

WeatherBond PVC

Membrane (Minimum thickness)

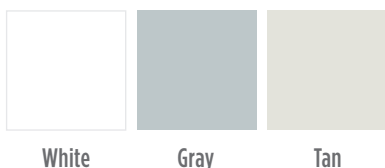


Overview

WeatherBond's PVC is an advanced-formula, heat-weldable PVC membrane that is designed for long-term weatherability and performance. The physical properties of the membrane are enhanced by a tenacious, anti-wicking, weft-inserted polyester fabric that is encapsulated by thick PVC-based top and bottom plies. The membrane's smooth surfaces facilitate a permanent weld for a consistent, watertight, monolithic roof assembly.

Features and Benefits

- Exceptional fire and chemical resistance
- Fully formulated monolithic top-ply for long-term weatherability
- Enhanced physical characteristics meeting ASTM D4434 Type IV requirements
- Antimicrobials throughout the polymer for increased resistance to mold, mildew, and algae growth
- Highly flexible with a wide window of weldability for ease of installation
- Available colors:



WEATHERBOND
ROOFING SYSTEMS

Single-Ply Simplified



Sustainable Attributes

WeatherBond Roofing Systems' focus has always been innovation - Innovation to solve problems, improve performance, reduce labor, and above all, improve sustainability. WeatherBond is committed to driving sustainable and efficient processes in the design and manufacturing of our products.

- PVC polymer derived from less than 50% fossil fuels
- Up to 10% pre-consumer recycled content
- Fully recyclable when used in mechanically-attached systems
- 3rd-party verified Environmental Product Declaration available
- California Title 24 compliant*
- See Radiative Properties and LEED® Information tables below for additional attributes

*White only.

Installation

Installation requires minimal labor and few components, making it quick and easy to install. Sheet seams are heat-welded together using hot-air welding equipment to create a monolithic, water-tight roof system.

WeatherBond PVC is suitable for the following roof systems:

Fully-Adhered – membrane is adhered to a suitable substrate utilizing an appropriate bonding adhesive

Mechanically Attached – membrane is attached to a suitable substrate utilizing plates and fasteners which are overlapped with membrane

Induction-Welded – membrane is attached to a suitable substrate via an induction welding tool being placed over the membrane where a fastened PVC induction welding plate is located to weld the two components together

REVIEW CURRENT WEATHERBOND INSTALLATION DETAILS FOR SPECIFIC INSTALLATION REQUIREMENTS.

Precautions

1. Sunglasses that filter out ultraviolet light are strongly recommended when working on reflective membranes. Roofing technicians should dress appropriately and wear sunscreen.
2. Exercise caution when walking on wet membranes; membranes may be slippery when wet or due to frost and ice buildup.
3. Care must be exercised while working close to a roof edge when the 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. Store membrane in its original, undisturbed plastic wrap in a cool, shaded area and cover with light-colored, breathable, waterproof tarpaulins.
6. Membrane that has been exposed to the weather or contaminated with dirt must be prepared with WeatherBond PVC/KEE HP Membrane Cleaner prior to hot-air welding.

Supplemental Approvals, Statements and Characteristics

- 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.
- WeatherBond reinforced 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.
- WeatherBond reinforced PVC 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 Cool Roof Rating Council (CRRC) and LEED

| Physical Property | Test Method | White PVC | Tan PVC | Gray PVC |
|--|------------------------|-----------|---------|----------|
| CRRC – Initial Solar Reflectance | ASTM C1549 | 0.87 | 0.72 | 0.59 |
| CRRC – Solar Reflectance after 3 years | ASTM C1549 (uncleaned) | 0.70 | 0.56 | 0.49 |
| CRRC – Initial Thermal Emittance | ASTM C1371 | 0.89 | 0.87 | 0.89 |
| CRRC – Thermal Emittance after 3 years | ASTM C1371 (uncleaned) | 0.88 | 0.87 | 0.89 |
| Solar Reflective Index (SRI) | ASTM E1980 | 110 | 89 | 70 |
| Solar Reflective Index (SRI) after 3 years | ASTM E1980 | 86 | 65 | 57 |

* Rapid Ratings

LEED Information

| | |
|--|-------------------------------|
| Pre-consumer Recycled Content | Up to 10% |
| Post-consumer Recycled Content | 0% |
| Manufacturing Locations | Greenville, IL |
| Solar Reflectance Index (SRI), Initial | White: 110, Tan: 89, Gray: 70 |



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Typical Properties and Characteristics

| Physical Property | ASTM D4434 Requirement | 60-mil | 80-mil |
|---|------------------------|--------------------------------|--------------------------------|
| Thickness over scrim , in. (mm) ASTM D4434 optical method average of 3 areas | 0.016 min (0.40) | 0.028 (0.711) | 0.038 (0.965) |
| Weight , lbs/ft ² (kg/m ²) | No requirement | 0.40 (1.95) | 0.55 (2.68) |
| Breaking strength (MD x CD), lbf/in (kN/m) ASTM D751 grab method | 275 min (48) | 330 x 300 (58 x 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 |
| Tearing strength (MD x CD), lbf (N) ASTM D751 proc. B, 8 in. x 8 in. | 90 min (400) | 100 x 130 (445 x 578) | 100 x 132 (445 x 587) |
| Low temperature bend , ASTM D2136, no cracks 5x at -40°C | PASS | PASS (-40°C) | PASS (-40°C) |
| Linear dimensional change , % ASTM D1204, 6 hours at 176°F | ±0.5 max | 0.4 | 0.4 |
| Ozone resistance , no cracks 7x ASTM D1149, 100pphm, 168 hrs | PASS | PASS | PASS |
| Water absorption resistance , mass % ASTM D570, 166 hours at 158°F water | ±3.0 max | 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. |
| Water vapor permeance , Perms, ASTM E96 proc. B | No requirement | 0.10 max 0.05 typ | 0.10 max 0.05 typ |
| Puncture resistance - Federal , lbf (kN) FTM 101C, method 2031 | No requirement | 320 | 380 |
| Puncture resistance - Dynamic , J (ft-lbf) ASTM D5635 | 20 (14.7) | PASS | PASS |
| Puncture resistance - Static , lbf (N) ASTM D5602 | 33 (145) | PASS | PASS |
| Xenon-Arc resistance , no cracks/ crazing 10x, ASTM G155 0.35 W/m ² at 340-nm, 63°C B.P.T. 12,600 kJ/m ² total radiant exposure 10,000 hours | 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 |

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.