

# VersiFleece® EPDM Membranes

## with Quick-Applied Tape (QAT) Seam Technology



### Overview

VersiFleece EPDM membranes are manufactured using a patented hot-melt adhesive technology to bond a fleece backing to the EPDM sheeting. VersiFleece EPDM membranes are available in total sheet thicknesses of 100-, 115-, and 145 mils and are manufactured with 3" or 6" Quick-Applied (QA) Seam Tape to ensure consistent, quality seams. Versico's VersiFleece EPDM is tough, durable and versatile and is ideal for re-roofing or new construction projects.

### Features and Benefits

- UL Class A rated
- Choice of VersiGard® Black or VersiGard White EPDM membranes
- Superior wind uplift performance and ratings (up to an FM 1-90) due to a mechanical bond between fleece and adhesive
- Fleece reinforcement adds toughness, durability and enhanced puncture resistance
  - 100-mil delivers 40% greater puncture resistance and 180% greater tear resistance than 60-mil EPDM
  - Better puncture resistance than modified bitumen
- 67% fewer seams than Modified Bitumen when 10' VersiFleece sheets are used
- QAT provides consistent seam quality and enhances productivity
- Excellent hail damage resistance
  - Passes FM's severe hail test
  - Passes UL-2218 Class 4 rating
  - Passes National Bureau of Standards – 23 Ice Ball test up to 3" diameter hail with the membrane cooled to 32°F

### Installation

**Adhered Roofing System** - Insulation is mechanically fastened or adhered with Flexible DASH™ Adhesive to the roof deck. When adhering insulation with Flexible DASH Adhesive, spray-apply, splatter, or extrude the adhesive onto the substrate and allow to rise and foam. Once adhesive develops string/body/gel (approximately 2 minutes depending on climate), place insulation into the adhesive and walk it in. Roll the insulation with a 30"-wide, 150-pound segmented weighted roller to ensure full embedment. Spray-apply, splatter, or extrude Flexible DASH Adhesive to the membrane and allow foam to develop string/body/gel (approximately 2 minutes depending on climate) prior to setting VersiFleece into the adhesive. Roll VersiFleece membrane with a 30"-wide, 150-pound segmented weighted roller to ensure full embedment. Splices are sealed with Versico's QAT Seam technology. End laps are butted and sealed with Quick-Applied Cured Cover Strip (for black membrane) or Peel & Stick Cured Cover Strip (for white membrane) or Overlayment Strip.

When the completion of flashings and terminations is not possible by the end of each work day, provisions must be taken to temporarily close the membrane to prevent water infiltration.

REVIEW CURRENT VERSICO SPECIFICATIONS AND DETAILS FOR SPECIFIC INSTALLATION REQUIREMENTS.



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### Splicing

1. Roller-apply V-150 Primer or Low-VOC EPDM Primer to the splice area of the bottom sheet with a short nap-length paint roller. The primed area will be free of globs and puddles. Allow primer to dry until it does not transfer to a dry finger.
2. Allow the taped edge of the top sheet to fall freely onto the primed sheet below.
3. Pull the poly backing from the QAT beneath the top sheet and allow the top sheet to fall freely onto the exposed primed surface.
4. Press top sheet on to the bottom sheet using firm, even hand pressure across the splice towards the splice edge.
5. Immediately roll the splice with a 2" (50 mm) wide steel roller or Versico's Stand-Up Seam Roller, using positive pressure. Roll across the splice edge when using a 2" roller, not parallel to it. When using the Stand-Up Seam Roller, roll parallel to the direction of the splice.
6. For cold weather splicing below 40°F (4°C), these steps must be followed:
  - Heat the primed area of the bottom membrane with a hot-air gun as the top sheet with QAT 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.
7. Install Quick-Applied Uncured EPDM Flashing or Quick-Applied T-Joint Covers over all field splice intersections. Apply Lap Sealant according to appropriate detail.

### Precautions

- UV-resistant sunglasses are required for white VersiFleece membranes.
- White surfaces reflect heat and may become slippery due to frost and ice accumulation. Exercise caution when walking on wet membrane.
- Care must be exercised when working close to a roof edge when the surrounding area is snow covered.
- VersiFleece membrane rolls must be tarped and elevated to keep dry prior to installation. If the fleece gets wet use a wet vac system to help remove moisture from the fleece. Do not install membrane if fleece gets wet.
- Prolonged jobsite storage at temperatures in excess of 90°F (32°C) may affect product shelf life.
- In warm, sunny weather, shade the tape end of the rolls until ready to use.

