IMPACT MODIFIED ACRYLIC

DURAPLEX®

Impact Modified Acrylic Flat Sheet

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			OPTIX®	DURAPLEX®			
PROPERTY	**ASTM**	**UNITS**		**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)	3.0×10^{-5}	3.5×10^{-5}	4×10^{-5}	4.5×10^{-5}	5×10^{-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 Specific Gravity	D-792		1.19	1.18	1.17	1.16	1.15
Moisture Water Absorption	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

Run-to-Size Available

PLASKOLITE, INC.
P.O. Box 1497 • Columbus, Ohio 43216
614/294-3281 • FAX: 877/538-0754
Email: plaskolite@plaskolite.com
www.plaskolite.com
1-800-848-9124

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