

**GEOMEMBRANE LINER
ENGINEERING SPECIFICATION GUIDE**



Since 1953

EPDM 45 mil Typical Properties

PROPERTY	TEST METHOD	Minimum Properties English	Minimum Properties Metric
Color		Black	Black
Thickness, nominal $\pm 10\%$	ASTM D 5199	45 mils	1.14 mm
Tensile Properties			
Break Strength	ASTM D 882	55 lb/in	9.6 kN/m
Break Elongation	ASTM D 882	500%	500%
Tear Resistance, lbf/in (kN/m)	ASTM D 1004	9 lbs	40 N
Puncture Resistance	ASTM D 4883	28 lbs	125 N
Brittleness Temperature max., °F (°C)	ASTM D 746	- 49	- 49
Water Vapor Permeance max, perms	ASTM E 96 (Proc B or BW)	2.0	2.0
Resistance to Water Absorption % Change in mass max., after 7 d immersion @ 158°F (°C)	ASTM D 471	+ 4.0 - 2.0	+ 4.0 - 2.0
Resistance to Heat Aging (Properties after 170 hours @ 212°F (100°C))			
1. Tensile Break Strength	ASTM D 882	50 lb/in	8.8 kN/m
2. Elongation, ultimate min.		450%	450%
Multiaxial Elongation	ASTM D 5617	100%	100%
Dimensional Stability	ASTM D 1204	0.75%	0.75%
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
Resistance to Outdoor (Ultraviolet) Weathering ¹ , Xenon-Arc, 4000 h exposure @ 70°C (176°F) Black panel temperature, visual condition	ASTM G 155	No Cracks	No Cracks
Toxicity to Fish*	ASTM E 729(96) modified	Passes	Passes
Shore A Durometer	ASTM D 2240	60 \pm 10	60 \pm 10

¹ Approximately equal to 8,000 hours at 0.35W/m² irradiance

* It is recommended that customers test EPDM before use to ensure it is compatible with the specific aquatic species for the proposed application

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