



Two formats for optimum sign production flexibility.

Plaskolite's OPTIX and DURAPLEX branded acrylic products are both available in roll stock and acrylic sheet. Plaskolite's roll stock provides you with added convenience and value with reduced operating costs, efficient inventory space utilization, better total sheet usage and less seams and joints in your finished products. Plaskolite acrylic sheet is offered in a wide range of sizes and thicknesses to best fit your production specifications.

When optical characteristics are critical, choose Optix. Optix is a continuously processed, high quality acrylic product that is crystal clear, impact resistant and five times stronger than glass. Optix is also inherently UV stable, non-yellowing and is available in roll stock or acrylic sheet.



For further design flexibility and increased durability, Plaskolite offers Duraplex. Duraplex impact modified acrylic is your economical alternative to polycarbonate. It is shatter/impact resistant, optically clear, comes in varying impact levels and is produced in a variety of sizes and thicknesses. Additionally, its wide range of forming temperatures and short forming cycles afford enhanced thermoforming capabilities not available in polycarbonate.



Optix and Duraplex are registered trademarks of Plaskolite, Inc.

World's largest privately owned manufacturer of continuously processed acrylic.

Combining time-honored traditions of trust and dependability with unparalleled technology.

Supplier of choice for acrylic, styrene, and mirrored acrylic sheet.

Exclusive producer of Optix acrylic for signage, lighting, point-of-purchase skylights and displays.

Offering Duraplex impact modified acrylic for signage and displays—guaranteed to weather the tests of time.

Able to meet your size, tolerance, currency, packing and shipping requirements.

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Sign grade acrylic flat sheet and roll stock that weather the tests of time.

Plaskolite acrylic—your optimum choice for sign fabrication material.

For over 50 years, Plaskolite has been providing the highest quality acrylic to sign fabrication shops throughout North America. Today, you can trust Plaskolite to produce the acrylic products that sign shops prefer due to its unparalleled performance characteristics that include:

- Unsurpassed weatherability
- Inherent UV stability
- Outstanding durability
- Production flexibility with roll stock and acrylic sheet
- Cost efficiencies
- Ease of fabrication
- Excellent clarity
- Size compatibility

Scratch resistant coating adds even greater sign durability.

Plaskolite offers a high-quality, scratch-resistant coating for those demanding applications requiring abrasion, stain and solvent resistance. Safer than glass and more economical than competitive products, Plaskolite acrylic with scratch-resistant coating is ideal for applications such as signs, retail displays, tabletops, door panels and other high traffic surfaces where the acrylic will be exposed.

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ACRYLIC THAT WEATHERS THE TESTS OF TIME

Processing and Handling Tips Plaskolite Sign Grade Acrylic Sheet

Forming
SG Sheet forms at approximately 50° to 60°F lower than that of cast acrylic with optimum range between 280° to 320°F.

Orientation
When heated to forming temperature, SG sheet will exhibit mild shrinkage in the extrusion direction, but not in the cross-extrusion direction. Cast sheet, depending on the manufacturer, may exhibit shrinkage from 0% to 2% in both directions.

Sheet		Shrinkage (%)	
Thickness	Extrusion Direction	Cross Extrusion Direction	
3/16"	2±1	0±0.5	
1/4"	1±1	0±0.5	

Painting
SG Sheet can be easily painted, however, it is susceptible to attack by aromatic solvents such as Toluene, Xylene, or Ketones.

Recommended Paint Systems:

Grip Flex	Lacryl
FR-1 (Screen)	800 Series (Screen)
FR-2 (Spray)	400 Series (Spray)
T-2003, T-2004, T-2005 (Thinner)	200-T, 201-T, 205-T (Thinner)
T-4000 (Cleaner)	206-T (Cleaner)

Prolonged contact with thinners and cleaners may cause crazing.

Recommended UV Ink:

Nazdar - Phone (800) 767-9942

Recommended Adhesives:

Adhesives listed below are recommended for use with SG Sheet products. However, adhesives should be tested prior to full-scale use.

Weld-On #3 Quick-set, good bond strength, most aggressive. Avoid use in high stress areas.

Weld-On #5 Set slightly slower than #3. Good bond strength. Most recommended.

Weld-On #16 Fast-drying, high strength.

Weld-On #40 Reactive gluing system. Good for bonding SG Sheet to other materials such as cell cast acrylic, polystyrene, PVC, butyrate and wood.

Colors:	Clear, 2447 White & 7328 White
Thickness:	.118" - .236"
Available Widths:	30" - 105"
For custom sign grade materials call for availability, quotation and delivery information.	

