

# OPTIX® ACRYLIC SHEET

Optix® is the tradename for Plaskolite's continuously processed, high quality acrylic sheet. Optix acrylic sheet is ideal for almost any fabrication or glazing application. Optix exceeds industry standards for quality and safety and its impact-resistance will prohibit the sheet from shattering into sharp edged pieces like glass. Special U.V. stabilization protects the sheet from yellowing and it's backed by a ten year limited warranty.



Primary applications for Optix include fabrication, picture framing, skylights, displays, signage, lighting and point of purchase.

Optix acrylic is available in colored, impact modified, green edged and patterned sheet. For fabricating convenience, Optix Acrylic Sheet can be ordered in custom sizes and thicknesses using Plaskolite's "Run-to-Size"

program. For more information on Optix Acrylic Sheet, call 1-800-848-9124.

## What to expect from Optix Acrylic Sheet

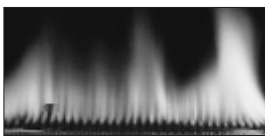
### Physical Properties

Optix® acrylic sheet is crystal clear, durable, weather-resistant and lightweight for easy transport and storage. It also offers the advantages of high molecular weight for ease of fabrication, low heat loss for economy and an attractive clear edge color.

Optix acrylic sheet is available in a variety of colors, non-glare, patterned, translucent and transparent colors. It is produced in thicknesses ranging from .040" to 1.0" and sheet widths up to 104".

### Safety Concerns

Optix acrylic sheet is a combustible thermoplastic. Acrylic sheet will ignite and burn if placed in an open flame or in contact with any other source of ignition. When working or storing Optix acrylic sheet, please be aware of the thermoplastic properties and take into consideration fire precautions.



### Sheet Tolerances (on line)

Optix acrylic sheet is produced to tolerances of  $\pm 1/16$ " length and width on sizes 42" and smaller. Sheet sizes greater than 42" up to 60" are produced to length and width tolerances of  $\pm 3/32$ ". All sheet sizes greater than 60" produced to length and width tolerances of  $\pm 1/8$ ". (-0, +1/4 on 48" x 96" stock sizes and above.)

### Sheet Squareness (on line)

Optix acrylic sheet is produced to squareness tolerances of  $\pm 1/8$ " on sizes 42" and smaller. Sheet sizes greater than 42" to 60" squareness is  $\pm 3/16$  and sheet sizes greater than 60" squareness is  $\pm 1/4$ .



### Sheet Thickness

Optix acrylic sheet is produced within industry standards of  $\pm 10\%$  on thickness. Minimum thicknesses available. Call for quotation and production minimums.

### Run-to-Size Sheet

Custom sizes, thicknesses, colors, masking and packaging are available upon request. Call for price quotation, production minimums and delivery information.

### Sheet Edges

Edges are supplied slit, hot sheered and saw cut.

### Sheet Masking

Optix acrylic sheet in .060"-.118" thicknesses and above are stocked with a 2mil static cling blue polyethylene masking on two sides. .080"-.100" is stocked with a 1mil static cling white polyethylene masking on two sides. Papermasking and papermask replacement film are available upon request.

# Optix® Acrylic Sheet Properties



Physical Properties	ASTM Test Method	Units	Values
Specific Gravity	D-792		1.19
Optical Refractive Index	D-542		1.49
Light Transmittance Total Haze	D-1003	% %	92 2
Sound Transmission	E 90 E 413	db	27
Water Absorption	D-570	% By Weight	0.40
Shrinkage	D-702	% Shrinkage	<5%

Mechanical			
Tensile Strength - Max. Tensile Elongation - Max. Tensile Modulus of Elasticity	D-638	psi % psi	11,030 5.8 490,000
Flexural Strength - Max. Flexural Modulus of Elasticity	D-790	psi psi	17,000 490,000
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 <sup>2</sup>	20
Abrasion Resistance Change in Haze 0 cycles 10 cycles 50 cycles 200 cycles	D-1044	Haze, % Haze, % Haze, % Haze, %	0 11.2 24.0 24.9
Rockwell Hardness	D-785		M-95

Thermal	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 °F	203 207
Coefficient of Thermal Expansion -30 to 30°C	D-696	in/(in-°F) x10 <sup>-5</sup>	3.0
Thermal Conductivity	C-177	BTU-ft/ (hr-ft <sup>2</sup> -°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 Craze Stress to:  Isopropyl Alcohol Lacquer Thinner Toluene Solvesso 100	ARTC modification of MIL-P-6997	psi psi psi psi	900 500 1,300 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.

## PLASKOLITE, INC.

P.O. Box 1497 • Columbus, Ohio 43216  
614/294-3281 • FAX: 877/538-0754  
Email: [plaskolite@plaskolite.com](mailto:plaskolite@plaskolite.com)  
[www.plaskolite.com](http://www.plaskolite.com)

1-800-848-9124