

# PLASKOLITE

## OPTIX SG Acrylic Sheet

### Typical Properties

Physical	TEST METHOD	UNITS	DURAPLEX OPTIX SG05 (50%)	DURAPLEX OPTIX SG10 (100%)	OPTIX
Specific Gravity/Relative Density	ASTM D792		1.17	1.15	1.19
Light Transmission -Total	ASTM D1003	%	92	90	92
Light Transmission - Haze	ASTM D1003	%	2	>3	2
Water Absorption	ASTM D570	%	0.3	0.3	0.4
Mold Shrinkage	ASTM D955	mils/in	3-6	3-6	2-6
Optical Refractive Index	ASTM D542		1.49		
Sound Transmission	ASTM E90 / E413	dB	27		

Mechanical	TEST METHOD	UNITS	DURAPLEX OPTIX SG05 (50%)	DURAPLEX OPTIX SG10 (100%)	OPTIX
Tensile Strength	ASTM D638	psi	8,000	5,600	11,030
Tensile Modulus of Elasticity	ASTM D638	psi	340,000	250,000	490,000
Flexural Strength	ASTM D790	psi	12,000	8,300	17,000
Izod Impact Strength – Molded Notch	ASTM D256	ft-lb/in Notch	0.7	1.1	0.4
Ball Drop Impact			Pass	Pass	
Rockwell Hardness	ASTM D785		M-68	M-46	M-95
Tensile Elongation – Max.	ASTM D638	%	5.8		
Flexural Modulus of Elasticity	ASTM D790	psi	490,000		
Izod Impact Strength – Milled Notch	ASTM D256	ft-lb/in Notch	0.28		
Tensile Impact Strength	ASTM D1822	ft-lb/in <sup>2</sup>	20		
Abrasion Resistance - Change in Haze - 0 cycles	ASTM D1044	Haze, %	0		
Abrasion Resistance - Change in Haze - 10 cycles	ASTM D1044	Haze, %	11.2		
Abrasion Resistance - Change in Haze - 50 cycles	ASTM D1044	Haze, %	24		
Abrasion Resistance - Change in Haze - 200 cycles	ASTM D1044	Haze, %	24.9		

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.

Questions? Please contact Plaskolite Customer Support 800-848-9124

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Thermal	TEST METHOD	UNITS	DURAPLEX OPTIX SG05 (50%)	DURAPLEX OPTIX SG10 (100%)	OPTIX
Deflection Temperature @ 264 psi (1.8 MPa)	ASTM D648	°F	194	185	203
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	4x10 <sup>-5</sup>	5x10 <sup>-5</sup>	3.0x10 <sup>-5</sup>
Flammability (Burning Rate)	ASTM D635	in/minute	1.25	1.97	1.019
Flammability	UL 94		HB	HB	HB
Smoke Density Rating	ASTM D2843	%	8.5	16.5	3.4
Self-Ignition Temperature	ASTM D1929	°F	>850	>850	833
Maximum Recommended Continuous Service Temperature		°F	170-190		
Softening Temperature		°F	210-220		
Melting Temperature		°F	300-315		
Deflection Temperature @ 66 psi (0.45 MPa)	ASTM D648	°F	207		
Thermal Conductivity	ASTM C177	BTU-ft/ft <sup>2</sup> /hr/°F	0.075		
Flame Spread Index	ASTM E84		115		
Smoke Developed Index	ASTM E84		550		

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