

Properties of High Density Polyethylene (HDPE)

ASTM or UL test	Property	HDPE
D792	Density (lb/in ³) (g/cm ³)	0.035 0.95
D570	Water Absorption, 24 hrs (%)	0
D638	Tensile Strength (psi)	4,600
D638	Tensile Modulus (psi)	-
D638	Tensile Elongation at Yield (%)	900
D790	Flexural Strength (psi)	-
D790	Flexural Modulus (psi)	200,000
D695	Compressive Strength (psi)	-
D695	Compressive Modulus (psi)	-
D785	Hardness, Shore D	D69
D256	IZOD Notched Impact (ft-lb/in)	3
D696	Coefficient of Linear Thermal Expansion (x 10 ⁻⁵ in./in./°F)	6
D648	Heat Deflection Temp (°F / °C) at 66 psi at 264 psi	170 / 76 150 / 66
D3418	Approx. Melting Temperature (°F / °C)	260 / 125
-	Maximum Continuous Operating Temp (°F / °C)	120/49
-	Maximum Short Term Temperature Exposure (°F / °C)	140/60
C177	Thermal Conductivity (BTU-in/ft ² -hr-°F) (x 10 ⁻⁴ cal/cm-sec-°C)	--
UL94	Flammability Rating	n.r.
D149	Dielectric Strength (V/mil) short time, 1/8" thick	450-500
D150	Dielectric Constant at 1 kHz	2.30-2.35
D150	Dissipation Factor at 1 kHz	0.0002
D257	Volume Resistivity (ohm-cm) at 50% RH	10 ¹⁵
D495	Arc Resistance (sec)	200-250