

## PHYSICAL PROPERTIES OF ACRYLIC SHEET

Table 1-a

Property	ASTM Method	Units	Average Value For .250 Thickness ①
<b>MECHANICAL</b>			
<b>Specific Gravity</b>	D792-66		1.19
<b>Tensile Strength</b> (Rupture) Elongation, Rupture Modules of Elasticity	D638-67T	PSI % PSI	10,000 4.2 400,000
<b>Flexural Strength</b> (Rupture) Modules of Elasticity	D790-66	PSI PSI	16,500 475,000
<b>Compressive Strength</b> (Yield) Modules of Elasticity	D695-63T	PSI PSI	18,000 430,000
<b>Compressive Deformation</b> Under Load 2000 PSI 122 F., 24 hr. 4000 PSI 122 F., 24 hr.	D621-64	% %	0.23 0.81
<b>Shear Strength</b>	D732-46 (1961)	PSI	9,000
<b>Impact Strength</b> Izod Milled Notch	D256-56 (1961)	ft. lbs./in. of notch	0.4
<b>Rockwell Hardness</b> <b>Barcol Hardness</b>	D785-65 D2583-67		M94 49
<b>Residual Shrinkage</b> ② (Internal Strain)	D702-64T	%	approx. 2
<b>OPTICAL</b> (Based on Clear Material)			
<b>Reflective Index</b>	D542-50 (1965)		1.49
<b>Luminous Transmittance</b> As Cast Parallel Total Haze	D1003-61	% % %	91 92 less than 1
<b>Luminous Transmittance</b> After 1,000 hrs. Accelerated Weathering Parallel Total Haze	D1003-61 D1499-64	% %	91 92 less than 1
Effect of Accelerated Weathering on Appearance Crazing Discoloration Warping	D1499-64		none none none
<b>Ultraviolet Transmission</b> at 320 mu	Cary Model 11	%	0
<b>Displacement Factor</b>	D637-50 (1965)		50
<b>Notes:</b> Data given are average values and should not be used for specification purposes. ① All values shown are for .250" thickness <b>PLEXI-VIEW® ACRYLIC</b> unless noted otherwise. ② Some values will change with thickness. Difference in length and width, as measured at room temperature, before and after heating above 300° F.			



These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee as conditions and methods of use are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale.

# PHYSICAL PROPERTIES OF ACRYLIC SHEET

**Table 1-b**

Property	ASTM Method	Units	Average Value For .250 Thickness ①
<b>THERMAL</b>			
Hot Forming Temperature		°F.	290-360 ③
Deflection Temperature Under Load (Heat Distortion Temperature) 66 PSI 264 PSI	D-648-56 (1961)	°F. °F.	230 210
Maximum Recommended Continuous Service Temperature		°F.	180-200
Coefficient of Linear Thermal Expansion	D696-44 (1961)	in./in./°F.	.000034
Coefficient of Thermal Conductivity (K-Factor)	Cenco-Fitch	$\frac{\text{BTU}}{(\text{Hr.})(\text{Sq. Ft.})(\text{°F./in.})}$	1.3 ④
Flammability (Burning Rate)	D635-63	in./min.	1.1
Self-Ignition Temperature	D1929-62T	°F.	860
Specific Heat at 77°F.	DuPont 900 Therm. An. Cal.	$\frac{\text{BTU}}{(\text{Lb.})(\text{°F.})}$	0.35
<b>ELECTRICAL</b>			
Dielectric Strength Short Time Test	D149-64 (1/8" Thickness)	volts/mil	430
Dielectric Constant 60 Cycles 1,000 Cycles 1,000,000 Cycles	D150-65T		3.5 3.2 2.7
Power Factor 60 Cycles 1,000 Cycles 1,000,000 Cycles	D150-65T		0.06 0.04 0.02
Loss Factor 60 Cycles 1,000 Cycles 1,000,000 Cycles	D150-65T		0.21 0.13 0.06
Arc Resistance	D495-61		No Tracking
Volume Resistivity	D257-66	ohm-cm	$1.6 \times 10^{16}$
Surface Resistivity	D257-66	ohms	$1.9 \times 10^{15}$

**Notes:**

- Data given are average values and should not be used for specification purposes.
- ① All values shown are for .250" thickness **PLEXI-VIEW® ACRYLIC** unless noted otherwise.  
Some values will change with thickness.  
Difference in length and width, as measured at room temperature, before and after heating above 300° F.
- ③ Temperature varies with thickness.
- ④ The K-Factor is an inherent property of the material and is independent of its thickness.



These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee as conditions and methods of use are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale.