

OPTIX[®]

LIGHT DIFFUSION
Substrate Solutions



Plaskolite's line of OPTIX light diffusing acrylic sheet products includes both textured and smooth surface finishes. Designed specifically for use with LED lights, they have excellent diffusion properties and effectively eliminate LED pinpoints. Lightweight and easily fabricated, OPTIX LD sheet products are the ideal choice for a variety of lighting, signage and POP display applications.

OPTIX[®] LD

- Soft satin texture on one side
- Available in a thickness range from .060" to .236"
- >92% light transmission
- >95% haze

OPTIX[®] FROST LD

- Soft satin texture on two sides
- Available in a thickness range from .080" to .118"
- 87% light transmission
- >95% haze

OPTIX[®] LD 2406 WHITE

- Smooth finish on both sides
- Ideal for use with laminates and vinyl graphics
- Ultra bright

Contact Piedmont Plastics for custom thickness and sheet size availability

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Piedmont Plastics[®]

where solutions take shape

301.881.7900 local • 800.638.6651 toll free
7045 Troy Hill Drive, Suite 450 • Elkridge, MD 21075
www.piedmontplastics.com

Physical Properties

Physical Properties	ASTM Test Method	Units	Values
Specific Gravity	D-792		1.19
Optical Refractive Index	D-542		1.49
Sound Transmission	E 90 E 413	db	27
Water Absorption	D-570	% By wt	0.4
Shrinkage	D-702	%	<5

Mechanical Properties			
Tensile Strength	D-638	psi	11,030
Tensile Elongation – Max.		%	5.8
Tensile Modulus of Elasticity		psi	490,000
Flexural Strength	D-790	psi	17,000
Flexural Modulus of Elasticity		psi	490,000
Izod Impact Strength – Molded Notch	D-256	ft-lb/in Notch	0.4
Izod Impact Strength – Milled Notch		ft-lb/in Notch	0.28
Tensile Impact Strength	D-1822	ft-lb/in ²	20
Abrasion Resistance	D-1044	Haze, %	0
Change in Haze			11.2
0 cycles			24.0
10 cycles			24.9
50 cycles			
200 cycles			
Rockwell Hardness	D-785		M-95

Thermal Properties	ASTM Test Method	Units	Values
Maximum Recommended Continuous Service Temperature		°F	170-190
Softening Temperature		°F	210-220
Melting Temperature		°F	300-315
Deflection Temperature 264 psi 66 psi	D-648	°F	203 207
Coefficient of Thermal Expansion – 30 to 30°C	D-696	in/(in-°F) x 10 ⁻⁵	3.0
Thermal Conductivity	C-177	BTU-ft/(hr-ft ² -°F)	0.075
Flammability (Burning Rate)	D-635	In/minute	1.019
Smoke Density Rating	D-2843	%	3.4
Self-Ignition Temperature	D-1929	°F	833
Flame Spread Index	E-84		115
Smoke Developed Index			550

Chemical			
Resistance to Stress – Critical Crazing Stress to:	ARTC modification of MIL-P-6997		
Isopropyl Alcohol		psi	900
Lacquer Thinner		psi	500
Toluene		psi	1,300
Solvesso 100		psi	1,600

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.

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