

# PRODUCT DATA SHEET

## MULE-HIDE EPDM POND LINER

### PRODUCT DESCRIPTION

Mule-Hide's Pond Liner is a nominal .040" (1.00 mm) thick non-reinforced Ethylene Propylene Diene Terpolymer (EPDM) based elastomeric waterproofing liner for use in recreational, commercial and industrial water containment applications. The membrane is available in 10'- 45' (3-13.5 m) widths and 50'- 100' (15-60 m) lengths (Special Order 20' x 200' also available). The Mule-Hide EPDM Pond Liner has been formulated to be "fish-friendly" for support of aquatic life. The EPDM membrane has a wide variety of applications including landscaping and the lining of agricultural, commercial and industrial reservoirs, catch basins, and retention ponds. The membrane is marked in blue non-fading ink with a **PL1MM** marking to distinguish it from roofing membrane.

### SPECIFICATIONS

Property	Test Method	Specification	Typical Properties
Color		Gray/Black	
Thickness Tolerance %	ASTM D 412	± 10	± 10
Tensile Strength min., Psi (Mpa)	ASTM D 412	1305 (9.0)	1600
Elongation, ultimate min., %	ASTM D 412	350	500
Hardness, Durometer A	ASTM D 2240	60 ± 10	60
Tear Resistance min., lbf/in (kN/m)	ASTM D 624 (Die C)	175 (30.6)	200
Brittleness Temperature max., °F (°C)	ASTM D 746	- 75 (- 59)	- 85 (- 65)
Water Vapor Permeance max., perms	ASTM E 96 (Proc. B or BW)	0.10	0.05
Resistance to Water Absorption % Change in mass max., after 7 d immersion @ 158 °F (°C)	ASTM D 471	+ 4.0 -2.0	± 2.0
Resistance to Soil Burial (% change max. in original value) 1. Tensile Strength 2. Elongation, ultimate	ASTM D 3083 (modified)**	± 5 ± 10	Pass pass
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 D 573	1205 (8.3) 225 150 (26.3) ± 1.0	1600 (11.0) 250 240 (42.0) -0.4
Ozone Resistance Condition after exposure to 100 pphm ozone in air for 168 hrs @ 140°F (40°C) (sample under 50% strain)	ASTM D 1149	No Cracks	No Cracks
Root Penetration	DIN 4106	No Penetration	No Penetration
Resistance To Outdoor (Ultraviolet) Weathering, Xenon-Arc, 4000 h exposure @ 70°C (176°F) Black panel temperature, visual condition	ASTM G 26	No Cracks	No Cracks

Form # PDS-E-PL  
Date 01/01/2007

### **MULE-HIDE PRODUCTS CO., INC.**

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**INSTALLATION INSTRUCTIONS**

Installation procedures vary as to the type of application employed and the specific job requirements. When installed correctly, it is difficult to find a more efficient water barrier. Surfaces on or against which the EPDM Pond Liner membrane is to be applied must be clean, smooth, free of fins, sharp edges, loose and foreign materials, oil and grease. Before installing the membrane, examine the surfaces and find them satisfactory. It is recommended that a protective liner or fabric, such as a Reinforced Stone Mat, be installed prior to installation of the EPDM Pond Liner. Place the membrane in its final position without stretching and allow the membrane to relax for ½ hour before final positioning and securement.

**MEMBRANE SPLICING**

Fold the top sheet back 12 inches (30 cm) for cleaning and splice adhesive application. Remove dirt, foreign material and excess dust from splice area by brooming or wiping with Seam Cleaner. If necessary, scrub the sheet with warm soapy water and rinse with clean water. Clean the dry splice area of both sheets by scrubbing with clean natural fiber rags using Seam Cleaner. The membrane surface shall be solid black in color. Extra cleaning is required along a factory seam which intersects a splice area. Sponges, sponge mops, squeegees, brushes, paint rollers, etc. must not be used.

- A. SEAM CLEANER AND ITS FUMES ARE EXTREMELY FLAMMABLE. DO NOT BREATHE VAPORS OR USE NEAR FIRE, FLAME, OR IN A CONFINED OR UNVENTILATED AREA. DISPENSE ONLY FROM AN OSHA APPROVED OR EQUIVALENT SAFETY CAN.
  
