FR 60- and 90-mil EPDM Membrane

Pre-Cleaned

PRODUCT DATA SHEET

DESCRIPTION

MuleHide 60- and 90-mil thick FR EPDM membranes (pre-cleaned) are high-performance non-reinforced membranes that stand 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 D4637.

Fire Retardant (FR) EPDM membranes are specially formulated to inhibit spread of flame and meet or exceed code body testing criteria for fire-retardant roofing membranes.

MuleHide EPDM (Pre-Cleaned) membranes are available with in-seam tape that is pre-applied to the sheet.

BASIC USES

Can be used as an elastomeric single-ply roofing membrane for new construction and re-roofing applications. Pre-cleaned 60- and 90-mil membranes are used primarily in fully adhered roofing systems, but can also be ballasted.

BENEFITS AND 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.

PACKAGING

MuleHide 60- and 90-mil FR EPDM membranes (with and without tape) are available in a variety of sheet sizes with widths up to 40' and lengths up to 100' long.

CODE APPROVALS AND COMPLIANCE

A variety of Factory Mutual ratings, Underwriters Laboratories classifications and Miami-Dade approvals are available. Contact the MuleHide Warranty Department for additional information. Meets or exceeds requirements of ASTM D4637 for Type 1 non-reinforced EPDM single-ply roofing membranes.

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

INSTALLATION INSTRUCTIONS

1. Fully Adhered Roofing System
   a. Approved insulation shall be attached to the roof deck with an approved insulation adhesive or approved fasteners and plates.
   b. The field of the roof is fully adhered to the substrate with MuleHide membrane adhesive.
2. Ballasted Roofing System
   a. Approved insulation to be loosely laid to the deck.
   b. Roofing membrane is loosely laid over insulation and ballasted with washed river rock or pavers.
3. The membrane is required to be mechanically attached at the base of all vertical surfaces, roof edges, and angle changes greater than 2:12.
4. All seams are to be constructed with seam tape and tape primer, and checked for voids.
5. All details will be done in accordance with MuleHide details.
6. On projects where a MuleHide standard or premium warranty is requested, an authorized MuleHide representative shall inspect all completed work. This is only a brief summary and not the complete specification. The MuleHide specifications, details, technical bulletins, and associated documents should be thoroughly reviewed prior to starting any project. Contact MuleHide for additional information.

STORAGE AND HANDLING

- 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 MuleHide 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 90ºF (32ºC), 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.
- MuleHide pre-tape has a shelf life of one year.

FR 60- and 90-mil EPDM Membrane

Pre-Cleaned

PRODUCT DATA SHEET

PROTECTION & SAFETY

MuleHide 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. MuleHide's safety data sheets should be read and understood by all of your supervisory personnel and employees before using MuleHide products in your facilities.

ADDITIONAL INFORMATION

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

TYPICAL PROPERTIES AND CHARACTERISTICS			
Physical Property	**Test Method**	**Specification**	**Typical**
Tolerance on nominal thickness, %	ASTM D412	±10	±10
Weight, lbm/ft² (kg/m²) 60-mil 90-mil	–	–	 0.35 (1.7) 0.59 (2.9)
Tensile Strength, min, psi (Mpa)	ASTM D412	1305 (9)	1600 (11)
Elongation, ultimate, min, %	ASTM D412	300	465
Tear strength, min, lbf/in (kN/m) - (Die C)	ASTM D751	150 (26.3)	200 (35.0)
Factory Seam Strength, min	ASTM D816 (modified)	Membrane Rupture	Membrane Rupture
Brittleness Temp., max °F (°C)	ASTM D746	-49 (-45)	-49 (-45)
Resistance to heat aging* Properties after 4 weeks @ 240°F (116° C) Tensile Strength, min psi (MPa) Elongation, Ultimate, min, % Tear Resistance, min, lbf/in (kN/m) Linear Dimensional Change, max, %	ASTM D573 ASTM D412 ASTM D412 ASTM D624 ASTM D1204	 1205 (8.3) 200 125 (21.9) ±1	 1450 (10.0) 280 215 (37.6) -0.5
Ozone resistance** Condition after exposure to 100 pphm Ozone in air for 168 hrs @ 104°F (40°C) Specimen is at 50% strain	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	+2.0
Water Vapor Permeability* MAX. perm mils	ASTM E96 (Proc. B or BW)	0.10	0.03
Flexibility/Torsion DMA @ -40°F	ASTM D5279	N/A	225 MPa
Resistance to Outdoor (Ultraviolet) Weathering Xenon-Arc, total irradiate exposure at 0.70 W/m² irradiance, 176°F (80°C) black panel temperature	ASTM G155	No Cracks No Crazing 7,560 kJ/m² 3,000 hours	No Cracks No Crazing 41,580 kJ/m² 16,500 hours
At 0.35 W/m² irradiance, 176°F (80°C) black panel temperature		6,000 hours	33,000 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 are run on a statistical basis to ensure overall long-term performance of the sheeting.

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. ("MuleHide"). Since the manner of use is beyond our control, MuleHide 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 MuleHide warranty, please check the MuleHide website at www.mulehide.com or contact MuleHide 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 to 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. MuleHide must be notified in writing of any claims and be given the opportunity to inspect the alleged failure before repairs are made.