

Plaskolite Optix® Acrylic Sheet

Category : Polymer , Thermoplastic , Acrylic (PMMA) , Acrylic, Optical Sheet

Material Notes:

Optix® is a continuously processed acrylic sheet that is crystal clear, impact resistant, weather resistant, and non-yellowing. It offers high molecular weight for superior thermoforming, bending, and flame polishing. Data provided by the manufacturer, Plaskolite, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Plaskolite-Optix-Acrylic-Sheet.php

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/in ³	ASTM D792
Water Absorption	0.40 %	0.40 %	ASTM D570
Linear Mold Shrinkage	0.0040 cm/cm	0.0040 in/in	Shrinkage; ASTM D702

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	93	93	0.64 cm sample; ASTM D785
Tensile Strength, Yield	70.0 MPa	10200 psi	ASTM D638
Elongation at Break	5.1 %	5.1 %	ASTM D638
Tensile Modulus	3.00 GPa	435 ksi	ASTM D638
Flexural Yield Strength	101 MPa	14600 psi	ASTM D790
Izod Impact, Notched	0.400 J/cm	0.749 ft-lb/in	Molded Notch
	0.200 J/cm @Temperature -18.0 °C	0.375 ft-lb/in @Temperature -0.400 °F	ASTM D256
Gardner Impact	0.450 J	0.332 ft-lb	J; ASTM D3029-GB, unpainted
Tensile Impact Strength	42.0 kJ/m ²	20.0 ft-lb/in ²	ASTM D1822
Abrasion	50	50	% haze after 200 cycles per ASTM D1044

Thermal Properties	Metric	English	Comments
CTE, linear	52.2 µm/m-°C	29.0 µin/in-°F	ASTM D696
	@Temperature -18.0 - 38.0 °C	@Temperature -0.400 - 100 °F	
Thermal Conductivity	0.130 W/m-K	0.902 BTU-in/hr-ft ² -°F	ASTM C177
Melting Point			

Thermal Properties	149 - 157 °C Metric	300 - 315 °F English	Comments
Maximum Service Temperature, Air	82.0 °C	180 °F	77-88°C (170-190°F) Continuous Service
Deflection Temperature at 0.46 MPa (66 psi)	96.0 °C	205 °F	2°C/min unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	88.0 °C	190 °F	2°C/min (3.6°F/min) unannealed; ASTM D648

Optical Properties	Metric	English	Comments
Refractive Index	1.46	1.46	ASTM D542
Haze	2.0 % @Thickness 2.50 mm	2.0 % @Thickness 0.0984 in	ASTM D1003
Transmission, Visible	92 %	92 %	ASTM D1003

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