



POLYETHYLENE

Characteristics

- * Good Resistance to Organic Solvents
- * Good Fatigue and Wear Resistance
- * Low Moisture Absorption Properties
- * Impact Tolerant
- * Highly Flexible and Light Weight

Description

Polyethylenes are semi-crystalline materials that provide good resistance to organic solvents. They have high impact strength, are light in weight, resist staining, and have low moisture absorption properties.

High Density Polyethylene (HDPE) offers excellent impact resistance, light weight, low moisture absorption, and high tensile strength. HDPE is also non-toxic and meets FDA and USDA certifications for food processing.

Low Density Polyethylene (LDPE) offers good corrosion resistance and low moisture absorption permeability. Not recommended for use in high temperature structural applications. A highly flexible product LDPE is widely used in orthopedic products, or where mobility without stress fatigue is desired.

Forms Available

- ROD .375 to 7.00 " diameter, Lengths to 12 feet
 BUSHING Available upon Request
 PLATE .078" to 4.000" thick, Widths to 48", Lengths to 96"
 COLOR Opaque

Typical Property Values

MECHANICAL @ 73°F

Density	
Tensile Strength	psi
Tensile Modulus of Elasticity	psi
Tensile Elongation (at Break)	%
Flexural Strength	psi
Flexural Modulus of Elasticity	psi
Shear Strength	psi
Compressive Strength, 10% Deformation	psi
Compressive Modulus of Elasticity	psi
Hardness	Shore D
Izod Impact Strength, Notched	ft-lbs/in. of notch
Coefficient of Friction, Dynamic (Dry vs. Steel)	
Limiting PV (4 :1 Safety Factor Applied)	ft.lbs/in. ² min
Wear Factor	in ³ -min/ft.lbs. hr.
Water Absorption 24 hrs	% by wt.

LDPE

0.03
1,800
600
41 - 50
<0.01
3 x 10 ⁻⁵
105
230
160
460 - 700
2.25 - 2.30
0.0002

HDPE

0.04
4,600
900
200,000
69
3.00
6 x 10 ⁻⁵
150
260
180
450 - 500
2.30 - 2.35
0.0002

THERMAL

Coefficient of Linear Expansion (-40°F to 300°F)	in./in./°F
Heat Deflection Temperature @264 psi	°F
Melting Point (Crystalline)	°F
Continuous Service Temperature in Air	°F
Thermal Conductivity	°F

ELECTRICAL

Dielectric Strength, Short Term	Volts/mil
Surface Resistivity	Ohms/Sq.
Dielectric Constant	1 MHz
Dissipation Factor	1 MHz

(Properties listed above are provided for reference only, they should not be used for design specifications or quality control)