

Polycarbonate									
Physical Properties			Metric		English		Comments		
Specific Gravity		1.2 g/cc		0.0434 lb/in <sup>3</sup>		ASTM D792			
Water Absorption		0.20%			0.20%			Immersion, 24hr; ASTM	
Water Absorption at Saturation	0.40%			0.40%				Immersion; ASTM D570(2)	D570(2)
Mechanical Properties									
Hardness, Rockwell M			75		75			ASTM D785	
Hardness, Rockwell R			126		126			ASTM D785	
Hardness, Shore D			80		80			ASTM D2240	
Tensile Strength, Ultimate	72.4 MPa			10500 psi		ASTM D638			
Elongation at Break			100%		100%			ASTM D638	
Tensile Modulus		2.21 GPa		320 ksi		ASTM D638			
Flexural Modulus		2.41 GPa		350 ksi		ASTM D790			
Flexural Yield Strength	89.6 MPa			13000 psi		ASTM D790			
Compressive Strength		79.3 MPa		11500 psi			10% Def.; ASTM D695		
Compressive Modulus		2.07 GPa		300 ksi			ASTM D695		
Shear Strength			63.4 MPa		9200 psi			ASTM D732	
Izod Impact, Notched		0.801 J/cm			1.5 ft-lb/in			ASTM D256 Type A	
Electrical Properties									
Surface Resistivity per Square		Min 1e+013 ohm		Min 1e+013 ohm		EOS/ESD S11.11			
Dielectric Constant			3.17		3.17			1MHz; ASTM D150	
Dielectric Strength		15.7 kV/mm		400 V/mil			Short Term; ASTM D149		
Dissipation Factor		0.0009			0.0009			1MHz; ASTM D150	
Thermal Properties									
CTE, linear 68°F			70.2 μm/m-°C		39 μin/in-°F			(-40°F to 300°F); ASTM E831	
Thermal Conductivity			0.187 W/m-K		1.3 BTU-in/hr-ft	ASTM F433			
Maximum Service Temperature, 121 °C				250 °F			Long Term		
Deflection Temp, 143 °C			290 °F			ASTM D648			
Glass Temperature			145 °C		293 °F			ASTM D3418	
Flammability, UL94 (Estimated FHB)				HB				1/8 inch	
Qualitative Processing Properties									
Compliance - FDA			Not Compliant						
Machinability				3				1-10, 1=Easier to Machine	
Service in Alcohols			Acceptable						
Service in Aliphatic Hydrocarbons			Limited						
Service in Aromatic Hydrocarbons			Unacceptable						
Service in Chlorinated Solvents			Unacceptable						
Service in Ethers			Unacceptable						
Service in Ketones			Unacceptable						
Service in Strong Acids		Unacceptable							
Service in Strong Alkalies		Unacceptable							
Service in Sunlight			Limited						
Service in Weak Acids			Acceptable						
Service in Weak Alkalies		Acceptable							
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