

WeatherBond PRO PAS (Peel & Stick) TPO Membrane



Overview

WeatherBond PRO PAS membrane is a heat-weldable single-ply thermoplastic polyolefin (TPO) sheet designed for fully adhered new roof construction and re-roofing applications. WeatherBond PRO PAS is a nominal 60-mil reinforced TPO membrane laminated to an elastomeric quick-applied adhesive. WeatherBond PRO PAS membrane is based on advanced polymerization technology that combines the durability and weatherability of ethylene-propylene (EP) rubber with the heat weldability of polypropylene. The membrane is specifically formulated for long-term weather resistance without the use of either polymeric or liquid plasticizers.

Every roll of WeatherBond PRO PAS TPO membrane utilizes WeatherBond's exclusive Lay-Flat Technology, a perfect combination of membrane, adhesive and manufacturing expertise that results in the easiest TPO installation.

The quick-applied adhesive is a 100%-solids, hot-melt adhesive that eliminates VOC and odor concerns typically associated with fully adhered systems. The adhesive is factory-applied to provide uniform thickness, yielding consistent field performance. An uncoated edge is maintained to allow for heat-welded field seams. The release liner is silicon-coated on both sides to provide consistent, easy release from the adhesive even if either side accidentally touches the adhesive again after removal.

WeatherBond PRO PAS TPO is available in 60-mil white (highly reflective) nominal thickness. Available sizes are 10' x 25', 10' x 50' and 10' x 100' rolls. The membrane is environmentally friendly and safe to install with its VOC-free quick-applied adhesive and heat-welded seams.

White WeatherBond PRO PAS TPO can contribute toward LEED® (Leadership in Energy and Environmental Design) credits and is ENERGY STAR®* qualified and California Title 24 rated.

Features and Benefits

- ENERGY STAR qualified, Title 24 compliant and can contribute toward LEED credits
- FM, UL and CRRC rated; UL-2218 class 4 rating
- Improved adhesive formulation for superior bonding to substrates
- Up to 80% labor savings
- No solvents, VOCs or odors
- Double-sided release liner
- Smooth membrane reduces dirt buildup and stays cleaner longer
- Full line of Certified Fabricated Accessories (CFA)
- Exclusive lay-flat technology
- Enhanced with the OctaGuard XT weathering package

Installation

WeatherBond PRO TPO Roofing Systems are fast to install since minimal labor and few components are required.

The WeatherBond PRO PAS TPO Fully Adhered Roofing System application begins with the insulation/underlayment being attached per the required attachment specification.

1. The WeatherBond PRO PAS TPO membrane may only be installed when the outdoor temperature is at least 50°F (10°C).
2. The surface to which the membrane is to be applied must be very clean. Prior to membrane placement, the surface of the insulation or underlayment board must be cleaned of dust and other foreign matter using a fine push broom or a blower.
Note: Priming of the insulation surface is not required.
3. Remove the release liner on one half of the sheet starting from the split in the liner at the middle of the sheet. The liner should be removed at an angle to reduce splitting or tearing.
4. Roll the membrane onto the substrate while avoiding wrinkles. To achieve the best adhesion, the membrane should be rolled onto the substrate at an angle. When applying the WeatherBond PRO PAS TPO membrane it is recommended to maintain a large curve (radius) on the leading edge of the membrane. This will help eliminate creases and bubbles that cannot be removed after the sheet is in place.

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5. Roll the membrane with a segmented roller to ensure full contact with the substrate. Roller should weigh at least 50 lbs per linear foot.
6. Fold back the remaining half of the sheet and repeat the above process.

Heat Welding Procedures

1. Refer to the WeatherBond PRO PAS TPO installation specification for typical heat welding procedures.
2. The membrane has an uncoated edge on one side along the length of the sheet for membrane welding. Adjoining membrane sheets are overlapped lengthwise a minimum of 2" to provide for a minimum 1½"-wide heat weld. It is recommended that all splices be shingled to avoid bucking of water.
3. An uncoated edge is not provided at the ends of the rolls. Adjoining membrane sheets must be butted together and overlaid with 6"-wide WeatherBond PRO TPO Reinforced Membrane, hot-air welded along all edges. Seal all membrane edges (where scrim reinforcement is exposed) with Cut-Edge Sealant.**

Wall Flashing

Walls may be flashed using WeatherBond PRO PAS TPO or standard TPO membrane with WeatherBond's TPO Bonding Adhesive.

REVIEW CURRENT WEATHERBOND SPECIFICATIONS AND INSTALLATION INSTRUCTIONS FOR SPECIFIC INSTALLATION REQUIREMENTS.

