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TECHNICAL DATA SHEET
Acrylic (PMMA)
(Polymethyl-Methacrylate)

An amorphous, transparent and colorless high-performance thermoplastic which is hard and rigid but also refractory and notch-sensitive. Two of the most common trade names are Plexiglas and Lucite and it is also commonly known as acrylic glass, acrylic or perspex. It is often used as an alternative to glass and is preferred for many applications because of its moderate properties, easy handling, ease of processing and low cost. Exceptional outdoor performance, such as weather and sunlight resistance, without reduction of optical or mechanical characteristics.

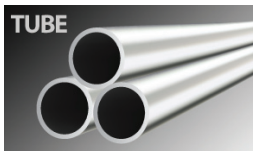
TYPICAL PROPERTIES of ACRYLIC PMMA

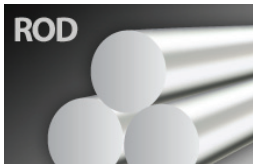
ASTM or UL test	Property	Acrylic
	PHYSICAL	
D792	Density (lb/in³) (g/cm³)	0.043 1.18
D570	Water Absorption, 24 hrs (%)	0.3
	MECHANICAL	
D638	Tensile Strength (psi)	8,000 - 11,000
D638	Tensile Modulus (psi)	350,000 - 500,000
D638	Tensile Elongation at Break (%)	2
D790	Flexural Strength (psi)	12,000 - 17,000
D790	Flexural Modulus (psi)	350,000 - 500,000
D695	Compressive Strength (psi)	11,000 - 19,000
D695	Compressive Modulus (psi)	-
D785	Hardness, Rockwell	M80 - M100
D256	IZOD Notched Impact (ft-lb/in)	0.3
	THERMAL	
D696	Coefficient of Linear Thermal Expansion (x 10^{-5} in./in./°F)	5 - 9
D648	Heat Deflection Temp (°F / °C) at 264 psi	150-210 / 65-100
D3418	Melting Temp (°F / °C)	265-285 / 130-140
-	Max Operating Temp (°F / °C)	150-200 / 65-93
C177	Thermal Conductivity (BTU-in/ft²-hr-°F) (x 10^{-4} cal/cm-sec-°C)	 3.9 1.2
UL94	Flammability Rating	-
	ELECTRICAL	
D149	Dielectric Strength (V/mil) short time, 1/8" thick	400
D150	Dielectric Constant at 60 Hz	4.0
D150	Dissipation Factor at 60 Hz	0.05
	OPTICAL	
-	Light Transmission, minimum (%)	92
-	Refractive Index	1.48-1.50

Benefits
Lightweight
Optically Clear
Weather Resistance
Easily machined and formed
Insoluble in water, resistant to salty water
Easy maintenance (cleaning & polishing)
* Some grades are approved for food contact

Applications
Automotive
Electronics
Lighting Fixtures
Sanitary Ware
Signs and Displays
Construction

SHAPES AVAILABLE





NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets.
All values at 73°F (23°C) unless otherwise noted.