



ROLL STOCK ACRYLIC

Roll Stock Sign Grade Acrylic Sheet

Physical Property & Performance Summary

Property	ASTM	UNITS	OPTIX® DURAPLEX®		
			SG	SG-05	SG-10
Optical					
Light Transmittance	D-1003	%	92	92	90
Percent Haze	D-1003	%	2	2	<3
Mechanical					
Izod Impact Strength	(73°F) D-256	ft.-lbs./in.	0.4	0.7	1.1
	(0°F) D-256	ft.-lbs./in.	0.2	0.2	0.5
Tensile Modulus of Elasticity	D-638	PSI	490,000	340,000	250,000
Tensile Strength @ Yield	D-638	PSI	11,030	8,000	5,600
Flexural Strength @ Yield	D-790	PSI	17,000	12,000	8,300
Rockwell Hardness	D-785		95	68	46
Thermal					
Deflection Temperature (264 psi)	D-648	°F	203	194	185
Coefficient of Thermal Expansion	D-696	in./in.-°F	3.0 x 10 ⁻⁵	4 x 10 ⁻⁵	5 x 10 ⁻⁵
Processing					
Density	Specific Gravity D-792		1.19	1.17	1.15
Moisture	Water Absorption D-570	% wt. gain	0.4	0.3	0.3
Dimensional	Molding Shrinkage D-955	mils./in.	2 - 6	3 - 6	3 - 6

Suggested Thermoforming Conditions

Property	UNITS	OPTIX® DURAPLEX®			Cast Acrylic
		SG	SG-05	SG-10	
Thermoforming for Sheet Thickness 0.100" to 0.375"					
Optimal Forming Temperature	°F	320	315	310	380
Forming Temperature Range	°F	270-350	270-350	270-350	350-390
Heating Time	Minutes	1 - 10	1 - 10	1 - 10	2 - 25
Two Sided Infrared					
Cooling Time	Minutes	0.5 - 4	0.5 - 4	0.5 - 4	1 - 7
Optimal Mold Temperature	°F	180	175	170	190
Free Shrinkage at Forming Temperature					
Machine Direction	%	1 - 3	1 - 3	1 - 3	0 - 2
Transfer Direction	%	0	0	0	0 - 2

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.