

TECHNICAL DATA SHEET

Low Density Polyethylene (LDPE)

This extruded material offers good corrosion resistance and low moisture permeability. It can be used in applications where corrosion resistance is important, but stiffness, high temperature, and structural strength are not. A highly flexible product, LDPE is used widely in orthopedic products, or where mobility without stress fatigue is desired. LDPE is also frequently used in consumer packaging, bags, bottles, and liners.

TYPICAL PROPERTIES of POLYETHYLENE				
ASTM or UL test	Property	LDPE	HDPE	UHMW
PHYSICAL				
D792	Density (lb/in ³) (g/cm ³)	0.033 0.92	0.035 0.96	0.034 0.93
D570	Water Absorption, 24 hrs (%)	<0.01	<0.01	<0.01
MECHANICAL				
D638	Tensile Strength (psi) at 72°F	1,400	4,600	5,800
D638	Tensile Strength (psi) at 150°F	400	400	400
D638	Tensile Modulus (psi)	57,000	200,000	80,000
D638	Tensile Elongation at Break (%)	100	400	300
D790	Flexural Strength at Yield (psi)	1,500	4,600	3,500
D790	Flexural Modulus (psi)	29,000	174,000	88,000
D695	Compressive Strength (psi)	1,400	4,600	3,000
D695	Compressive Modulus (psi)	54,000	100,000	80,000
D732	Shear Strength (psi)	-	-	3,000
D785	Hardness, Shore D	D45	D69	D62-D66
D256	IZOD Notched Impact (ft-lb/in)	No Break	1.3	No Break
THERMAL				
D696	Coefficient of Linear Thermal Expansion (x 10 ⁻⁵ in./in./°F)	-	6	11
D648	Heat Deflection Temp (°F / °C) at 66 psi at 264 psi	120 / 48 116 / 46	170 / 76 176 / 80	203 / 95 180 / 82
D3418	Approx. Melting Temperature (°F / °C)	244 / 118	260 / 125	275 / 136
-	Max Operating Temp (°F / °C)	160 / 71	180 / 82	180 / 82
C177	Thermal Conductivity (BTU-in/ft ² -hr-°F) (x 10 ⁻⁴ cal/cm-sec-°C)	- -	- -	2.84 10.0
UL94	Flammability Rating	HB	HB<	HB
ELECTRICAL				
D149	Dielectric Strength (V/mil) short time, 1/8" thick	460-700	450-500	2300
D150	Dielectric Constant at 1 MHz	2.25- 2.30	2.30- 2.35	2.30- 2.35
D150	Dissipation Factor at 1 kHz	0.0002	0.0002	0.0005
D257	Surface Resistivity (ohm/square) at 50% RH	> 10 ¹⁵	> 10 ¹⁵	> 10 ¹⁵
D495	Arc Resistance (sec)	135-160	200-250	250-350

Benefits

- Lightweight
- Formable
- Impact Resistant
- Good electrical properties
- Easily cleaned
- Easily Fabricated

Applications

- Chemical resistant tank and containers
- Food storage containers
- Laboratory equipment
- Corrosion resistant work surfaces
- Vacuum formed end caps and tops
- Moisture barrier

SHAPES AVAILABLE



NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets.
All values at 73°F (23°C) unless otherwise noted.