

# AK Cast Acrylic Physical Properties



(3.00mm thickness)

Property	ASTM Method	Unit	Typical Value
<b>Optical</b>			
Refractive Index	D-542	-	1.49
Light Transmission, Total	D-1003	%	92
Haze	D-1003	%	< 1
<b>Thermal</b>			
Specific Heat	-	J/kg.K (cal/g. °c)	1470 (0.35)
Deflection Temperature under load	D-648	°C	(after anneal) 100
Coefficient of Thermal Linear Expansion	D-696	K <sup>-1</sup>	7 x 10 <sup>-5</sup>
Thermal Conductivity	-	W/m.K (cal/cm.sec °c)	0.19 (5 x 10 <sup>-4</sup> )
Max. Recommended Continuous Service Temperature	-	°C	80
<b>Mechanical</b>			
Specific Gravity	D-792	-	1.19
Tensile Strength	D-638	MPa (kgf/cm <sup>2</sup> )	78 (800)
Elongation		%	3-7
Flexural Strength	D-790	MPa (kgf/cm <sup>2</sup> )	117 (1200)
Modulus of Elasticity		MPa (kgf/cm <sup>2</sup> )	3250 (33000)
Izod Impact Strength	D-265	J/cm (kgf.cm/cm)	0.2 of notch (2)
Rockwell Hardness	D-785	M-scale	100
<b>Water Absorption</b>			
		%	(24hr) 0.3
	D-570	%	(Saturate) 2.1
<b>Electrical</b>			
Dielectric Strength	D-149	kv/mm	20
	D-150	(60Hz)	0.06
Dissipation Factor		(1000Hz)	0.04
Volume Resistivity	D-257	ohm-cm	>10 <sup>15</sup>
Surfact Resistivity	D-257	ohms	>10 <sup>15</sup>

Note: The values mentioned above are typical values. They are not guaranteed.



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