

**lucitelux** Museum Grade Technical Bulletin

		Test Method	Typical Value <sup>(a)</sup>		
<b>General</b>	Specific Gravity	ASTM D792	1.19		
<b>Mechanical</b>	Tensile Strength ❖ % Elongation @ break ❖ Modulus of elasticity ❖ % Elongation @ yield	ASTM D638	11,000 psi 7.6% 465,000 psi 6.0%		
	Flexural Strength Flexural modulus (tangent)	ASTM D790	14,700 psi 461,000 psi		
	Impact Strength ❖ Compressive strength (x-y plane) ❖ Compressive stress @ yield ❖ Compressive modulus ❖ Charpy (un-notched) ❖ Charpy (notched) ❖ Shear Strength (punch tool) ❖ Izod (procedure A)	ASTM D695  ASTM D256 ASTM D6110 ASTM D732 ASTM D256	83,300 psi 18,000 psi 279,000 psi 5.0 ft lb/in/in 20.8 J/m 11,200 psi 0.32 ft-lb. / in.		
	Rockwell Hardness	ASTM D785	M-92		
	Residual Shrinkage (b) (Internal Strength)	ASTM D702	2.5 % maximum		
	<b>Optical</b>	Refractive Index	ASTM D542	1.49	
		% Light Transmission (visible)	ASTM D1003	92	
	% UV Transmission ( $\lambda$ 280- 400 nm) (c )		$\lambda$ 280 nm 300 nm 320 nm 340 nm 360 nm 380 nm 400 nm	%UVT < 0.012 < 0.012 < 0.017 < 0.014 < 0.017 < 0.035 < 2.00	
	Haze	ASTM D1003	Less than 1%		
	Surface Abrasion Resistance (d) (Taber , CS-10)	ASTM D1044	500 cycles : < 1% 1000 cycles: <2%		
<b>Thermal</b>	Maximum Continuous Service Temperature		175°F (e)		
	Coefficient of Thermal Conductivity		1.45 Btu in./ft <sup>2</sup> hr. °F		
	Deflection Temperature under load, 264 psi	ASTM D648	200°F		
	Hot Forming Temperature		280°-340°F (138°-170°C)		
	Coefficient of Linear Thermal Expansion	ASTM D696	3.5 E-05 in/in/°F		
	Specific Heat		0.35 Btu/ lb (°F)		

<b>Electrical</b>	D-C Resistance ❖ Volume Resistivity ❖ Surface Resistivity	ASTM D257	>3.912E+15 $\Omega$ /cm > 5.237E+15 $\Omega$ /sq
	Dielectric Strength (2000v/sec)	ASTM D149	354 V/mil
	Dielectric Constant, k' ❖ 60 Hz ❖ 1 KHz ❖ 1MHz Dissipation Factor, D ❖ 60Hz ❖ 1KHz ❖ 1MHz	ASTM D150	3.3 3.0 2.7 0.06 0.04 0.02
	Arc Resistance	ASTM D495	No tracking
<b>Combustibility</b>	Smoke Density Rating Tunnel Test (smoke developed)	ASTM D2843 ASTM E84	13.5% 385
	Rate of Flame Spread	ASTM E84	140
	Fuel contribution factor	-	11,300 Btu/lb
	Ignition temperature	ASTM D1929	750°F (399°C)
	Radiant Panel, Flame spread index	ASTM E162	219
	Horizontal Burn	ASTM D635	1.18 in. /min.
	UL Horizontal Burn Rating	UL94	94 HB
<b>Miscellaneous</b>			
Water Absorption	24 hrs @ 23°C 2 hrs boiling water immersion	ASTM D570	0.2% 0.6%
	Soluble Matter Lost (post immersion)	ASTM D570	nil
	Odour	-	nil

Notes:

- Values provided should not be used for specification purposes. Some values will vary with sheet thickness.
- Measured at room temperature before and after heating above 300° F.
- % UVT based on average wavelength values for .118" and .177" Museum Grade sheet
- Numerical values indicate % light transmission loss after indicated cycles.
- It is recommended that temperatures not exceed 180°F for continuous Service.

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