

High Density Polyethylene



HDPE

FEATURES

- HDPE has great chemical resistance and durability
- UV stable
- Product range includes: smooth, textured, and conductive
- Available in 20, 30, 40, 60, 80 & 100 mil thicknesses

High Density Polyethylene is the most commonly used liner in the industry due to its high strength, good chemical resistance, and proven track record. High Density Polyethylene must be installed by certified technicians, but still manages to be a cost effective alternative.

HDPE is also available in single and double sided textured options.

APPLICATIONS

- Landfills
- Brine & evaporation ponds
- Wastewater treatment plants
- Animal waste lagoons
- Golf course ponds
- Gas collection covers
- Pond & lake liners
- Irrigation reservoirs

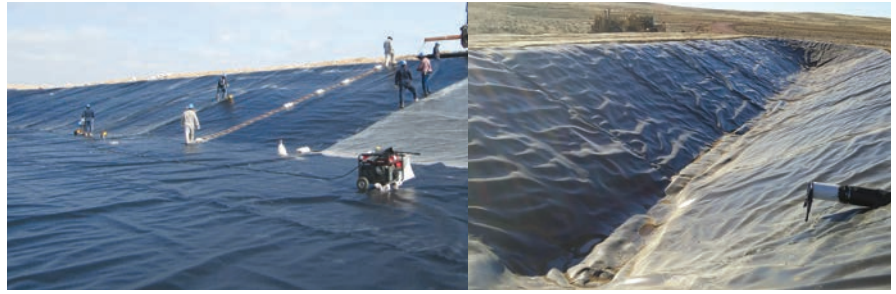
FOR MORE INFO CALL 800.524.8672



WWW.COLORADOLINING.COM

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Product Data



Smooth HDPE Material Information

Properties	Test Method	Test Value							Testing Frequency minimum
		30 mils	40 mils	50 mils	60 mils	80 mils	100 mils	120 mils	
Thickness (min. ave.) •lowest individual of 10 values	D5199	Nom. -10%	Nom. -10%	Nom. -10%	Nom. -10%	Nom. -10%	Nom. -10%	Nom. -10%	Per roll
Formulated Density mg/l (min.)	D1505/D729	0.940 g/cc	0.940 g/cc	0.940 g/cc	0.940 g/cc	0.940 g/cc	0.940 g/cc	0.940 g/cc	200,000 lb
Tensile Properties ⁽¹⁾ (min. ave.) •yield strength •break strength •yield elongation •break elongation	D6693 Type IV	63 lb/in. 114 lb/in. 12% 700%	84 lb/in. 152 lb/in. 12% 700%	105 lb/in. 190 lb/in. 12% 700%	126 lb/in. 228 lb/in. 12% 700%	168 lb/in. 304 lb/in. 12% 700%	210 lb/in. 380 lb/in. 12% 700%	252 lb/in. 456 lb/in. 12% 700%	20,000 lb
Tear Resistance (min. ave.)	D1004	21 lb	28 lb	35 lb	42 lb	56 lb	70 lb	84 lb	45,000 lb
Puncture Resistance (min. ave.)	D4833	54 lb	72 lb	90 lb	108 lb	144 lb	180 lb	216 lb	45,000 lb
Stress Crack Resistance ⁽²⁾	D5397 (App)	500 hr	500 hr	500 hr	500 hr	500 hr	500 hr	500 hr	per GRI-GM10
Carbon Black Content (range)	D4218 ⁽³⁾	2.0-3.0%	2.0-3.0%	2.0-3.0%	2.0-3.0%	2.0-3.0%	2.0-3.0%	2.0-3.0%	20,000 lb
Carbon Black Dispersion	D5596	note ⁽⁴⁾	note ⁽⁴⁾	note ⁽⁴⁾	note ⁽⁴⁾	note ⁽⁴⁾	note ⁽⁴⁾	note ⁽⁴⁾	45,000 lb
Oxidative Induction Time (OIT)(min. ave.) ⁽⁵⁾ (a) Standard OIT or (b) High Pressure OIT	D3895 D5885	100 min. 400 min.	100 min. 400 min.	100 min. 400 min.	100 min. 400 min.	100 min. 400 min.	100 min. 400 min.	100 min. 400 min.	200,000 lb
Oven Aging at 85°C ⁽⁵⁾⁽⁶⁾ (a) Standard OIT (min. ave.) - % retained after 90 days or (b) High Pressure OIT (min. ave.) - % retained after 90 days	D5721 D3895 D5885	55% 80%	55% 80%	55% 80%	55% 80%	55% 80%	55% 80%	55% 80%	per each formulation
UV Resistance ⁽⁷⁾ (a) Standard OIT (min. ave.) or (b) High Pressure OIT (min. ave.) - % retained after 1600 hrs ⁽⁹⁾	D7238 D3895 D5885	N.R. ⁽⁸⁾ 50%	N.R. ⁽⁸⁾ 50%	N.R. ⁽⁸⁾ 50%	N.R. ⁽⁸⁾ 50%	N.R. ⁽⁸⁾ 50%	N.R. ⁽⁸⁾ 50%	N.R. ⁽⁸⁾ 50%	per each formulation

(1) Machine direction (MD) and cross machine direction (XMD) average values should be on the basis of 5 test specimens each direction.

Yield elongation is calculated using a gage length of 1.3 inches
Break elongation is calculated using a gage length of 2.0 in.

(2) The yield stress used to calculate the applied load for the SP-NCTL test should be the manufacturer's mean value via MQC testing.

(3) Other methods such as D 1603 (tube furnace) or D 6370 (TGA) are acceptable if an appropriate correlation to D 4218 (muffle furnace) can be established.

(4) Carbon black dispersion (only near spherical agglomerates) for 10 different views:
9 in Categories 1 or 2 and 1 in Category 3

(5) The manufacturer has the option to select either one of the OIT methods listed to evaluate the antioxidant content in the geomembrane.

(6) It is also recommended to evaluate samples at 30 and 60 days to compare with the 90 day response.

(7) The condition of the test should be 20 hr. UV cycle at 75°C followed by 4 hr. condensation at 60°C

(8) Not recommended since the high temperature of the Std-OIT test produces an unrealistic result for some of the antioxidants in the UV exposed samples.

(9) UV resistance is based on percent retained value regardless of the original HP-OIT value.