WeatherBond **EPDM**

Reinforced Membrane

Overview

WeatherBond's polyester-reinforced EPDM roof membranes are available in thicknesses of 45-mil (1.14 mm), 60-mil (1.52 mm), and 75-mil (1.9 mm). Standard sheet size is 10' x 100' (3 m x 30 m). WeatherBond offers 6.5' (1.98 m) wide sheets, ideal for use as perimeter sheets and to achieve certain uplift ratings, in 45- and 60-mil thicknesses. WeatherBond membranes are formulated with fire retardants to inhibit spread of flame and meet or exceed UL Class A requirements for slopes up to 3" (76.2 mm), depending on the assembly.

Features and Benefits

- Internally reinforced sheets provide excellent resistance to punctures, tears and scuffs
- Industry-leading resistance to outdoor weathering with 35,320 kJ/m^2 total radiant exposure without cracking or crazing
- Pre-Applied Seam Tape Technology and full line of Peel & Stick flashing accessories greatly enhance workmanship quality
- Dark-colored EPDM is the smart choice in colder climates:
  - Reduces heating costs, which are generally 5 times greater than air conditioning costs
  - Reduces carbon footprint by lowering heating costs
  - Reduces safety hazard from snow and ice accumulation
  - Reduces hazardous conditions from frost, dew and ice
  - Reduces potential condensation problems
- Lifecycle Assessment using EPA's TRACI model analyzed EPDM, TPO, PVC and Modified-Bitumen
  - EPDM had the lowest Global Warming Potential
  - EPDM had the lowest Acid Rain impact
  - EPDM had the lowest contribution to smog
- Numerous studies and real-world experience confirm that EPDM's elongation and weathering resistance result in superior hail damage resistance; UL 2218 Class 4 Rating
- EPDM is the most dimensionally stable heat-resistant membrane and stays flexible even in extremely cold conditions
- Extruded manufacturing technology results in seamless sheets that are UL and FM approved
- WeatherBond manufactures all the major components of a typical roofing system including membrane, flashings, tapes, adhesives, sealants, insulations and insulating cover boards

WeatherBond's Pre-Applied Seam Tape Technology

With WeatherBond's Pre-Applied Seam Technology, most of the labor to create seams between membrane panels is completed in a quality-controlled, state-of-the-art environment. This process results in a reliable seam with greater peel and shear strengths and no entrapped air bubbles. Consistent placement of the Pre-Applied Seam Tape maximizes the splice area and results in a high-quality seam. Pre-Applied Seam Tape has a shelf life of one year. WeatherBond's Pre-Applied Seam Tape is available on all WeatherBond EPDM membranes up to 10' (3 m) in width, providing the fastest way to complete a seam in today's roofing market.

Reinforced EPDM

Compared to non-reinforced membranes, WeatherBond Reinforced EPDM offers up to 60% greater resistance to punctures (as measured by ASTM D5635 and Federal Method 2031). Reinforced EPDM features dual-ply construction that makes it resistant to the cuts, tears, and scuffs that can be caused by maintenance traffic.

Installation

WeatherBond Reinforced 45-mil (1.14 mm), 60-mil (1.52 mm) and 75-mil (1.9 mm)-thick reinforced EPDM membranes are utilized in Mechanically Attached and Fully Adhered Roofing Systems.

Mechanically Attached and Metal Retrofit Roofing Systems: Insulation is mechanically attached to the roof deck and membrane is secured with seam fastening plates or bars and fasteners. To complete seams between two adjoining membrane panels, apply primer to the splice area in conjunction with WeatherBond's Pre-Applied Seam Tape. As an alternative, WeatherBond's hand-applied P&S (Peel & Stick) Seam Tape may be used.

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ROOFING SYSTEMS

Fully Adhered Roofing System: Insulation is mechanically attached or adhered to the roof deck. The substrate and membrane are coated with WeatherBond's EPDM Bonding Adhesive. The membrane is then rolled into place and broomed down. To complete seams between two adjoining membrane panels, apply primer to the splice area in conjunction with WeatherBond's primer and Pre-Applied Seam Tape. As an alternative, WeatherBond's hand-applied P&S Seam Tape may be used.

