

Optically Transparent Engineering Plastic

Typical Applications

- Master cylinders
- Water tank liners
- Liquid chemical pumps
- Dashboard lighting
- Motorcycle helmet visors
- Hard contact lenses

Product Description

Acrylics (Polymethyl-Methacrylate or PMMA) is an amorphous thermoplastic which is optically transparent, unaffected by moisture, and offers a high strength-to-weight ratio. Common trade names for this material include Plexiglas®, Acrylite® and Lucite®. Acrylics are not recommended for use with chlorinated or aromatic hydrocarbons, esters or ketones. However, the material is unaffected by aqueous solutions of most detergents, acids, alkali's and laboratory chemicals. It is both a thermoplastics and transparent plastic and is often used as an alternative to glass, but should not be used in structural applications due to poor impact resistance.

Key features

- Good insulation properties
- UV resistant
- Low smoke emissions
- Good stiffness & abrasion resistance
- Clear / colourable - excellent clarity
- Good weatherability
- Low water absorption
- Good insulation properties

Availability

Sheet, rod and tube.

Usability

Easily drilled, milled, engraved and finished with sharp carbide-tipped tools. Cut surfaces may be readily sanded and polished.

Mechanical Properties

Tensile Strength	(psi)	8,000 - 11,000
Tensile Modulus	(psi)	350,000 - 500,000
Tensile Elongation at break	(%)	2
Flexural Strength	(psi)	12,000 - 17,000
Flexural Modulus	(psi)	350,000 - 500,000
Compressive Strength	(psi)	11,000 - 19,000
Compressive Modulus	(psi)	-
Hardness	Rockwell	M80 - M100
IZOD Notched Impact	(ft-lb/in)	0.3

Thermal Properties

Coefficient of Thermal Expansion	(x 10 ⁻⁵ in./in./°F)	5 - 9
Flammability Rating	UL94	-
Heat Deflection Temperature @264	(psi)	150-210 / 65-100
Melting Temp	(°F / °C)	265-285 / 130-140
Max Operating Temp	(°F / °C)	150-200 / 65-93

Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

UK Service Centres:

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