

Acrylic Cast

Property	Test Method	Units	Acrylic Cast
Physical			
Specific Gravity	ASTM D792		1.17 – 1.20
Water Absorption, 24hrs, 1/8"	ASTM D570		0.4
Mechanical			
Tensile Strength	ASTM D638 (Test Speed B)	psi	8,038
Elongation at Break	ASTM D638 (Test Speed B)	%	2.7
Tensile Modulus	ASTM D638	psi	350,000 – 500,000
Izod Impact Strength, Notched	ASTM D256	ft-lb/in	0.4-0.5
Flexural Strength	ASTM D790	psi	12,000
Compressive Strength, 10% Deflection	ASTM D695	psi	
Hardness, Rockwell	ASTM D785		M80 – M100
Thermal			
Coefficient of Linear Thermal Expansion	ASTM D696	in/in/°F	3 – 5 x 10 ⁻⁵
Cont. Service Temp. in Air, Maximum		°F	150
Thermal Conductivity	ASTM D177	BTU (hr)(ft ²)(°F)/in	1.16 – 1.74
Deflection Temperature, 264 psi	ASTM D648	°F	190
Burning Rate	ASTM D635	in/min	1.75
Electrical			
Volume Resistivity	ASTM D251	ohm-cm	10 ¹⁵
Dielectric Strength, 1/8"	ASTM D149	V/mil	350 – 400
Dissipation Factor			
60 cycles	ASTM D150		0.05 – 0.06
1000 cycles	ASTM D150		0.04 – 0.06
10 ⁶ cycles	ASTM D150		0.02 – 0.03
Arc Resistance	ASTM D496	sec	No Track
Optical			
Light Transmission	ASTM D791	%	92
Index of Refraction at 73 °F	ASTM D542		1.491
Spectral Transmittance	LP-391-D (4.3.7)		
290 nm		%	47.2
300 nm		%	55.5
310 nm		%	60.4
320 nm		%	62.8
330 nm		%	64.9

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.