

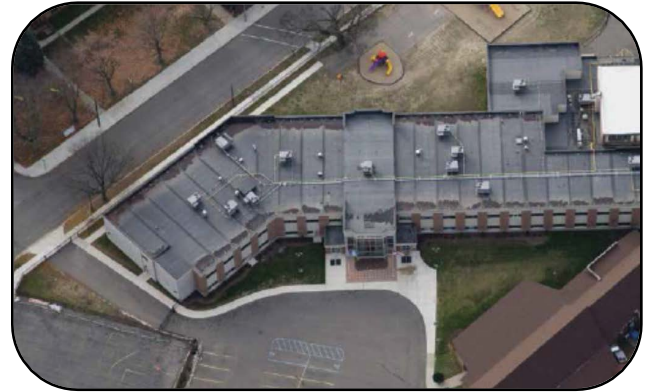


# Product Data Sheet

## MULE-HIDE STANDARD REINFORCED AND FR REINFORCED EPDM MEMBRANE

### PRODUCT DESCRIPTION

Mule-Hide Standard Reinforced EPDM is a high performance, polyester reinforced membrane that stands up to tearing, impacts, punctures and normal roof traffic. The elastomeric properties of the EPDM membrane compensate for thermal shock and building movement. EPDM membranes provide excellent resistance to ozone and aging. The membrane is manufactured in accordance with the guidelines established by the RMA (Rubber Manufacturers Association) and meets or exceeds the ASTM Standard Specification D 4637, Type II. Also available as a Fire retardant (FR) membrane that is specially formulated to inhibit spread of flame and meet or exceed code body testing criteria for fire retardant roofing membranes.



Mule-Hide STANDARD REINFORCED and FR REINFORCED EPDM membranes are available with in-seam tape that is pre-applied to the sheet. See below for sizes available.

### BASIC USES

The Standard Reinforced and FR Reinforced EPDM membrane is used in mechanically attached and fully adhered roofing systems in new construction, reroofing and recover (retrofit) applications. It may also be used as flexible membrane flashings for walls, curbs, etc, when installing an EPDM membrane roofing systems. The system must be installed over acceptable roof insulation or other suitable substrate. See the Mule-Hide EPDM Specifications Manual for complete specifications and details.

### SPECIFICATIONS

Physical Properties*	Test Method	SPEC. (Pass)	Typical Standard
Tolerance on Nominal Thickness, %	ASTM D 751	± 10	± 10
Thickness Over Scrim, min, in.(mm) .045 .060 .075	ASTM D 4637 Annex	0.015 (0.381)	0.016 (0.406) 0.020 (0.508) 0.032 (0.810)
Weight, lbm/ft <sup>2</sup> (kg/m <sup>2</sup> ) .045 .060 .075			0.27 (1.3) 0.39 (1.9) 0.48 (2.3)
Elongation, Ultimate, min, % .045 & .060 .075	ASTM D 412 Die C	250**	480*** 500***
Tear Strength min, lbf (N) .045, .060 & .075	ASTM D 751 B Tongue Tear	10 (45)	70 (311)
Breaking Strength, min, lbf(N) .045, .060 .075	ASTM D 751 (Grab Method)	90(400)	140(623) 177 (787)
Factory Seam Strength, min.	ASTM D 816 (Modified)	Membrane Rupture	Membrane Rupture
Brittleness point, max, deg.F (deg.C)*	ASTM D 2137	-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 D 573  ASTM D 751 ASTM D 412 Die C ASTM D 1204	80(355) 200** ± 1.0	182 (823) 250** -1.0

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## SPECIFICATIONS - Continued

Ozone Resistance** Conditions after exposure 100 pphm Ozone in air for 168 hrs @ 104oF(40oC) Specimen wrapped around 3 inch mandrel	ASTM D 1149	No Cracks	No Cracks
Resistance to Water Absorption* After 7 days immersion @ 158oF (70oC), Change in mass, max, %	ASTM D 471	+8, -2**	5.5**
Resistance to Outdoor (Ultraviolet) Weathering - Xenon-Arc, exposure, 0.70 W/m <sup>2</sup> irradiance, 176°F (80°C) black panel temperature	ASTM G 155	No Cracks No Cracking 7,560 kJ/m <sup>2</sup> 3,000 hours	No Cracks No Cracking 33,320 kJ/m <sup>2</sup> 14,000 hours
At 0.35 W/m <sup>2</sup> irradiance, 176°F (80°C) black panel temperature		6,000 hours	28,000 hours
Fungi Resistance	ASTM G21	N/A	0 (no growth)
*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.			
*Not a Quality Control Test due to the time required for the test or the complexity of the test. However, all tests 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.			

