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Product Data

Impact Modified Acrylic Flat Sheet

Impact Modified Acrylic Sheet							
PROPERTY	ASTM	UNITS	OPTIX®	DURAPLEX®			
				30% I	50% I	70% I	100% I
Optical							
Light Transmission	D-1003	%	92	92	92	90	90
Percent Haze	D-1003	%	2	2	2	<3	<3
Mechanical							
Impact Strength Izod Impact (73°F)	D-256	ft.lbs./in.	0.4	0.6	0.7	0.9	1.1
(0°F)	D-256	ft.lbs./in.	0.2	0.2	0.2	0.3	0.5
Falling Dart	D-3029-GB (Unpainted, 73°F)	in.-lb.	4	17	30	45	60
Tensile Strength	D-638	PSI	430,000	376,000	340,000	304,000	250,000
Modulus	D-638	PSI	10,500	9,000	8,000	7,100	5,600
Strength @ Yield	D-790	PSI	16,000	13,690	12,000	10,610	8,300
Flexural Strength	D-785		96	78	68	59	46
Strength @ Yield							
Rockwell Hardness							
Method A							
Thermal							
Deflection Temperature (Annealed)	D-648 (264psi)	°F	208	200	194	188	180
Coefficient of Linear Thermal Expansion	D-696 (0-100°F, Avg.)	in./in.°F	3 x 10 ⁻⁵	3 x 10 ⁻⁵	4 x 10 ⁻⁵	4 x 10 ⁻⁵	5 x 10 ⁻⁵
Self Ignition Temperature	D-1929	°F	833°	<850°	<850°	<850°	<850°
Burn Rate	D-635-88 (0.177" Sheet)	in./min.	<0.5	0.85	1.25	1.53	1.97
Smoke Density Rating	D-2843 (0.177" Sheet)	%	.036	5.20	8.50	11.5	16.5
Processing							
Density	D-792		1.19	1.18	1.17	1.16	1.153
Specific Gravity	D-570	% wt. gain	0.3	0.3	0.3	0.3	0.3
Moisture	D-955	mils./in.	2 -6	3 -6	3 -6	3 -6	3 -6
Water Absorption							
Dimensional Molding Shrinkage							

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