

# EPDM GEOMEMBRANES

## EPDM Geomembranes - (Ethylene Propylene Diene Monomer)

Ethylene Propylene Terpolymer (EPDM) is a cured rubber liner that has many useful applications in water containment and groundwater protection. Unlike other thermoplastic geomembranes, EPDM must be seamed and repaired using a solvent adhesive and uncured rubber tape system. This is an advantage for do-it-yourself installations, however, it is a drawback for overall weld strength and quality control practices. EPDM has good multi-axial strain and elongation properties which makes it well suited for irregularly shaped projects.



### *Common Applications*

- Irrigation Reservoirs & Canals
- Landfill/Mine Reclamation Caps
- Golf Course Ponds
- Fish Ponds and Lakes
- Decorative Water Features
- Oilfield Mud Pits
- Potable Water Storage
- Secondary Containment

### *Material Advantages*

- Standard Manufacturer sizes of 100' or 200' in length and widths of 10', 15', 20', 25', 30', 40', and 50'.
- Welds by chemical adhesive and cover strip tape.
- EPDM has relatively good chemical resistance and comes several specialized formulations.
- Available in 45 mil and 60 mil thicknesses.



2195 Weaver Rd  
Belgrade, MT 59714

Phone: 406-924-4090

Fax: 406-388-5408

Email: [headwater@imt.net](mailto:headwater@imt.net)

Website: [headwaterlining.com](http://headwaterlining.com)

# ETHYLENE PROPYLENE DIENE MONOMER (EPDM)

<u>Property</u>	<u>Test Method</u>	<u>Units</u>	<u>Typical Value</u>
Thickness - nominal	ASTM D-5199	in.	.045
Specific Gravity	ASTM D-792		1.10
Unit Weight	ASTM D-5261	lb/ft. <sup>2</sup>	.28
Tensile Properties:			
Break Strength (min.)	ASTM D-882	lb./in.	50
Break Elongation (min.)	ASTM D-882	%	500
Tear Resistance (min.)	ASTM D-1004	lb.	9
Puncture Resistance (min.)	ASTM D-4833	lb.	35
Multiaxial Elongation (min.)	ASTM D-5617	%	100
Oven Aging - 100°C for 170 hours	ASTM D-573		
% Retained Tensile Break Strength	ASTM D-882	%	90
% Retained Tensile Break Elongation	ASTM D-882	%	75
Resistance to ozone 7 days/100 pphm @ 100 F with 50% extension	ASTM D-1149		No Cracks
Brittleness Temp.	ASTM D-2137	°F	-49
Water Resistance Change in weight after Immersion 7 days @ 150°F, %	ASTM D-471	%	8
Water Vapor Permeability (max.)	ASTM E-96	perm-mils	2.0 (max)
Dimensional Stability (max.)	ASTM D-1204	%	1.0 (max)



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