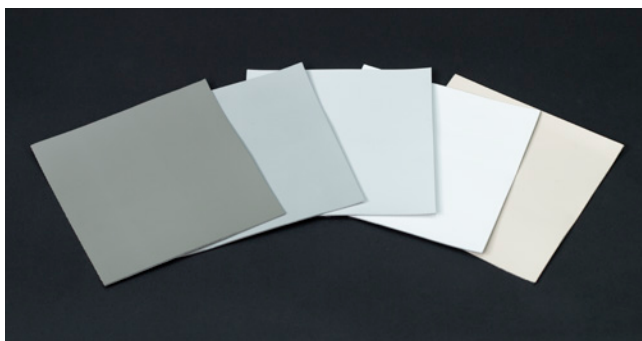


WeatherBond PVC

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



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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 CAV-GRIP PVC, Low-VOC PVC Bonding Adhesive, or HydroBond™ Water-Based PVC Bonding Adhesive is applied.

REVIEW CURRENT WEATHERBOND INSTALLATION INSTRUCTIONS FOR SPECIFIC INSTALLATION REQUIREMENTS.

Optional APEEL™ Protective Film

Shield WeatherBond PVC membrane from dirt and scuffs during installation with APEEL Protective Film. Factory-applied and easy to remove, APEEL eliminates the need for rooftop cleaning upon project completion.



- Ideal for re-roofing, re-cover, and new construction projects
- Simple and easy to remove
- Film is 100% PVC and recyclable
- Saves time and money when compared to pressure washing
- Protecting from dirt maintains maximum membrane reflectivity

Installation

Simply order membrane with APEEL, install, and remove the film to reveal a clean, new roof.

- APEEL Protective film can be left in place for up to 90 days without affecting the integrity of the film
- After 30 days, membrane sections covered by APEEL should be cleaned with PVC/KEE HP membrane cleaner prior to welding
- Be sure to clean any excess cleaners, solvents, or adhesives spilled on APEEL protective film

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.

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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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 | N/A |
| ENERGY STAR – E-903 Solar Reflectance after 3 years | Solar Spectrum Reflectometer (Uncleaned) | pending | pending | pending | 0.63 | N/A |
| CRRC – Initial Solar Reflectance | ASTM C1549 | 0.59 | 0.74 | 0.72 | 0.86 | N/A |
| CRRC – Solar Reflectance after 3 years | ASTM C1549 (uncleaned) | 0.49* | 0.64* | 0.60* | 0.63 | N/A |
| CRRC – Initial Thermal Emittance | ASTM C1371 | 0.89 | 0.88 | 0.87 | 0.89 | N/A |
| CRRC – Thermal Emittance after 3 years | ASTM C1371 (uncleaned) | 0.86* | 0.89* | 0.86* | 0.87 | N/A |
| Solar Reflective Index (SRI) | ASTM E1980 | 70 | 90 | 88 | 108 | N/A |
| Solar Reflective Index (SRI) after 3 years | ASTM E1980 | 56* | 77* | 71* | 75 | N/A |

* 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: N/A |



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WB-2610 - "PVC Membrane Technical Data Bulletin"

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