

**lucitelux** Spectrum 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-100	
	Residual Shrinkage (b) (Internal Strength)	ASTM D702	2.5 % maximum	
	Surface Abrasion Resistance (c) (Taber , CS-10)	ASTM D1044	500 cycles : < 1% 1000 cycles: <2%	
	<b>Optical</b>	Light Transmission, Total (e)	ASTM D1003	62%
		Haze (e)	ASTM D1003	99%
	Yellowness index (YI) (e)		-0.3	
<b>Thermal</b>	Maximum Continuous Service Temperature(e)		173°F (d)	
	Coefficient of Thermal Conductivity		1.45 Btu in./ft <sup>2</sup> hr. °F	
	Deflection Temperature under load, 264 psi(e)	ASTM D648	198°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 Ω/cm > 5.237E+15 Ω/sq.	
	Dielectric Strength (2000v/sec) ❖	ASTM D149	354 V/mil	
	<b>Dielectric Constant, k'</b> ❖ 60 Hz ❖ 1 KHz ❖ 1MHz <b>Dissipation Factor, D</b> ❖ 60Hz ❖ 1KHz ❖ 1MHz <b>Arc Resistance</b>	<b>ASTM D150</b>      <b>ASTM D495</b>	<b>3.3</b> <b>3.0</b> <b>2.7</b>  <b>0.06</b> <b>0.04</b> <b>0.02</b> <b>No tracking</b>	

<b>Combustibility</b>	Smoke Density Rating Tunnel Test (smoke developed)	ASTM D2843	13.5%
	❖ 0.118" ❖ 0.236"	ASTM E84	385 530
	Rate of Flame Spread	ASTM E84	
	❖ 0.118" ❖ 0.236"		140 110
	Fuel contribution factor	-	11,300 Btu/lb.
	Ignition temperature	ASTM D1929	750°F (399°C)
	Radiant Panel, Flame spread index	ASTM E162	
	❖ 0.118" ❖ 0.236"		219 249
	Horizontal Burn		
	❖ 0.118" 0.236"	ASTM D635	1.18 in./min. 0.65 in./min
	❖ UL Horizontal Burn Rating	UL94	94 HB (f1); (f2)
<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
	Dimensional tolerances, inches		
	❖ Length – width ❖ Squareness ( Δ in length of diagonal)		+1/4" – 0" ≤ 1/4"

This material complies with the requirements for Class C-2 (Dade County, FL) and Class CC-2 (ICBO) which indicates an average burning rate greater than 1 in. /min. and less than 2.5 in. /min.

**Notes:**

- a) Values provided should not be used for specification purposes. Some values will vary with sheet thickness.
- b) Measured at room temperature before and after heating above 300° F.
- c) Numerical values indicate % light transmission loss after indicated cycles.
- d) It is recommended that temperatures not exceed 180°F for continuous service
- e) Values based on 0.118" WT2448

**\*All test performed on 0.118" thick, clear acrylic, unless otherwise noted.**

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