

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 METRIC PROPERTIES			
Property	Test Method	Units	Values
PHYSICAL			
Specific Gravity / Relative Density	ISO 1183	-	1.19
Optical Refractive Index	ISO 489	-	1.49
Light Transmission - Total	ASTM D1003	%	92
Light Transmission - Haze	ASTM D1003	%	<2
Sound Transmission	ASTM E90 / E413	dB	27
Water Absorption	ISO 62 (1)	%	0.4
Mold Shrinkage	ASTM D955	mm	0.051-0.152
MECHANICAL			
Tensile Strength	ISO 527-2	MPa	72
Tensile Elongation - Max.	ISO 527-2	MPa	4
Tensile Modulus of Elasticity	ISO 527-2	MPa	3300
Flexural Strength	ISO 178	MPa	106
Flexural Modulus of Elasticity	ISO 178	MPa	3350
Charpy Impact Strength - Unnotched	ISO 179/1fu	kJ/m ²	15
Charpy Impact Strength - Notched	ISO 179/1eA	kJ/m ²	2
Izod Impact Strength - Notched	ISO 180/1A	kJ/m ²	1.5
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	-	°C	77-88
Vicat Softening Temperature (50N)	ISO 306	°C	99-104
Deflection Temperature @ 1.8 MPa	ISO 75-1	°C	95
Deflection Temperature @ 0.45 MPa	ASTM D648	°C	97
Coefficient of Linear Thermal Expansion	ASTM D696	cm/cm/°C	5.4 x 10 ⁻⁵
Flammability (Burning Rate)	ASTM D635	cm/min	2.54
Flammability	UL 94	-	HB
Smoke Density Rating	ASTM D2843	%	3.4
Self-Ignition Temperature	ASTM D1929	°C	445
Flame Spread Index	ASTM E84	-	115
Smoke Developed Index	ASTM E84	-	550
Electrical			
Dielectric Strength	DIN 53481	kV/mm	20-25
Dielectric Constant (50Hz)	DIN 53483		3.7
Dissipation Factor (1MHz)	DIN 53483		0.04
Surface Resistivity	IEC 60093	Ohm	>10 ¹⁴
Volume Resistivity	IEC60093	Ohm-cm	>10 ¹⁵

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 determines the suitability of our materials and suggestions before adopting them on a commercial scale.