SIGN GRADE ACRYLIC SHEET

Property	ASTM	UNITS	OPTIX [®]	DURAPLEX [®]	
			SG	SG-05	SG-10
Optical Light Transmission Percent Haze	D-1003 D-1003	% %	92 2	92 2	90 <3
Mechanical Izod Impact Strength (73°F) (0°F) Tensile Modules of Elasticity Tensile Strength @ Yield Flexural Strength @ Yield Rockwell Hardness Method A	D-256 D-256 D-638 D-638 D-790 D-785	ft.-lbs./in. ft.-lbs./in. PSI PSI PSI PSI	0.4 0.2 490,000 11,030 17,000 95	0.7 0.2 340,000 8,000 12,000 68	1.1 0.5 250,000 5,600 8,300 46
Thermal Deflection Temperature (264psi) Coefficient of Thermal Expansion Self Ignition Temperature Burning Rate Smoke Density Rating	D-648 D-696 D-1929 D-635 D-2843	°F in./(in.-°F) °F in./min. %	203 2.3 x 10 ⁻⁵ 833 1.019 3.4	194 4 x 10 ⁻⁵ >850 1.25 8.50	185 5 x 10 ⁻⁵ >850 1.97 16.5
Processing Density Moisture Dimensional	D-792 D-570 D-955	Specific Gravity Water Absorption Molding Shrinkage %	1.19 0.4 2 - 6	1.17 0.3 3 - 6	1.15 0.3 3 - 6

SUGGESTED THERMOFORMING CONDITIONS

Condition	UNITS	OPTIX [®]	DURAPLEX [®]		Cast Acrylic
		SG	SG-05	SG-10	
Thermoforming for Sheet Thickness 0.100" to 0.375"					
Optimal Forming Temperature	°F	320	315	310	380
Forming Temperature Range	°F	270-350	270-350	270-350	350-390
Heating Time	Minutes	1 - 10	1 - 10	1 - 10	2 - 25
Two Sided Infrared					
Cooling Time	Minutes	0.5 - 4	0.5 - 4	0.5 - 4	1 - 7
Optimal Mold Temperature	°F	180	175	170	190
Free Shrinkage at Forming Temperature					
Machine Direction	%	1 - 3	1 - 3	1 - 3	0 - 2
Transfer Direction	%	0	0	0	0 - 2

GENERAL COMPARISON CHART FOR RIGID SIGN PLASTICS - PRINCIPLE PHYSICAL PROPERTIES

Properties	OPTIX [®] General Purpose Acrylic		DURAPLEX [®] Impact Modified Acrylic			Poly-Carbonate
	Optix SG	Cell Cast	Cont. Cast	Duraplex SG-05	Duraplex SG-10	
1) Optical Appearance	Superior	Superior	Very Good	Very Good	Very Good	Very Good
2) Optical Appearance After Weathering	Superior	Superior	Very Good	Very Good	Very Good	Fair
3) Impact Resistance	Fair	Fair	Good	Good	Excellent	Superior
4) Scratch Resistance	Excellent	Excellent	Very Good	Good	Fair	Fair
5) Chemical Resistance	Fair	Excellent	Good	Fair	Good	Very Good
6) Machining (Route/Saw)	Good	Excellent	Very Good	Good	Superior	Good
7) Heat Resistance	Very Good	Excellent	Very Good	Good	Fair	Superior

GENERAL COMPARISON CHART FOR RIGID SIGN PLASTICS - THERMOFORMING

Properties	OPTIX [®] General Purpose Acrylic		DURAPLEX [®] Impact Modified Acrylic			Poly-Carbonate
	Optix SG	Cell Cast	Cont. Cast	Duraplex SG-05	Duraplex SG-10	
1) Optimal Forming Temp	Low	High	High	Low	Low High	Very
2) Processing Window	Wide	Wide	Narrow	Wide	Wide	Narrow
3) Predrying	No	No	No	No	No	Always
4) Melt Strength	Low	High	Moderate	Low	Moderate	Low
5) Hot Sticking	High	Low	Low	High	Moderate	Moderate
6) Shrinkage	Linear Low	Symmetrical Very Low	Symmetrical Very Low	Linear Low	Linear Low	Linear High
7) Heating Time (I.R.)	Short	Moderate	Long	Short	Short	Long
8) Stiffening Rate for Part Removal	Very Fast	Slowest	Slow	Fast	Fast	Fastest
9) Vacuum Definition	High	Lowest	Low	High	High	High

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.