OPTIX GENERAL PURPOSE ACRYLIC

OPTIX extruded acrylic is a lightweight, crystal clear, weather-resistant sheet that is ideal for many fabrication or glazing applications. The exceptional clarity and weatherability of the OPTIX acrylic sheet makes it the perfect choice for applications with high optical and light transmitting requirements. It is impact resistant, and does not shatter into sharp-edged pieces, which makes it a good alternative to glass.

OPTIX is available in a wide range of gauges, textures, colors and sizes.

APPLICATIONS

Point-of-purchase displays, lighting, signage, picture framing, glazing, transportation

TYPICAL PROPERTIES

Property	Test Method	Units	Values
PHYSICAL			
Specific Gravity / Relative Density	ASTM D792	–	1.19
Optical Refractive Index	ASTM D542	–	1.49
Light Transmission - Total	ASTM D1003	%	92
Light Transmission - Haze	ASTM D1003	%	<2
Sound Transmission	ASTM E90 / E413	dB	27
Water Absorption	ASTM D570	%	0.4
Mold Shrinkage	ASTM D955	mils/in	2-6
MECHANICAL			
Tensile Strength	ASTM D638	psi	11,030
Tensile Elongation – Max.	ASTM D638	psi	5.8
Tensile Modulus of Elasticity	ASTM D638	psi	490,000
Flexural Strength	ASTM D790	psi	17,000
Flexural Modulus of Elasticity	ASTM D790	psi	490,000
Izod Impact Strength - Molded Notch	ASTM D256	ft-lb./in	0.4
Izod Impact Strength - Milled Notch	ASTM D256	ft-lb./in	0.28
Tensile Impact Strength	ASTM D1822	ft-lb./in^2	20
Abrasive Resistance – Change in Haze			
10 cycles	ASTM D1044	Haze %	11.2
50 cycles	ASTM D1044	Haze %	24
200 cycles	ASTM D1044	Haze %	24.9
Rockwell Hardness	ASTM D785	–	M-95
THERMAL			
Maximum Recommended Continuous Service Temperature	–	°F	170-190
Softening Temperature	ASTM D1525	°F	210-220
Deflection Temperature @ 264 psi (1.8 MPa)	ASTM D648	°F	203
Deflection Temperature @ 66 psi (0.45 MPa)	ASTM D648	°F	207
Coefficient of Linear Thermal Expansion	ASTM D696	in/in/°F	3.0 x 10^{-5}
Thermal Conductivity	ASTM C177	Btu-ft/ft^2/hr/°F	0.075
Flammability (Burning Rate)	ASTM D635	in/min	1.0
Flammability	UL 94	–	HB
Smoke Density Rating	ASTM D2843	%	3.4
Self-Ignition Temperature	ASTM D1929	°F	833
Flame Spread Index	ASTM E84	–	115
Smoke Developed Index	ASTM E84	–	550

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