

lucitelux EcoShade™ Technical Bulletin

	Test Method	Typical Value	Units
General			
Nominal thickness	-	.118/ .177	inches
Specific Gravity	ASTM D792	1.19	g/cm ³
Optical			
Light Transmission ¹ (400 – 700 nm)	ASTM D1003	52	%
Solar Energy Reflectivity ²	-	75	%
Mechanical			
Tensile Strength			
Rupture	ASTM D638	11,000	psi
Modulus		564,000	psi
Elongation		4.1	%
Flexural Strength	ASTM D790		
Rupture		14,800	psi
Modulus		450,000	psi
Compressive Strength	ASTM D695		
Yield		14,800	psi
Modulus		279,000	psi
Shear Strength	ASTM D732	8,400	psi
Impact Strength	ASTM D256	5.0	ft.lb/in. ²
Charpy (unnotched)			
Rockwell Hardness	ASTM D785	92	M scale
Thermal			
Solar Heat Gain Coefficient (SHGC) ³		0.43 – 0.47	%
Heat Forming Temperature	-	275-350	°F
HDTUL (load -264 psi)	ASTM D648	200	°F
Coefficient of Linear Thermal Expansion (avg.) ³	ASTM D696	3.9x10 ⁻⁵	in./in./ °F
Coefficient of Thermal Conductivity	-	1.45	Btu in. /ft ² hr. °F
Residual Shrinkage ⁴ (internal strength)	-	2.5	%
Max. Continuous Service Temperature	-	180	°F
Specific Heat (@ 77 °F)	-	0.35	Btu/(lb.)(°F)
Electrical			
Surface Resistivity (82°F/ 75% RH)	ASTM D257	>10 ¹⁴	Ω
Volume Resistivity	ASTM D257	4 x 10 ¹¹	Ω/mil
Dielectric Strength (short time test)	ASTM D149	0.42	kv/mil
Dielectric Constant			
60 cycles	ASTM D150	4	k'
10 ³ cycles		3	k'
10 ⁶ cycles		3	k'
Dissipation Factor	ASTM D150		
60 cycles		0.06	
10 ³ cycles		0.04	
10 ⁶ cycles		0.02	
Arc Resistance	ASTM D495	No tracking	

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Combustibility (0.118")*			
Smoke Density Rating	ASTM D2843	13.5	%
Tunnel Test (smoke developed index)	ASTM E84	385	
Flame Spread Index	ASTM E84	140	
Fuel contribution factor	-	11,300	Btu/lb.
Auto Ignition Temperature	ASTM D1929	750	°F
Surface Flammability (radiant panel index)	ASTM E162	219	
Rate/ Extent of Burn	ASTM D635	1.18	in. /min.
UL Horizontal Burn rating	UL94	Pass	94HB
Miscellaneous			
Water Absorption (24hr immersion)	ASTM D570	0.29	%
Soluble matter lost (post immersion)	ASTM D570	0.0	%
Odor	-	none detected	

Note: Results quoted for the physical properties of Lucite® EcoShade™ are typical / average values and should not be used for specification purposes

- 1) %LT value refers to transmittance in the visible range of the spectrum.
- 2) %Solar energy reflecting value refers to an average obtained from lab test results on representative samples. (Subject to revision)
- 3) %SHGC is estimated value based on laboratory product specifications, not confirmed by NFRC
- 4) This value changes with thickness. Reported value represents 0.236" std. LuciteLux.
- 5) Change in dimensions = coefficient x (dimension of sheet) x (change in temperature)

* Lucite® EcoShade™ continuous cast acrylic sheet is combustible like many other synthetic and natural building materials. Small scale tests are not intended to reflect hazards under actual fire conditions.

The information and recommendations in this publication are, to the best of our knowledge, reliable. Users should make their own tests to determine the suitability of these products for their own particular purpose.

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Heat Reflection Ability of Eco Shade

