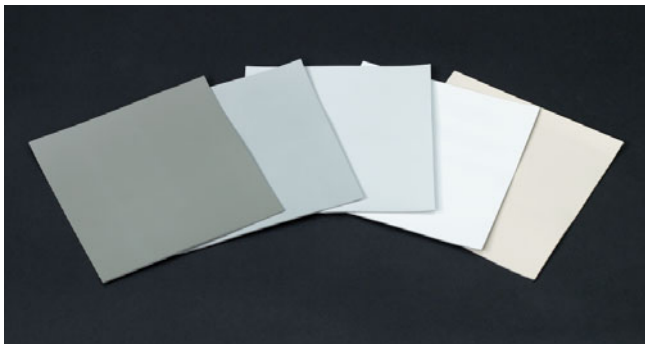
WeatherBond **PVC**
Membrane



Overview

WeatherBond 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. The smooth surface of the PVC membrane allows for a total-surface fusion and permanent weld, creating a consistent, watertight monolithic roof assembly.

PVC can be used in adhered and mechanically attached systems. The dark gray-colored bottom ply provides a visual confirmation of a proper weld during the lap welding process.

Features and Benefits

- Wide choice of membrane sizes, thicknesses and colors
- Enhanced chemical resistance
- Can increase a building's energy efficiency
- Excellent heat weldability
- Exceptional low-temperature flexibility
- Highly resistant to punctures, UV, ozone and oxidation
- Impact Resistance – UL-2218 Class 4 Rating
- Easy installation
- Available in white, gray, light gray, slate gray, and tan

Installation

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

Mechanically Attached Roofing System

The mechanically attached system starts with approved insulation being fastened with a minimum of 5 fasteners per 4′ x 8′ board. The PVC membrane is then mechanically attached to the deck using HPWX Fasteners and Plates. Adjoining sheets of PVC 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 upon which the WeatherBond Low-VOC PVC Bonding Adhesive or HydroBond™ Water-Based PVC Bonding Adhesive is applied.

REVIEW CURRENT WEATHERBOND INSTALLATION INSTRUCTIONS FOR SPECIFIC INSTALLATION REQUIREMENTS.

Precautions

1. Sunglasses that filter out ultraviolet light are strongly recommended as the white surface is highly reflective to sunlight. Roofing technicians should dress appropriately and wear sunscreen.
2. Smooth surfaces may cause slippery conditions 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.
5. Exercise caution when walking on wet membrane. Membranes may be slippery when wet.
6. Store PVC membrane in the original undisturbed plastic wrap in a cool, shaded area and cover with light-colored, breathable, waterproof tarpaulins. 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

1. WeatherBond PVC meets or exceeds the requirements of ASTM D4434 Standard Specification for Poly Vinyl Chloride Sheet Roofing. WeatherBond PVC is classified as Type III and/or Type IV as defined by ASTM D4434.
2. WeatherBond PVC 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.
3. WeatherBond PVC was tested for static puncture resistance per ASTM D5602-98 and exceeded 33 lbf (145 N), which passes the ASTM D4434 requirement.

WEATHERBOND
ROOFING SYSTEMS

Radiative Properties for ENERGY STAR®*, Cool Roof Rating Council (CRRC) & LEED®

Physical Property	Test Method	Gray PVC	Light Gray PVC	Tan PVC	White PVC	Slate Gray
ENERGY STAR – E-903 Initial Solar Reflectance	Solar Spectrum Reflectometer	0.59	0.74	0.73	0.86	pending
ENERGY STAR – E-903 Solar Reflectance after 3 years	Solar Spectrum Reflectometer (Uncleaned)	pending	pending	pending	0.63	pending
CRRC – Initial Solar Reflectance	ASTM C1549	0.59	0.74	0.72	0.86	pending
CRRC – Solar Reflectance after 3 years	ASTM C1549 (uncleaned)	0.49*	0.64*	0.60*	0.63	pending
CRRC – Initial Thermal Emittance	ASTM C1371	0.89	0.88	0.87	0.89	pending
CRRC – Thermal Emittance after 3 years	ASTM C1371 (uncleaned)	0.86*	0.89*	0.86*	0.87	pending
Solar Reflective Index (SRI)	ASTM E1980	70	90	88	108	pending
Solar Reflective Index (SRI) after 3 years	ASTM E1980	56*	77*	71*	75	pending

* Rapid Results

LEED® Information

Pre-consumer Recycled Content	10%
Post-consumer Recycled Content	0%
Manufacturing Locations	Hillside, NJ; Greenville, IL
Solar Reflectance Index	White: 111, Gray: 69, Tan: 89, Light Gray: 90, Slate Gray: unkn

Typical Properties and Characteristics

Physical Property	ASTM D4434 Requirement	50-mil	60-mil	80-mil
Thickness over scrim, in. (mm) ASTM D4434 optical method, average of 3 areas	0.016 min (0.40)	0.023 (0.533)	0.025 (0.635)	0.034 (0.864)
Weight, lbs/ft^2 (kg/m^2)	No requirement	0.33 (1.61)	0.40 (1.95)	0.55 (2.68)
Breaking strength (MD x CD), lbf/in (kN/m)ASTM D751 grab method	275 min (48)	320 x 300 (56 x 53)	330 x 300 (58x 55)	360 x 330 (63 x 58)
Elongation break of reinforcement (MD x CD), % ASTM D751 grab method	25 min	30 x 30	30 x 30	30 x 30
Seam Strength, min. ASTM D751 grab method (% of breaking strength)	>75	PASS	PASS	PASS
Tearing strength (MD x CD), lbf (N) ASTM D751 proc. B, 8 in. x 8 in.	90 min (400)	100 x 120 (445 x 534)	100 x 130 (445 x 578)	100 x 132 (445 x 587)
Low temperature bend, no cracks 5x ASTM D2136	PASS	PASS (-40°C)	PASS (-40°C)	PASS (-40°C)
Linear dimensional change, % ASTM D1204, 6 hours at 176°F	± 0.5 max	0.4	0.4	0.4
Ozone resistance, no cracks 7X ASTM D1149, 100 pphm, 168 hrs	PASS	PASS	PASS	PASS
Water absorption resistance, mass % ASTM D570, 166 hours at 158°F water	± 3.0 max	2.0	2.0	2.0
Field seam strength, lbf /in. (kN/m) ASTM D1876 tested in peel	No requirement	25 (4.4) min 60 (10.5) typ	25 (4.4) min 60 (10.5) typ	25 (4.4) min 60 (10.5) typ
Water vapor permeance, Perms ASTM E96 proc. B	No requirement	0.10 max 0.05 typ	0.10 max 0.05 typ	0.10 max 0.05 typ
Puncture resistance - Federal, lbf (kN) FTM 101C, method 2031	No requirement	280	320	380
Puncture resistance - Dynamic, J (ft-lbf) ASTM D5635	20 (14.7)	PASS	PASS	PASS
Puncture resistance - Static, lbf (N) ASTM D5602	33 (145)	PASS	PASS	PASS
Xenon-Arc resistance, no cracks/ crazing 10x, ASTM G155 0.35 W/m^2 at 340nm, 63°C B.P.T. 12,600 kJ/m^2 total radiant exposure 10,000 hours	PASS	PASS	PASS	PASS
Properties after heat aging ASTM D3045, 56 days at 176°F Breaking strength, % retained Elongation reinf., % retained	90 min 90 min	90 min 90 min	90 min 90 min	90 min 90 min

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.

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ROOFING SYSTEMS

Single-Ply Simplified

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