Roll Stock 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^2	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		

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	$4x10^{-5}$	$5x10^{-5}$	$3.0x10^{-5}$
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^2/hr/°F	0.075		
Flame Spread Index	ASTM E84		115		
Smoke Developed Index	ASTM E84		550		

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