



PVC FLEECE BACK MEMBRANE

PRODUCT DESCRIPTION

Revision Date: Sept 2020

Mule-Hide's PVC Fleece Back polyester reinforced membrane is tough, durable, and versatile, making it ideal for a wide variety of re-roofing and new construction projects. Manufactured using a hot-melt extrusion process for complete scrim encapsulation, this product is available in total sheet thicknesses of 115, and 135 mils.

PVC Fleece Back polyester reinforced membrane offers exceptional weatherability, flexibility, and toughness due to its polyester reinforcing scrim and polyester fleece backing. The polyester reinforcing scrim provides the sheet with added breaking strength, tear strength and puncture resistance for fully adhered or mechanically attached applications; the fleece backing adds to the puncture-resistance of the membrane and provides a built-in separation layer against rough concrete decks or existing asphaltic-based roofing systems. Years of proven PVC formulation performance helps to ensure the membrane remains pliable and weldable as it ages.



FEATURES AND BENEFITS

- Available in white, gray, and tan and offered in 60-mil (115) and 80-mil (135) membrane thicknesses
- Roll Sizes: 60mil = 10' x 100', 80-mil = 10' x 75'
- Provides superior wind uplift performance due to a mechanical bond between the fleece and adhesive
- Labor-saving 10'-wide sheets result in 67% fewer seams than a modified bitumen system of comparable size
- Polyester reinforcing scrim provides exceptional puncture strength
- Low-volatility plasticizer in proven performance PVC formulation
- Good chemical resistance to acids, bases, restaurant oils, fats, greases, and acid rain
- ENERGY STAR®-qualified, California Title 24 compliant, can contribute to LEED® (Leadership in Energy and Environmental Design) credits.

INSTALLATION

Mechanically Attached Roofing System

The mechanically fastened system starts with approved insulation being fastened with a minimum of 5 fasteners per 4' x 8' board. The PVC Fleece Back membrane is then mechanically fastened to the deck using HPD (#14) Fasteners and 2.4" Seam Plates or EHD (#15) Fasteners and 2.4" Seam Plates. Adjoining sheets of PVC Fleece Back membrane are overlapped over the fasteners and plates and joined together with a minimum 1½"-wide hot-air weld.

Adhered Roofing System – Low Rise Foam

Insulation is mechanically fastened or adhered with Helix Low Rise Foam Adhesive to the roof deck. Apply adhesive onto the substrate as beads and allow foam to rise approximately 1 minute. Adhesive should rise about ½" and still be tacky. Roll PVC Fleece Back membrane into the adhesive. Roll PVC Fleece Back membrane with a 30"-wide, 150-pound (68 kg) segmented weighted roller to ensure full embedment. Splices are hot-air welded.

Adhered Roofing System – Water Based

The fully adhered system starts with a suitable surface on which to apply the HydroBond™ Water-Based Adhesive.

HydroBond can be applied to the approved substrate with a medium nap roller. Once the adhesive has been applied, roll the membrane in place.

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Adhered Roofing System – Water Based (continued)

To prevent over-drying, Mule-Hide recommends applying the adhesive 3'-4' at a time ahead of the roll. Immediately broom the membrane starting from the center and working out to the sides of the sheet using a soft bristle push broom to work out any air bubbles. Immediately after brooming, roll the adhered membrane in two directions in a crossways pattern using a minimum 150-lb (68 kg) segmented membrane roller.

Review Mule-Hide specifications and details for complete installation information.

SUPPLEMENTAL STATEMENTS

PVC Fleece Back Polyester Reinforced membranes meet or exceed the requirements of ASTM D4434 Standard Specification for Poly (Vinyl Chloride) Sheet Roofing. PVC Fleece Back is classified as Type III or Type IV as defined by ASTM D4434.