LEED Information	
Pre-consumer Recycled Content	5%
Post-consumer Recycled Content	0%
Manufacturing Location	Carlisle, PA or Greenville, IL
Solar Reflectance Index (SRI)	9

## PACKAGING

Mule-Hide Standard Reinforced and FR Reinforced EPDM Membranes (with and with-out tape) are available in a variety of sizes with widths up to 10' and lengths up to 100' long. Contact Mule-Hide Products for available roll sizes.

## BENEFITS & SUPPLEMENTAL STATEMENTS

- Can be installed over a variety of roof decks
- Outstanding weatherability
- Sheets can be pre-taped for labor savings and consistent seam placement
- Requires no special equipment to install
- Available as a lightweight system
- Full line of pre-taped accessories available

## CODE APPROVALS/COMPLIANCE

A variety of Factory Mutual Ratings and Underwriter Laboratory Classifications are available. Contact Mule-Hide Technical Department for additional information. Meets or exceeds ASTM D4637, Type II for reinforced EPDM single-ply membranes.

## INSTALLATION INSTRUCTIONS

- 1) Approved insulation shall be attached to the roof deck with an approved insulation adhesive or approved fasteners and plates. Install insulation with its largest dimension perpendicular to the direction of the membrane seams where possible.

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## **INSTALLATION INSTRUCTIONS - Continued**

- 2) Mechanically Attached Roofing System
  - a) Perimeter sheets to be installed in an approved pattern along all exterior roof edges.
  - b) Mechanical fasteners and plates are installed in the seams of both the perimeter sheets and field sheets and into the roof deck. Use approved fasteners and maintain proper penetration for specific roof deck.
- 3) Fully Adhered Roofing System
  - a) Perimeter sheets are not required.
  - b) The membrane is required to be mechanically attached at the base of all vertical surfaces, roof edges, and angle changes.
  - c) The field of the roof is fully adhered to the substrate with Mule-Hide membrane adhesive.
- 4) All seams are made with Mule-Hide Tape Primer and In-Seam Tape.
- 5) All details will be done in accordance with Mule-Hide details.
- 6) On projects where a Mule-Hide Standard or Premium Warranty is requested, an authorized Mule-Hide representative shall inspect all completed work. This is only a brief summary and not the complete specification. Mule-Hide Specifications, Details, Technical Bulletins, and associated documents should be thoroughly reviewed prior to starting any project. Contact Mule-Hide Products for additional information.

## **PRECAUTIONS**

- Use proper stacking procedures to ensure sufficient stability of the materials.
- Surfaces may be slippery when wet, or due to frost and ice build-up. Exercise caution to prevent falls.
- Exercise care when working near edge of roof.
- Store Mule-Hide membrane in original wrappings in a cool, shaded area. Cover with light colored, breathable, waterproof tarpaulins.
- Pre-Taped membranes should not be exposed to prolonged jobsite storage temperatures in excess of 90°F (32°C), otherwise the shelf life of the Pre-Tape may be affected.
- When using pre-taped membranes in warm, sunny weather, shade the tape end of the rolls until ready to use.

## **STORAGE & HANDLING**

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- When using pre-taped membranes in warm, sunny weather, shade the tape end of the rolls until ready to use.
- Mule-Hide Pre-Tape has a shelf life of one year.

## **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](http://www.mulehide.com) for the latest information, changes and updates or contact Mule-Hide Products Company at 800-786-1492.

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## **DISCLAIMER**

The statements provided concerning the material shown are intended as a guide for material usage and are believed to be true and accurate at the time of printing. No statement made by anyone may supersede this information, except when done in writing by Mule-Hide Products Co., Inc. Since the manner of use is beyond our control, Mule-Hide does not authorize anyone to make any warranty of merchantability or fitness for any particular purpose or any other warranty, guarantee or representation, expressed or implied, concerning this material. This product may be eligible for a Mule-Hide warranty, please check the Mule-Hide website at [www.mulehide.com](http://www.mulehide.com) or contact Mule-Hide directly at 800-786-1492 for details. Buyer and user accept the product under these conditions and assume the risk of any failure, any injury person or property (including that of the user), loss or liability resulting from the handling, storage or use of the product whether or not it is handled, stored or used in accordance with the directions or specifications. Mule-Hide must be notified in writing of any claims and be given the opportunity to inspect the alleged failure before repairs are made.