

HDPE Specs

				HDPE
		Units	ASTM Test Method	High Density Polyethylene
MECHANICAL	Strength to Weight Ratio	ksi		4.9
	Specific Gravity @73 F		D792	0.94
	Tensile Strength @73 F, (ult)(yld)	psi	D638	4600 (ult)
	Tensile Modulus of Elasticity @ 73 F	psi	D638	170000
	Tensile Elongation at Break @ 73 F	%	D638	55
	Flexural Strength @ 73 F	psi	D790	1400
	Flexural Modulus of Elasticity @ 73 F	psi	D790	200000
	Shear Strength @ 73 F	psi	D732	3380
	Compressive Strength, (% Deformation) @73 F	psi	D695	4570 (10)
	Compressive Modulus of Elasticity @73 F	psi	D695	
	Hardness, Rockwell, Scale as noted @73 F		D785	
	Hardness, Durometer, Shore D @73 F		D2240	D69
	Izod Impact, (Notched) @73 F	ft-lb/in of notch	D256 TypeA	3.0
	Coefficient of Friction, (Dry vs. Steel) Dynamic			
Limiting PV, (with 4 to 1 factor of safety applied)	psi-ft/min			
THERMAL	Coefficient of Linear Thermal Expansion @73 F	in/in/F	E-831 (TMA)	1.3E-04
	Heat Deflection Temperature @ 264 psi	F	D648	151
	Tg-Glass transition temperature, (Amorphous)	F	D3418	
	Melting Point, (VS=Vicat Softening Temp.)	F	D3418	
	Continuous Service Temperature in Air, (Max.)	F		180
	Thermal Conductivity	BTU-in/hr-ft ² -F		
ELECTRICAL	Dielectric Strength, Short Term	Volts/mil	D149	500
	Volume Resistivity	ohm-cm	D257	1.0E+15
	Dielectric Constant @ 10E6 Hz		D150	
	Dissipation Factor @ 10E6 Hz		D150	
	Flammability @ 3.1 mm unless noted		UL94	
H₂O	Water Absorbion, Immersion, 24 Hrs	% by wt.	D570(7)	0.03
	Water Absorbion, Saturation	% by wt.	D570(7)	