- B. NEOPRENE SOLVENT RESISTANT GLOVES ARE RECOMMENDED FOR HAND PROTECTION WHEN SEAM CLEANER IS BEING USED.

Stir Splice Adhesive, thoroughly scraping the sides and bottom of the can (minimum 5 minutes stirring is recommended). Splice Adhesive should be used with the EPDM Membrane. Properly stirred Splice Adhesive will have a solid black appearance with no heavier black material remaining on the bottom or sides of the can.

**MOST EPDM ADHESIVES AND THEIR FUMES CONTAIN PETOLEUM DISTALLATES AND ARE EXTREMELELY FLAMMABLE: THEY CONTAIN SOLVENTS THAT ARE DANGEROUS FIRE AND EXPLOSION HAZARDS WHEN EXPOSED TO HEAT, FLAME OR SPARKS. CONSULT CONTAINER LABEL, MATERIAL SAFETY DATA SHEETS, AND PRODUCT DATA SHEETS FOR SPECIFIC INFORMATION.**

Apply Splice Adhesive to both mating surfaces with either a 3 or 4 inch (8 or 10 cm) wide medium nap roller. Apply adhesive smoothly and evenly to obtain 100% coverage. Do not allow the adhesive to glob or puddle. One gallon (3.8 liters) of Splice Adhesive will achieve an approximate coverage rate of 85 linear feet (26 meters) of 6" (15 cm) wide completed seam (when coated surface is approximately 7 inches (18 cm) wide on both mating surfaces). Allow the adhesive to dry until it is tacky but will not string to a dry finger touch and will not move when pushed with a dry finger.

Roll the top sheet onto the mating surface. Take care not to stretch or wrinkle the EPDM membrane sheet and assemble the seam with hand pressure by wiping toward the splice edge. Roll the splice with a 2 inch (5 cm) wide steel roller using positive pressure toward the splice edge. **DO NOT ROLL PARALLEL TO THE SPLICE EDGE.** Wait at least two hours and clean the dry splice edge, extending at least 1 inch (2.5 cm) onto the top and bottom membrane with Seam Cleaner. Apply a minimum of ¼ inch (6 mm) bead of Lap Sealant to the splice edge. **LAP SEALANT MUST BE COMPLETED BY THE END OF EACH DAY.** Allow a minimum of 24 hours for Lap Sealant to cure.

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### REFERENCES

American Society of Testing Materials (ASTM):

ASTM D 412	Standard Test Method For Rubber Properties in Tension
ASTM D 471	Test Method For Rubber Property – Effect Of Liquids
ASTM D 573	Test Method For Rubber Deterioration In An Air Oven
ASTM D 624	Test Method For Rubber Property – Tear Resistance
ASTM D 746	Test Method For Brittleness Temperature Of Plastics and Elastomers By Impact
ASTM D 1149	Test Method For Rubber Deterioration – Surface Ozone Cracking In A Chamber
ASTM D 3083	Test Method For Flexible Mastic Sheetting For Pond, Canal, and Reservoir Lining
ASTM E 96	Test Method For Water Vapor Transmission Of Materials
ASTM E 154	Method Of Testing Materials For Use As Vapor Barriers Under Concrete Slabs And As Ground Cover in Crawl Spaces
ASTM G 26	Recommended Practice For Operating Light Exposure Apparatus (Xenon-Arc Type) With And Without Water For Exposure Of Non-Metallic Materials

German Institute For Standards

DIN 4106 Resistance To Root Penetration

### TECHNICAL SERVICES

Contact Mule-Hide Products Co., Inc. at 608/365-3111 for additional information.

### DISCLAIMER

The statements provided concerning the material shown are intended as a guide for material usage and are believed to be true and accurate. 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 make nor does it 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 except that it conforms to Mule-Hide's physical properties. Buyer and user accept the product under these conditions and assume the risk of any failure, any injury of 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 complaint or failure before repairs are made.

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