



LIBBYHQ

Physical Properties

Libby MFG's high density polyethylene (HDPE) is used in many applications and industries where impact resistance, high tensile strength, low moisture absorption and chemical and corrosion-resistance properties are required. The excellent molecular structure and superior stress crack resistance makes HDPE ideal for all types of fabrications. This resin meets the Food and Drug Administration requirement for direct food contact.

TECHNICAL INFORMATION

Property	Method	Unit	Nominal Value
Density	ASTM D-792	g/cm ³	0.954
Tensile strength at yield	ASTM D-638	psi	4000
Tensile modulus	ASTM D-638	psi	n/a
Elongation at yield	ASTM D-638	%	18
Elongation at break	ASTM D-638	%	700
Tensile impact	DIN 53448	ft-lbs/in ²	550
Flexural modulus	ASTM D-790	psi	165,000
Flexural strength	ASTM D-790	psi	3,800
Izod impact	ASTM D-4020	ft-lbs/in ²	17
IZOD impact notched	ASTM D-2240	ft-lbs/in ²	3.5
Compressive modulus	ASTM D-695	psi	n/a
Compressive deformation	ASTM D-621	% at 1000 psi	n/a
Melting point	ASTM D-3417	°F	290
Hardness	ASTM D-2240	Shore D	65
Coefficient of linear thermal expansion	ASTM D-696	in/in/ °F	6.7 x 10 ⁻⁵
Heat deflection temperature, 66 psi	ASTM D-648	°F	165
Max. operating temp.		°F	170
Volume Resistivity	ASTM D-257	Ohm-cm	>10 ¹⁵
Surface Resistivity	ASTM D-257	Ohm	>10 ¹⁵
Water absorption 24hrs.	ASTM D-570	%	0.0001

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