

### PVC Membrane



#### Overview

WeatherBond PRO PVC is an advanced-formula, heat-weldable PVC thermoplastic membrane that is designed for long-term weatherability and performance. The physical properties of the membrane are enhanced by a tenacious, weft-inserted polyester fabric that is encapsulated by thick PVC-based top and bottom plies for mechanically attached systems. The smooth surface of the WeatherBond PRO PVC membrane allows for a total-surface fusion, permanent weld that creates a consistent, watertight monolithic roof assembly.

#### Features and Benefits

- Wide choice of membranes
- Enhanced chemical resistance
- Energy efficiency
- Heat weldability
- Low temperature flexibility
- Impact and puncture resistance
- UV, ozone and oxidation resistance
- Easy installation

#### Installation

With minimal labor and few components required, WeatherBond PRO PVC is quick and easy to install. WeatherBond PRO PVC systems may be installed utilizing laborsaving devices that make sheet welding fast, clean and consistent.

##### Mechanically Attached Roofing System

The mechanically attached system starts with insulation being fastened with a minimum of 5 fasteners per 4 by 8 ft. board. The WeatherBond PRO PVC reinforced membrane is then mechanically attached to the deck using HPWX Fasteners and Plates. Adjoining sheets of membrane are overlapped over the fasteners and plates and joined together with a minimum 1½"-wide hot-air weld.

##### Fully Adhered Roofing System

The fully adhered system starts with a suitable surface to apply the WeatherBond PVC Bonding Adhesive or PVC Low-VOC Bonding Adhesive. After thorough stirring (minimum 5 minutes), apply bonding adhesive to substrate and membrane using a 9" (23 mm) medium nap roller. Application should be continuous and uniform, avoiding globs or puddles. An open time of 5 to 50 minutes, based on drying conditions, is recommended before assembly. PVC Bonding Adhesive must be allowed to dry until it does not string or stick to a dry finger touch. Any coated area that has been exposed to rain should be allowed to dry and then recoated. Do not apply adhesive to areas to be hot-air welded. Roll the membrane onto the adhesive-coated substrate while avoiding wrinkles. Immediately brush down the bonded portion of the sheet with a soft-bristle push-broom or a clean dry roller applicator to achieve maximum contact.

REVIEW CURRENT WEATHERBOND SPECIFICATIONS AND DETAILS FOR SPECIFIC INSTALLATION REQUIREMENTS.

#### Precautions

1. Sunglasses that filter out ultraviolet light are strongly recommended as the white surface is highly reflective to sunlight. White surfaces reflect heat and light. Roofing technicians should dress appropriately and wear sunscreen to protect skin.
2. Smooth surfaces may be slippery due to frost and ice build-up. Exercise caution during cold conditions to prevent falls.
3. 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.
4. Use proper stacking procedures to ensure sufficient stability of the materials.

## WeatherBond PRO PVC Membrane

- Exercise caution when walking on wet membrane. Membranes may be slippery when wet.
- Store membrane in the original undisturbed plastic wrap in a cool, shaded area and cover with light-colored, breathable, waterproof tarpaulins. WeatherBond PRO PVC membrane that has been exposed to the weather or contaminated with dirt must be prepared with PVC Membrane Cleaner prior to hot-air welding.

### Supplemental Approvals, Statements and Characteristics

- WeatherBond PRO PVC meets or exceeds the requirements of ASTM D4434 Standard Specification for Poly Vinyl Chloride Sheet Roofing. WeatherBond PRO PVC is classified as type III as defined by ASTM D4434.
- WeatherBond PRO PVC reinforced membrane was tested for dynamic puncture resistance per ASTM D5635-04 using the most recently modified impact head. 50-mil-thick membrane was watertight after an impact energy of 22.5 J (16.6 ft-lbf), which passes the ASTM D4434 requirement.
- WeatherBond PRO PVC reinforced membrane was tested for static puncture resistance per ASTM D5602-98 and exceeded 33 lbf (145 N), which passes the ASTM D4434 requirement.

### Radiative Properties for ENERGY STAR®, Cool Roof Rating Council (CRRC) and LEED®

Property	Test Method	White PVC
ENERGY STAR – E-903 Initial solar reflectance	Solar Spectrum Reflectometer	0.87
ENERGY STAR – E-903 Solar reflectance after 3 years	Solar Spectrum Reflectometer (uncleaned)	0.61
CRRC – Initial solar reflectance	ASTM C1549	0.87
CRRC – Solar reflectance after 3 years	ASTM C1549 (uncleaned)	0.61
CRRC – Initial thermal emittance	ASTM C1371	0.95
CRRC – Thermal emittance after 3 years	ASTM C1371 (uncleaned)	0.86
LEED – Thermal emittance	ASTM E408	0.94
Solar Reflectance Index (SRI)	ASTM E1980	111

### LEED Information

Pre-consumer Recycled Content	10%
Post-consumer Recycled Content	0%
Manufacturing Location	Hillside, NJ
Solar Reflectance Index	White: 111

### Typical Properties and Characteristics

Property	Test Method	Property of Unaged Sheet	Property after ASTM D3045 aging 56 days @ 176°F
Tolerance on nominal thickness, %	ASTM D751	±10	
Thickness over scrim, in (mm)	ASTM D4434 Optical Method (avg of 3 areas)	0.016 (0.406) min 0.025 (0.635) min 0.035 (0.888) min	
Breaking strength, lbf/in (kN/m)	ASTM D751 Grab Method	200 (35) min 300 (53) typical	90% min retention of original breaking strength
Elongation at break of fabric, %	ASTM D751	15 min 25 typical	90% min retention of original elongation
Tearing strength, lbf (N) 8 by 8 in. specimen	ASTM D751 B Tongue Tear	45 (200) min 100 (445) typical	
Low temperature bend, °F (°C)	ASTM D2136	-40 (-40) max -50 (-46) typical	
Linear dimensional change (shrinkage), % After 6 hours at 176°F (80°C)	ASTM D1204	± 0.5 max -0.3 typical	
Ozone resistance, 100 pphm 168 hours	ASTM D1149	No Cracks	
Resistance to water absorption After 7 days immersion 158°F (70°C) Change in mass, %	ASTM D570	3.0 max 2.0 typical	
Field seam strength, lbf/in (kN/m) Seam tested in peel after welding	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(N) (See supplemental section for additional puncture data.)	FTM 101C Method 2031	250 (1110) min 280 (1245) typical 50-mil 320 (1423) typical 60-mil 380 (1690) typical 80-mil	
Resistance to xenon-arc weathering Xenon-Arc, 12,600 kJ/m² total radiant exposure, visual condition at 10x (ASTM D4434 light & spray cycle)	ASTM G155	0.35 W/m² 63°C B.P.T. (10,000 hours)	No cracks No crazing

B.P.T. is black panel temperature  
6/07

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.