

## CARLISLE .045 and .060 GeoEPDM POND LINER

### GENERAL

Carlisle's GeoEPDM Pond Liner is a nominal 45-mil and 60-mil thick non-reinforced Ethylene Propylene Diene Terpolymer (EPDM) based elastomeric waterproofing liner for use in recreational, commercial aquaculture and industrial water containment applications. The membrane is specifically formulated for long-term use in buried or exposed geomembrane applications. GeoEPDM Pond Liner has been formulated to be compatible with aquatic life. It is recommended that customers test GeoEPDM before use to ensure it is compatible with the specific aquatic species for the proposed application. GeoEPDM has a wide variety of applications including the lining of agricultural waste water containment, commercial and industrial reservoirs, catch basins, stormwater retention ponds, canals and aquaculture, including fish hatcheries.

### INSTALLATION

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 where GeoEPDM Pond Liner membrane is to be applied must be smooth, free of fins, sharp edges, loose and foreign materials, oil and grease. GeoEPDM can be easily repaired in the field by the owner without specialized tools or training. Consult current specifications and details for complete installation information.

### FEATURES:

- Superb elongation and lay flat characteristics
- Excellent low temperature impact resistance
- Exceptional resistance to solar UV, ozone, and oxidation
- Low water vapor permeance and water absorption
- Quick seaming process - no specialized or expensive tools required
- 20 year material warranty available
- Large prefabricated panels available in custom sizing

#### GeoEPDM 45-mil sizes available:

Width : 5–50 feet (1.5 - 15.2 meters)  
Length: 50–200 feet (15.2 – 61 meters)  
Weight: 0.28 lbs/f<sup>2</sup> (1.37 kg/m<sup>2</sup>)  
Specific Gravity: 1.19 g/cc

#### GeoEPDM 60-mil sizes available:

Width: 5–50 feet (1.5 - 15.2 meters)  
Length: 50, 100, 150 feet (15.2, 30.5, 45.7 meters)  
Weight: 0.37 lbs/f<sup>2</sup> (1.81 kg/m<sup>2</sup>)  
Specific Gravity: 1.19 g/cc



# CARLISLE'S GEO MEMBRANE

GeoEPDM Physical Property	Test Method	Minimum Properties English		Minimum Properties Metric	
		45 mil	60 mil	1.14 mm	1.52 mm
Thickness Tolerance	ASTM D412	45 mils ± 10%	60 mils ± 10%	1.14 mm ± 10%	1.52 mm ± 10%
Break Strength	ASTM D412	1305 PSI	1305 PSI	9.0 MPA	9.0 MPA
Break Elongation	ASTM D412	300%	300%	300%	300%
Tear Strength min.	ASTM D624	150 lbf/in	150 lbf/in	26.3 kN/m	26.3 kN/m
Puncture Resistance	ASTM D4833	30 lbs.	35 lbs.	125 N	155 N
Brittleness Temperature max.	ASTM D2137	-49 °F	-49 °F	-45 °C	-45 °C
Water Vapor Permeance max.	ASTM E96 (Proc. B or BW)	.1 perms	.1 perms	.1 perms	.1 perms
Resistance to Water Absorption after 7 d immersion @ 158 °F (°C), max.	ASTM D471	+8.0 % -2.0 %	+8.0 % -2.0 %	+8.0 % -2.0 %	+8.0 % -2.0 %
Resistance to Heat Aging (Properties after 670 hours @ 240° F (116° C)) 1. Tensile Break Strength 2. Elongation, ultimate min. 3. Tear Strength	ASTM D573 ASTM D412 ASTM D624	1205 PSI 200% 125 lbf/in	1205 PSI 200% 125 lbf/in	8.3 mPa 200% 21.9 kN/m	8.3 mPa 200% 21.9 kN/m
Multiaxial Elongation	ASTM D5617	100%	100%	100%	100%
Dimensional Stability 168 hrs, 212 °F (100 °C)	ASTM D1204	0.75% ±1.0%	0.75% ±1.0%	0.75% ±1.0%	0.75% ±1.0%
Ozone Resistance Condition after exposure to 100 ppm ozone in air for 168 hrs @ 140°F (40°C) sample under 50% strain)	ASTM D1149	No Cracks	No Cracks	No Cracks	No Cracks
Resistance To Outdoor (Ultraviolet) Weathering <sup>1</sup> , Xenon-Arc, 10,080 kJ/m <sup>2</sup> exposure @ 80°C (176°F) Black panel temperature, visual examination 7X magnification	ASTM G155	No Cracks	No Cracks	No Cracks	No Cracks
Toxicity to Fish	ASTM E729(96) (modified)	Passes	Passes	Passes	Passes
Whole Effluent Toxicity Testing	EPA 600/4-89/001 Method 1000	Tested	Tested	Tested	Tested
Shore A Durometer	ASTM D2240	60±10	60±10	60±10	60±10

<sup>1</sup>Approximately equal to 8,000 hours at 0.35W/m<sup>2</sup> irradiance.  
A two week minimum lead time will be necessary when ordering Carlisle GeoEPDM that is certified to meet the ASTM D-7465 requirements for Type I sheeting.

## CARLISLE GEOMEMBRANES FOR AMERICA AND THE WORLD

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