### Typical Properties and Characteristics

Physical Property	Test Method	VersiFleece White
CRRC initial solar reflectance	ASTM D1549	0.79
CRRC solar reflectance after 3 years	ASTM D1549 (uncleaned)	0.71
CRRC initial thermal emittance	ASTM C1371	0.86
CRRC thermal emittance after 3 years	ASTM C1371 (uncleaned)	0.89
LEED thermal emittance	ASTM E408	0.91
SRI (Solar Reflectance Index)	ASTM E1980 (initial) 3 year aged	98 87

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.

### LEED® Information

	VersiFleece Black	VersiFleece White
Pre-consumer Recycled Content	5%	0%
Post-consumer Recycled Content	0%	0%
Manufacturing Location	Carlisle, PA	Carlisle, PA
Solar Reflectance Index	0 – 1	98



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## Typical Properties and Characteristics

Property	Test Method	SPEC. (Pass)	VersiFleece EPDM Black	VersiFleece EPDM White
Tolerance on nominal thickness, %	ASTM D751	± 10	± 10	± 10
Thickness over Fleece, min 100-mil (2.54 mm) 115-mil (2.92 mm) 145-mil (3.68 mm)	ASTM D4637	.030 (.762) .045 (1.14) .080 (2.03)	.045 (1.14) .060 (1.52) .090 (2.28)	- .060 (1.52) .090 (2.28)
Weight, lbm/ft <sup>2</sup> (kg/m <sup>2</sup> ) 100-mil 115-mil 145-mil			0.29 (1.4) 0.38 (1.9) 0.59 (2.4)	- 0.42 (2.1) 0.63 (3.1)
Breaking strength, min, lbf (N) 100- & 115-mil 145-mil	ASTM D751 Grab Method	90 (400)	210 (934) 250 (1112)	210 (934) 235 (1045)
Air Permeance	ASTM E2178	(0.02 L/s*m <sup>2</sup> )	Pass	Pass
Elongation, Ultimate, min, %	ASTM D412	300**	480**	500**
Tearing Strength, min, lbf (N) 100- & 115-mil 145-mil	ASTM D751 B Tongue Tear	10 (45)	45 (200) 60 (266)	45 (200) 45 (200)
Puncture Resistance, Joules 100-mil 115-mil 145-mil	ASTM D5635		20 27.5 35	- 25 42.5
Puncture Resistance, lbf 100-mil 115-mil 145-mil	FTM 101C Method 2031		328 338 355	- 325 307
Puncture Resistance, lbf 100-mil 115-mil 145-mil	ASTM D120		18 22 28	17 19 22
Puncture Resistance, lbf 100-mil 115-mil 145-mil	ASTM D5602		63.99 63.99 63.99	- 63.99 63.99
Hail Resistance 100-mil 115-mil 145-mil	UL 2218 Over Iso HP Rec. Bd. Gypsum Bd.	Class 4 Rating 2" Steel Ball at 20'	Pass Pass Pass	Pass Pass Pass
Brittleness point, max, °F (°C)	ASTM D2137	-49 (-45)	-67 (-55)	-67 (-55)



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## Typical Properties and Characteristics

Property	Test Method	SPEC. (Pass)	VersiFleece EPDM Black	VersiFleece EPDM White
Resistance to heat aging* Properties after 4 weeks @ 240°F (116°C) for black EPDM 1 week @ 240°F (116°C) for white EPDM	ASTM D573			
Breaking strength, min, lbf (N) Elongation, Ultimate, min, % Linear Dimensional Change, max, %	ASTM D751 ASTM D412 ASTM D1204	80 (355) 200** ± 1.0	200 (890) 225** -0.7	200 (890) 250** -0.7
Ozone Resistance* Condition after exposure to 100 pphm Ozone in air for 168 hours @ 104°F (40°C) Specimen wrapped around 3-inch (7.5 cm) mandrel	ASTM D1149	No Cracks	No Cracks	No Cracks
Resistance to Water Absorption* After 7 days immersion @ 158°F (70°C) Change in mass, max, %	ASTM D471	+8, -2**	+2.0**	+3.6**
Resistance to Outdoor (Ultraviolet) Weathering* Xenon-Arc, total radiant exposure at 0.70 W/m <sup>2</sup> irradiance, 80°C black panel temp.	ASTM G155 ASTM D4637 Conditions	No Cracks No Cracking 7,560 kJ/m <sup>2</sup> 3,000 hrs	No Cracks No Cracking 41,580 kJ/m <sup>2</sup> 16,500 hrs	No Cracks No Cracking 25,200 kJ/m <sup>2</sup> 10,000 hrs

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VersiFleece EPDM membranes meet or exceed the minimum requirements set forth by ASTM D4637 for Type III fabric-backed EPDM Single-ply roofing membranes.

\* 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.



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