



Applications

- Channels, Ponds, Lakes
- Containment Areas
- Landfill Liner & Caps
- Golf Course Ponds
- Irrigation Reservoirs
- Waste Water Treatment

HDPE Liner

Due to its excellent chemical resistance and low material cost, HDPE is extremely popular in lining applications requiring low permeability and high strength/density ratio. HDPE Liners are becoming more widely used as the implications of contaminated soil conditions on structures and the general environment. Polyfabrics' HDPE Liners are most commonly used in lining of channels, small dams and other containment structures.

HDPE is known for its large strength to density ratio. The density of HDPE can range from 930 to 970 kg/m³. Although the density of HDPE is only marginally higher than that of low-density polyethylene, HDPE has little branching, giving it stronger intermolecular forces and tensile strength than LDPE. The difference in strength exceeds the difference in density, giving HDPE a higher specific strength. It is also harder and more opaque and can withstand somewhat higher temperatures (120°C/ 248°F for short periods).

Smooth HDPE Liner Specifications							
Index Properties	Units	Standard	75-5.8/100	1-5.8/100	1.5-5.8/100	2-5.8/100	Test Frequency
Thickness Average	mm	ASTM D 5199	0.75	1	1.5	2	Per roll
Density	g/cm ³	ASTM D 792	0.94				90,000kg
Tensile Properties							
Yield Strength	kN/m	ASTM D 6693	11	15	22	29	9,000 kg
Break Strength	kN/m	ASTM D 6693	20	27	40	53	9,000 kg
Yield Elongation	%	ASTM D 6693	12				9,000 kg
Break Elongation	%	ASTM D 6693	700				9,000 kg
Tearing Resistance	N	ASTM D 1004	93	125	187	249	20,000 kg
Puncture Resistance	N	ASTM D 4833	240	320	480	640	20,000 kg
Stress Crack Resistance	Hr	ASTM D 5397	500				Per GRI GM-10
Carbon Black Content	%	ASTM D 1603	2-3				9,000 kg
Carbon Black Dispersion	Cat	ASTM D 5596	For 10 different views: 9 in Categories 1 or 2 and 1 in Category 3				20,000 kg
Oxidative Induction Time	Min	ASTM D 3895	100min in standard OIT				90,000 kg
Oven Aging at 85°C							
Standard (90 days)	%	ASTM D 5721	55				Per each formulation
High Pressure (90 days)	%	ASTM D 3895	88				
UV Resistance (1600 hours)	%	ASTM D 5885	50				
Dimensions							
Sizes	m	-	5.8 x 100	5.8 x 100	5.8 x 100	5.8 x 100	
Weight	kg/m ²	-	0.70	0.94	1.41	1.88	