



# Acrylic Mirror Sheet Datasheet

## Bay Plastics Datasheet

Physical Properties	ASTM Test Method	Units	Value
Specific gravity	D 792		1.19
Optical refractive index	D 542		1.46
Light transmission	D 1003		
Total		%	92
Haze		%	2
Sound transmission	E 90 - 70	db	27
Water absorption	D 570	% by weight	0.40
Shrinkage	D 702	% shrinkage	<5%

Mechanical Properties	Test Method	Units	Value
Tensile strength - maximum	D 638	psi	10,100
Tensile elongation - maximum		%	5.1
Modulus of elasticity		psi	431,000
Flexural strength - maximum	D 790	psi	14,600
Izod moulded notch	D 256-56	Ft lbs/inch of notch	0.4
Izod milled notch		Ft lbs/inch of notch	0.28
Tensile impact strength	D 1822	Ft lb/in	20
Abrasion resistance	D 1044		
0 cycles		Haze %	2
10 cycles		Haze %	15
50 cycles		Haze %	30
200 cycles		Haze %	50
Rockwell hardness	D 785		M-93

Chemical Properties	Test Method	Units
Resistance to stress – critical crazing stress to:	ARTC modification of MIL-P-6997	
Isopropyl Alcohol	psi	900
Lacquer Thinner	psi	500
Toluene	psi	1300
Solvesso 100	psi	1600



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Thermal Properties	ASTM Test Method	Units	Value
Maximum		°F	170 – 190
Recommended continued service temperature			
Softening temperature		°F	210 – 220
Melting temperature		°F	300 - 315
Deflection temperature under load, unannealed	D 648		
3.6°F/minute, 264 psi		°F	190
3.6°F/minute, 66 psi		°F	205
Coefficient of thermal expansion	D 696	Ins/in/°Fx10	
-40°F			2.7
-20°F			2.9
0°F			3.1
20°F			3.2
40°F			3.4
Thermal conductivity	C 177	BTU	0.90
Flammability (burning rate)	D 635	0.060"	1.019
Smoke density rating	D 2843-77	% 236"	0.36
Flame spread index		0.375"	110
Self-ignition temperature	D 1929	°F .236"	833
Smoke value	E84-86	.236"	115