

OPTIX[®] L ECOSHADE

OPTIX L Ecoshade continuous cast sheet reflects more than 75% of infrared radiation present in sunlight. This IR reflective sheet reduces heat transmitted through windows and skylights in the summer and decreases heat loss in the winter. OPTIX L Ecoshade is a translucent sheet that changes from iridescent blue to gold when viewed at different angles.

OPTIX L Ecoshade is available in 0.118" – 0.177" and can be used either for interior or exterior applications. Maximum length and width is 108"x 108.25"

APPLICATIONS

Skylights, windows, doors and partitions

TYPICAL PROPERTIES*

Property	Test Method	Units	Values
PHYSICAL			
Specific Gravity	ASTM D792	-	1.19
Water Absorption 24 hrs @ 23°C	ASTM D570	%	0.2
2 hrs boiling water immersion		%	0.6
MECHANICAL			
Tensile Strength	ASTM D638	psi	11,000
% Elongation @ Break		%	7.6
Modulus of Elasticity		psi	465,000
% Elongation @ Yield		%	6.0
Flexural Strength		psi	14,700
Flexural Modulus	ASTM D790	psi	461,000
Impact Strength			
Compressive Strength (x-y plane)	ASTM D695	psi	83,300
Compressive Stress @ Yield		psi	18,000
Compressive Modulus		psi	279,000
Charpy (un-notched)	ASTM D256	ft-lb/in/in	5.0
Charpy (notched)	ASTM D6110	J/m	20.8
Shear Strength (punch tool)	ASTM D732	psi	11,200
Izod (procedure A)	ASTM D256	ft-lb/in	0.32
Rockwell Hardness	ASTM D785		M-100
Residual Shrinkage (Internal Strength)	ASTM D702	%	2.5 maximum
OPTICAL			
Refractive Index	ASTM D542	-	1.49
Light Transmission ¹ (400 - 700 nm)	ASTM D1003	%	52
Solar Energy Reflectivity ²	-	%	75
THERMAL			
Maximum Continuous Service Temperature	-	°F	175
Coefficient of Thermal Conductivity	-	Btu-in/ft ² / hr/°F	1.45
Deflection Temperature Under Load, 264 psi	ASTM D648	°F	200
Coefficient of Linear Thermal Expansion	ASTM D696	in/in/°F	3.5 E ⁻⁰⁵
Solar Heat Gain Coefficient (SHGC) ³	-	%	0.43 - 0.47
Specific Heat	-	Btu/lb/°F	0.35
Smoke Density Rating	ASTM D2843	%	13.5
Smoke Developed Index	ASTM E84	-	750
Flame Spread Index	ASTM E84	-	95
Specific Energy	-	Btu/lb	11,300
Self Ignition Temperature	ASTM D1929	°F	750
Radiant Panel, Flame Spread index	ASTM E162	-	155
Horizontal Burn	ASTM D635	in./min.	0.71
UL Horizontal Burn Rating	UL94	-	HB
ELECTRICAL			
Volume Resistivity	ASTM D257	Ohm/cm	>3.912E ⁺¹⁵
Surface Resistivity	ASTM D257	Ohm/sq	> 5.237E ⁺¹⁵
Dielectric Strength (2000v/sec)	ASTM D149	V/mil	354
Dielectric Constant, k			
60 Hz		Hz	3.3
1 KHz	ASTM D150	Hz	3.0
1 MHz		Hz	2.7
Dissipation Factor, D			
60 Hz		Hz	0.06
1 KHz		Hz	0.04
1 MHz		Hz	0.02
Arc Resistance	ASTM D495	-	No tracking

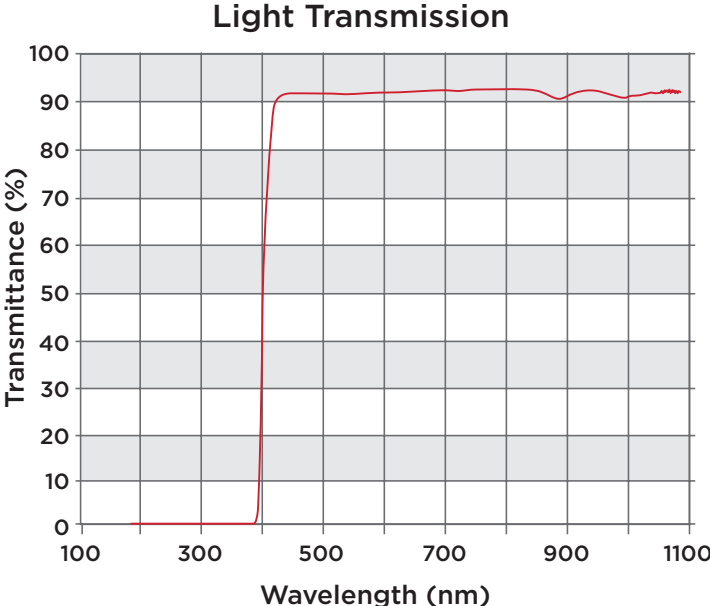
*All listed test values are on 0.236" thickness

1 - refers to transmittance in the visible range of the spectrum

2 - % solar energy reflecting value refers to an average obtained from lab tests on representative samples

3 - % SHGC is an estimated value based on laboratory product specifications, not confirmed by NFRC (National Fenestration Rating Council)

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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 determines the suitability of our materials and suggestions before adopting them on a commercial scale.

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