PRECAUTIONS

- Use proper stacking procedures to ensure sufficient stability of the materials.
- Exercise caution when walking on wet membrane; membranes may be slippery when wet.
- Sunglasses which filter out ultraviolet light are strongly recommended since white surfaces are highly reflective to sunlight. Roofing technicians should dress appropriately and wear sunscreen.
- White surfaces reflect heat and may become slippery due to frost and ice accumulation.
- Care must be exercised when working close to a roof edge, particularly when the surrounding area is snow-covered, as the roof edge may not be clearly visible.
- Fleece Back membrane rolls must be tarped and elevated to keep them dry prior to installation. If the fleece gets wet, use a wet vac system to help remove moisture from the fleece.
- PVC membrane that has been exposed to the weather must be prepared with Mule-Hide PVC Weathered Membrane Cleaner prior to hot-air welding.

Radiative Properties for ENERGY STAR [®] *, Cool Roof Rating Council (CRRC) and LEED				
DESCRIPTION	TEST METHOD	WHITE PVC	TAN PVC	GRAY PVC
ENERGY STAR [®] E-903 initial solar reflectance	Solar Spectrum Reflectometer	0.86	0.73	0.59
ENERGY STAR [®] E-903 solar reflectance after 3 yrs	Solar Spectrum Reflectometer (uncleaned)	0.63	pending	pending
CRRC initial solar reflectance	ASTM C1549	0.86	0.72	0.59
CRRC solar reflectance after 3 years	ASTM C1549 (uncleaned)	0.63	0.60*	0.49*
CRRC initial thermal emittance	ASTMC1371	0.89	0.87	0.89
CRRC thermal emittance after 3 years	ASTM C1371 (uncleaned)	0.87	0.86*	0.86*
Solar Reflectance Index (SRI)	ASTM E1980	108	88	70
CRRC SRI (Solar Reflectance Index - 3 yrs)	ASTM E1980	75	71*	56*

*Rapid Ratings

LEED Information	
Pre-consumer Recycled Content	10%
Post-consumer Recycled Content	0%
Manufacturing Location	Greenville, IL
Solar Reflectance Index (SRI)	White: 108, Tan: 89, Gray: 69

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TYPICAL PHYSICAL PROPERTIES

Physical Property*	ASTM D4434 Requirement	60-mil (115- mil)	80-mil (135- mil)
Thickness over fleece	No Requirement	60-mil	80-mil
Thickness over scrim, in. (mm) ASTM D4434 optical method, ave of 3	0.016 min (0.40)	0.027 typ (0.686)	0.037 typ (0.940)
Breaking Strength (MD x CD), lbf/in (N) ASTM D751 grab method	200 min (890)	420 X 380 (73 x 66)	450 x 410 (79 x 72)
Weight, lbs/ft ² (kg/m ²)	No Requirement	0.45	0.59
Elongation break of reinforcement (MD x CD) % ASTM D751 grab method	15 min	30 x 30	30 x 30
Tearing Strength (MD x CD), lbf (N) ASTM D751 proc. B, 8" x 8"	45 (200)	150 x 130 (667 x 578)	160 x 160 (711 x 711)
Low Temperature Bend, no cracks @5x @ -40°F (-40°C), ASTM D2136	PASS	PASS	PASS
Linear Dimensional Change % ASTM D1204, 6 hours @ 176° F (80° C)	±0.5 max	0.4 typ	0.4 typ
Water absorption resistance, mass % ASTM D570 166 hrs @ 158° F (70° C)	±3.0 max	2.0 typ	2.0 typ
Puncture resistance Dynamic, J (ft-lb) ASTM D5635 Static, lbf (N) ASTM D5602	20 (14.7) 33 (145)	PASS PASS	PASS PASS
Properties after heat aging ASTM D3045, 56 days @ 176°F Breaking strength % retained Elongation rein., % retained	90 min 90 min	90 min 90 min	90 min 90 min
Xenon-Arc Resistance, no cracks or 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 hrs	PASS	PASS	PASS
*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.			

PROTECTION & SAFETY

Mule-Hide maintains Safety Data Sheets on all of its non-exempt products. Safety Data Sheets contain health and safety information for your development of appropriate product handling procedures to protect your employees and customers. Mule-Hide's Safety Data Sheets should be read and understood by all of your supervisory personnel and employees before using Mule-Hide products in your facilities.

ADDITIONAL INFORMATION

The information given on this PDS is subject to change without notice. Always check the Mule-Hide website at www.mulehide.com for the latest information, changes and updates or contact Mule-Hide Products Company at 800-786-1492.

DISCLAIMER

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