

Physical Properties of AA Cast

The following physical properties were determined by using 3mm thickness of AA Cast.

Properties	ASTM	Unit	AA Cast
Specific Gravity	D 792-60 T		1.19
Optical			
Refractive Index	D 542-50		1.49
Light Transmittance	D 1003-61		
Parallel		%	92
Total		%	93
Haze		%	1
Mechanical			
Tensile Strength	D 638-61 T	kg/cm ²	758
Rupture			
Modulus of Elasticity		kg/cm ²	3 x 10 ⁴
Elongation at Rupture		%	4.5
Flexural Strength	D 790-63		
Rupture		kg/cm ²	1,265
Modulus of Elasticity		kg/cm ²	3 x 10 ⁴
Compressive Strength	D 695-63 T		
Yield		kg/cm ²	1,260
Modulus of Elasticity		kg/cm ²	3 x 10 ⁴
Shear Strength	D 732-46	kg/cm ²	625
Impact Strength	D 256-56		
Falling Ball Impact		kg/cm ²	0.8
Falling Dart Impact		N•M	
Rockwell Hardness	D 785-62		M 100
Thermal			
Hot Forming Temperature		°C	140-180
Heat Distortion Temperature			
2° C/Min – 264 p.s.i.	D 648-56	°C	100
Coefficient of Thermal Expansion	D 696-44	cm/cm/°C	7 x 10 ⁻⁵
Specific Heat		Cal/gr °C	0.35
Electrical			
Surface Resistivity 28° C, 75% RH	D 257-61	ohm	>1016
Volume Resistivity		ohm cm	>1515
Dielectric Strength			
Short Time Test	D 149-64	kv/mm	20
Arc Resistance	D495-61		No Track
Miscellaneous			
Flammability (Burning Rate)	D 635-63	mm/min	33
Water Absorption (Wt. Gain on Immersion for 24 hrs.)	D 570-63	%	0.3
Soluble Matter Lost after Immersion		%	0.0
Odor			None
Taste			None