



DuraPlex (Plaskolite)

Impact Modified Acrylic Flat Sheet

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PROPERTY	ASTM	UNITS	OPTIX [®]	DURAPLEX [®]			
				30% I	50% I	70% I	100% I
Optical							
Light Transmittance	D-1003	%	92	92	92	90	90
Percent Haze	D-1003	%	2	2	2	<3	<3
Mechanical							
Izod Impact Strength	D-256	ft.lbs./in.	0.4	0.6	0.7	0.9	1.1
Tensile Modulus of Elasticity	D-638	PSI	490,000	376,000	340,000	304,000	250,000
Tensile Strength @ Yield	D-638	PSI	11,030	9,000	8,000	7,100	5,600
Flexural Strength @ Yield	D-790	PSI	17,000	13,690	12,000	10,610	8,300
Rockwell Hardness Method A	D-785		95	78	68	59	46
Thermal							
Deflection Temperature (264psi)	D-648	°F	203	198	194	190	185
Coefficient of Thermal Expansion	D-696	in./in.-°F	3.0 x 10 ⁻⁵	3.5 x 10 ⁻⁵	4 x 10 ⁻⁵	4.5 x 10 ⁻⁵	5 x 10 ⁻⁵
Self Ignition Temperature	D-1929	°F	833	>850	>850	>850	>850
Burning Rate	D-635	in./min.	1.019	0.85	1.25	1.53	1.97
Smoke Density Rating	D-2843	%	3.4	5.20	8.50	11.5	16.5
Processing							
Density	D-792		1.19	1.18	1.17	1.16	1.15
Moisture	D-570	% wt. gain	0.4	0.3	0.3	0.3	0.3
Dimensional Molding Shrinkage	D-955	mils./in.	2 -6	3 -6	3 -6	3 -6	3 -6

These values are not intended for specification.

Duraplex/Polycarbonate Comparison		
Feature	Duraplex	Polycarbonate
Weatherability	Excellent weatherability with no impact reduction	Yellows when exposed to sunlight, lessens impact strength after exposure
Forming	Better melt strength	Low melt strength
Forming Temperature	Wide range (275°F-375°F)	Distinct forming temperature
Optical Clarity	Very clear	Less clear, hazy, shows distortion
Cost	40% less than polycarbonate	Expensive