must read container labels and Material Safety Data Sheets for health and safety precautions prior to use.

Availability and Cost: Contact your local Tremco Roofing Representative for pricing and availability. For the name and number of your Representative, call the Roofing Division at 216/292-5000.

Maintenance: Your local Tremco Roofing Representative can provide you with effective maintenance procedures which may vary, depending upon specific conditions. Periodic inspections, early repairs and preventative maintenance are all part of a sound roof program.

Physical Performance Characteristics

TremPly HP4510

Property	Typical Value	Test Method
Thickness	0.045 in (1.14 mm)	ASTM D 751-89
Tensile strength	225 lbf (1000N)	ASTM D 751-89
Elongation @ fabric break	25%	ASTM D 751-89
Tear resistance	90 lbf (400 N)	ASTM D 751-89
Dimensional stability @ 129°F	0.1% @ 24 hrs.	ASTM D 1204-84
Low temperature flexibility	-40°F (-40°C)	ASTM D 2136-84 (1989)

Guarantee/Warranty: Tremco, Inc. warrants TremPly HP 4510 to be free of defects and to meet published physical properties when tested according to ASTM and Tremco standards. Under this warranty, any product that is proved to be defective when applied in accordance with our written instructions, and in applications recommended by Tremco as suitable for this product will be replaced with like product at no charge. THIS IS BUYERS SOLE AND EXCLUSIVE REMEDY.

All claims concerning product defects must be made in writing within twelve (12) months of shipment. The absence of such claims in writing during this period will constitute a waiver of all claims with respect to such product. This warranty shall be IN LIEU OF any other warranty, express or implied, including but not limited to, any implied warranty of MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Technical Services: Your local Tremco Representative, working with the Technical Service Staff, can help analyze conditions and needs to develop recommendations for special applications. The services of the Tremco Research Center, which has earned a unique reputation in weatherproofing technology, complement and extend the services of the Tremco Technical Service staff.

Statement of Policy and Responsibility: Tremco takes responsibility for furnishing quality materials and for providing specifications and recommendations for their proper installation.

As neither Tremco itself nor its Representatives practice architecture or engineering, Tremco offers no opinion on, and expressly disclaims any responsibility for the soundness of any structure on which its products may be applied. If questions arise as to the soundness of a structure or its ability to support a planned installation properly, the Owner should obtain the opinion of competent structural engineers before proceeding. Tremco accepts no liability for any structural failure or for resultant damages, and no Tremco Representative is authorized to vary this disclaimer.



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