Follow these steps for cold weather splicing below 40°F (5°C):

- Heat the primed area of the bottom membrane with a hot-air gun as the top sheet with Pre-Applied Seam Tape is applied and pressed into place.
- Prior to rolling the splice area with a 2"-wide steel hand roller, apply heat to the top side of the membrane with a hot-air gun. The heated surface should be hot to the touch. Be careful not to burn or blister the membrane.

REVIEW CURRENT WEATHERBOND INSTALLATION INSTRUCTIONS FOR SPECIFIC INSTALLATION REQUIREMENTS.

Precautions

1. Use proper stacking procedures to ensure sufficient stability of the materials.
2. Exercise caution when walking on a wet membrane. Membranes are slippery when wet.
3. Membranes with Pre-Applied Tape should not be exposed to prolonged jobsite storage temperatures in excess of 90°F (32°C), otherwise the shelf life of the Pre-Applied Tape may be affected
4. When membranes with Pre-Applied Tape are used, shade the tape end of the rolls until ready to use in warm, sunny weather.

LEED® Information

Pre-consumer Recycled Content	0%
Post-consumer Recycled Content	0%
Manufacturing Location(s)	Carlisle, PA
Solar Reflectance Index	9

Typical Properties and Characteristics

Property	Test Method	SPEC. (Pass)	Typical
Tolerance on nominal thickness, %	ASTM D751	± 10	± 10
Thickness over scrim, min, in. (mm) .045 .060 .075	ASTM D4637 Annex	 0.015 (0.381)	 0.016 (0.406) 0.020 (0.508) 0.032 (0.81)
Weight, lbs/ft² (kg/m²) .045 .060 .075			 0.27 (1.3) 0.39 (1.9) 0.48 (2.3)
Breaking strength, min, lbf (N) .045/0.60 .075	ASTM D751 Grab Method	90 (400)	210 (930)
Elongation, Ultimate, min, % .045/0.60 .075	ASTM D412 (Die C)	250**	480** 500**
Tearing Strength, min, lbf (N) .045/0.60 .075	ASTM D715 B Tongue Tear	10 (45)	70 (311) 70 (311)
Brittleness Point, max, °F (°C)*	ASTM D2137	-49 (-45)	-49 (-45)
Resistance to Heat Aging* Properties after 4 weeks @ 240°F (116°C) Breaking strength, min, lbf (N) Elongation, Ultimate, min, % Linear Dimensional Change, max, %	ASTM D573 ASTM D751 ASTM D412 Die C ASTM D1204	 80 (355) 200** ±1.0	 250 (1,110) 250** -1.0
Ozone Resistance* Condition after exposure to 100 pphm Ozone in air for 168 hours @ 104°F (40°C) Specimen wrapped around 3 in. mandrel	ASTM D1149	No Cracks	No Cracks
Resistance to Water Absorption* After 7 days immersion @ 158°F (70°C) Change in mass, max, %	ASTM D471	 +8, -2**	 5.5**
Water Vapor Permeance* Max, perms	ASTM E96 (Proc. B or BW)	0.10	0.02
Factory Seam Strength, min	ASTM D816 Modified	Membrane Rupture	Membrane Rupture
Fungi Resistance	ASTM G1	N/A	0 (no Growth)
Resistance to Outdoor (Ultraviolet) Weathering* Xenon-Arc, total radiant exposure at 0.70 W/m² irradiance, 80°C black panel temp.	ASTM D4537 Conditions	No Cracks No Crazing 7,560 kJ/m² 3,000 hrs	No Cracks No Crazing 35,320 kJ/m² 14,000 hrs
At 0.35 W/m² irradiance, 80°C black panel temperature		6,000 hrs	28,000 hrs

* Not a Quality Control Test due to the time required for the test or the complexity of the test. However, all tests are run on a statistical basis to ensure overall long-term performance of the sheeting.

** Specimens to be prepared from coating rubber compound, vulcanized in a similar method to the reinforced product.

Note: WeatherBond Reinforced EPDM membrane meets or exceeds the minimum requirements set forth by ASTM D4637 for Type II reinforced EPDM single-ply roofing membranes.

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.

WEATHERBOND
ROOFING SYSTEMS
Single-Ply Simplified

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