

# PLASKOLITE

## SG Acrylic

Physical	TEST METHOD	UNITS	DURAPLEX OPTIX SG05 (50%)	DURAPLEX OPTIX SG10 (100%)	OPTIX
Light Transmission - Haze	ASTM D-1003	%	2	>3	2
Light Transmission - Total	ASTM D-1003	%	92	90	92
Specific Gravity/Relative Density	ASTM D-792		1.17	1.15	1.19
Mold Shrinkage	ASTM D-955	mils/in	3-6	3-6	2-6
Water Absorption	ASTM D-570	% By wt	0.3	0.3	0.4
Optical Refractive Index	ASTM D-542		1.49		
Sound Transmission	ASTM E90 / E413	db	27		

Thermal	TEST METHOD	UNITS	DURAPLEX OPTIX SG05 (50%)	DURAPLEX OPTIX SG10 (100%)	OPTIX
Coefficient of Thermal Expansion	ASTM D-696	in/(in-°F) x 10 <sup>-5</sup>	4	5	3.0
Smoke Density Rating	ASTM D-2843	%	8.5	16.5	3.4
Flammability	UL 94		HB	HB	HB
Flammability (Burning Rate)	ASTM D-635	In/minute	1.25	1.97	1.019
Self-Ignition Temperature	ASTM D-1929	°F	>850	>850	833
Deflection Temperature @ 264 psi (1.8 MPa)	ASTM D-648	°F	194	185	203
Thermal Conductivity	ASTM C-177	BTU-ft/(hr-ft <sup>2</sup> -°F)	0.075		
Flame Spread Index	ASTM E-84		115		
Melting Temperature		°F	300-315		
Deflection Temperature @ 66 psi (0.45 MPa)	ASTM D-648	°F	207		
Smoke Developed Index	ASTM E-84		550		
Softening Temperature		°F	210-220		
Melt Flow Rate	ASTM D-1238	g/10 min.	1.5		
Maximum Recommended Continuous Service Temperature		°F	170-190		

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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<b>Mechanical</b>	<b>TEST METHOD</b>	<b>UNITS</b>	<b>DURAPLEX OPTIX SG05 (50%)</b>	<b>DURAPLEX OPTIX SG10 (100%)</b>	<b>OPTIX</b>
Izod Impact Strength – Molded Notch	ASTM D-256	ft-lb/in Notch	0.7	1.1	0.4
Rockwell Hardness	ASTM D-785		M-68	M-46	M-95
Tensile Modulus of Elasticity	--	psi	340,000	250,000	490,000
Tensile Strength	ASTM D-638	psi	8,000	5,600	11,030
Ball Drop Impact			Pass	Pass	
Flexural Strength	ASTM D-790	psi	12,000	8,300	17,000
Flexural Modulus of Elasticity	ASTM D-790	psi	490,000		
Abrasion Resistance - Change in Haze - 50 cycles	ASTM D-1044	Haze, %	24		
Abrasion Resistance - Change in Haze - 200 cycles	ASTM D-1044	Haze, %	24.9		
Tensile Impact Strength	ASTM D-1822	ft-lb/in <sup>2</sup>	20		
Abrasion Resistance - Change in Haze - 10 cycles	ASTM D-1044	Haze, %	11.2		
Izod Impact Strength – Milled Notch	ASTM D-256	ft-lb/in Notch	0.28		
Abrasion Resistance - Change in Haze - 0 cycles	ASTM D-1044	Haze, %	0		
Tensile Elongation – Max.	ASTM D-638	%	5.8		

<b>Chemical</b>	<b>TEST METHOD</b>	<b>UNITS</b>	<b>DURAPLEX OPTIX SG05 (50%)</b>	<b>DURAPLEX OPTIX SG10 (100%)</b>	<b>OPTIX</b>
Resistance to Stress - Critical Crazing Stress to: Lacquer Thinner	ARTC Modification of MIL-P6997	psi	500		
Resistance to Stress - Critical Crazing Stress to: Toluene	ARTC Modification of MIL-P6997	psi	1,300		
Resistance to Stress - Critical Crazing Stress to: Isopropyl Alcohol	ARTC Modification of MIL-P6997	psi	900		
Resistance to Stress - Critical Crazing Stress to: Solvesso 100	ARTC Modification of MIL-P6997	psi	1,600		

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