WeatherBond **EPDM**

Black 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 5' (1.5 m) and 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 EPDM membranes are formulated with fire retardants to inhibit the 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

- 60% greater resistance to punctures (as measured by ASTM D5635 and Federal Method 2031) compared to non-reinforced membranes
- Internally reinforced sheets provide excellent resistance to punctures, tears, and scuffs that can be caused by maintenance traffic, backed by the industry's longest puncture warranty
- Pre-Applied Seam Tape Seam Technology and full line of Peel & Stick flashing accessories enhance workmanship quality
- Numerous studies and real-world experience confirm that EPDM's elongation and weathering resistance provide 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 Classified 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

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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.

- WeatherBond's EPDM has over 60 years of proven performance and industry-leading weathering resistance (35,320 kJ/m^2 total radiant exposure without cracking or crazing)
- Dark-colored EPDM is the smart choice in colder climates:
  - Reduces heating costs, which are generally 3 – 5 times greater than air conditioning costs
  - Reduces carbon footprint by lowering heating costs
  - Reduces safety hazards caused by snow and ice accumulation
  - Reduces hazardous conditions caused by frost, dew, and ice
  - Reduces the potential for condensation problems
- Life Cycle 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
  - Utilizes 5% post- and 5% pre-consumer recycled material resulting in:

Over 62,000	**98% less**	**61% less**	**97% less**
used tires out of landfills annually	water used	electricity used	CO_2 used

When compared to manufacturing with virgin material

WeatherBond's Pre-Applied Seam Tape Technology

With WeatherBond's patented Pre-Applied Seam Tape 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 no entrapped air bubbles. Consistent placement of the Pre-Applied Seam Tape also maximizes the splice area resulting in a high-quality seam.

Installation

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

Mechanically Attached and Metal Retrofit Roofing Systems: insulation is mechanically fastened 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 or WeatherBond's hand-applied P&S (Peel & Stick) Seam Tape. Sheet flutter/noise may occur on mechanically fastened systems.

Fully Adhered Roofing Systems: insulation is mechanically attached or adhered to the roof deck. The substrate and membrane are coated with the appropriate WeatherBond 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 Pre-Applied Seam Tape or WeatherBond's hand-applied P&S Seam Tape.

Follow these steps for splicing in temperatures 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 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 in warm, sunny weather, shade the tape end of the rolls until ready to use.
5. Peel & Stick Tape has a shelf life of one year.

LEED® Information

Pre-consumer Recycled Content	5%
Post-consumer Recycled Content	5%
Manufacturing Location	Carlisle, PA
Solar Reflectance Index	9
Corporate Sustainability Report	Yes

Typical Properties and Characteristics (WeatherBond Standard and Reinforced EPDM)

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/.060 .075	ASTM D751 Grab Method	 90 (400)	 210 (930)
Elongation, Ultimate, min, % .045/.060 .075	ASTM D412 (Die C)	 250**	 480** 500**
Tearing Strength, min, lbf (N) .045/.060 .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*	ASTM D573		
Properties after 4 weeks @ 240°F (116°C)			
Breaking strength, min, lbf (N)	ASTM D751	80 (355)	250 (1,110)
Elongation, Ultimate, min, %	ASTM D412 (Die C)	200**	250**
Linear Dimensional Change, max, %	ASTM D1204	±1.0	-1.0
Ozone Resistance*	ASTM D1149	No Cracks	No Cracks
Condition after exposure to 100 pphm Ozone in air for 168 hours @ 104°F (40°C) Specimen wrapped around 3 in. mandrel			
Fungi Resistance	ASTM G21	N/A	0 (No Growth)
Resistance to Water Absorption*	ASTM D471		
After 7 days immersion @ 158°F (70°C)			
Change in mass, max, %		+8, -2**	5.5**
Water Vapor Permeance*	ASTM E96	0.10	0.02
Max, perms	(Proc. B or BW)		
Resistance to Outdoor (Ultraviolet) Weathering* Xenon-Arc, total radiant exposure at 0.70 W/m² irradiance, 80°C black panel temp.	ASTM G155	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 D 4637 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.

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Single-Ply Simplified

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