Precautions

1. A static electric charge may develop when removing the poly release liner from the elastomeric quick-applied adhesive on the back of the membrane sheet. To avoid the possibility of ignition, lids must be closed on any flammable products and a fire extinguisher should be readily available.
2. Sunglasses that filter out ultraviolet light are strongly recommended since membrane surface is highly reflective. Roofing technicians should dress appropriately and wear sunscreen to protect skin from the sun.
3. Surfaces may become slippery due to frost and ice buildup. Exercise caution during cold conditions to prevent falls.
4. Care must be exercised when working close to a roof edge when surrounding area is snow-covered as the roof edge may not be clearly visible.
5. Use proper stacking procedures to ensure sufficient stability of the rolls.
6. Exercise caution when walking on wet membrane. Membranes may be slippery when wet.
7. Store WeatherBond PRO PAS TPO membrane in the original undisturbed plastic wrap in a cool, shaded area and cover with light-colored, breathable, waterproof tarpaulins. WeatherBond PRO PAS TPO membrane that has been exposed to the weather must be prepared with Weathered Membrane Cleaner prior to hot-air welding.

Code Approvals

- WeatherBond PRO TPO meets or exceeds the requirements of ASTM D6878 Standard Specification for Thermoplastic Polyolefin Based Sheet Roofing.
- WeatherBond PRO TPO was tested for dynamic puncture resistance per ASTM D5635-04 using the most recently modified impact head. It was watertight after an impact energy of 22.5 J (16.6 ft-lbf).
- WeatherBond PRO TPO membranes conform to requirements of the U.S.E.P.A. Toxic Leachate Test (40 CFR part 136) performed by an independent analytical laboratory.

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Typical Properties and Characteristics

Property	Test Method	Property of Unaged Sheet	Property After ASTM D573 Aging ¹ 28 Days @ 240°F
Nominal thickness with adhesive, in. (mm) 60-mil (adhesive nominal thickness is 0.010)	ASTM D751	0.070 (1.78)	
Thickness over scrim, in. (mm) 60-mil	ASTM D6878 (avg. of 3 areas)	typical 0.024 (0.610)	
Breaking strength, lbf (kN)	ASTM D751 Grab Method	250 (1.1) min. 360 (1.6) typical	250 (1.1) min. 360 (1.6) typical
Elongation at break of fabric, %	ASTM D751	25 typical	25 typical
Tearing strength, lbf (N) 8 x 8 in. Specimen	ASTM D751 B Tongue Tear	55 (245) min. 130 (578) typical	55 (245) min. 130 (578) typical
Brittleness point, °F (°C)	ASTM D2137	-40 (-40) max. -50 (-46) typical	
Linear Dimensional Change (shrinkage), % After 6 hours at 158°F (70°C)	ASTM D1204	± 0.5 max. -0.2 typical	
Ozone resistance, 100 pphm, 168 hours	ASTM D1149	No cracks	No cracks
Resistance to water absorption After 7 days immersion 158°F (70°C) Change in mass, %	ASTM D471 (top surface only)	3.0 max. 2.0 typical	
Resistance to microbial surface growth, rating (1 is very poor, 10 is no growth)	ASTM D3274 2 yr S. Florida	9–10 typical	
Field seam strength, lbf/in. (kN/m) Seam tested in peel	ASTM D1876	25 (4.4) min. 60 (10.5) typical	
Water vapor permeance, Perms	ASTM E96	0.10 max. 0.05 typical	
Puncture resistance, lbf (kN)	FTM 101C Method 2031	300 (1.3) min. 350 (1.6) typical	
Resistance to xenon-arc weathering ² Xenon-Arc, 17,640 kJ/m ² total radiant exposure, visual condition at 10x	ASTM G155 0.70 W/m ² 80°C B.P.T.	No cracks No loss of breaking or tearing strength	

Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

¹ Aging conditions are 28 days at 240°F (116°C) equivalent to 400 days at 176°F (80°C) for breaking strength, elongations, tearing strength, ozone and puncture resistance.

² Approximately equivalent to 14,000 hours exposure at 0.35 W/m² irradiance. B.P.T. is black panel temperature.

Radiative Properties for ENERGY STAR and Cool Roof Rating Council (CRRC)

Property	Test Method	PAS TPO
ENERGY STAR – Initial solar reflectance	Solar Spectrum Reflectometer	0.79
ENERGY STAR – Solar reflectance after 3 years	Solar Spectrum Reflectometer (after cleaning)	0.70
CRRC initial solar reflectance	ASTM C1549	0.79
CRRC solar reflectance after 3 years	ASTM C1549 (uncleaned)	0.70
CRRC initial thermal emittance	ASTM C1371	0.90
CRRC thermal emittance after 3 years	ASTM C1371 (uncleaned)	0.86

LEED Information

Post-industrial Recycled Content	8%
Post-consumer Recycled Content	0
Manufacturing Location(s)	Tooele, UT
Solar Reflectance Index (SRI)	110