

POLY (METHYL METHACRYLATE)

Technical Data Sheet

PRODUCT: Poly (methyl methacrylate)

EFFECTIVE: October 30, 2020

Description: Poly (methyl methacrylate), also known as Acrylic, is a thermoplastic polymer material that is available as a natural clear, solid sheet. The material can serve as a lightweight, shatter-resistant alternative to other materials and provides high transparency, moderate properties, and ease of handling and processing. Sheets are intended for agriculture, industrial, construction, etc. applications.

Physical Properties (Based on CM-205):

Thickness (standard)	3 mm (0.118 in), 4.5 mm (0.177 in), and 5.6 mm (0.220 in)
Mass Density (ASTM D792)	1.19 g/cm ³
Bulk Density (ASTM D1182)	0.7 g/cm ³
Light Transmission (ASTM D1003)	92%
Refractive Index (ASTM D542)	1.491
Water Absorption (ASTM D570)	0.3%

Mechanical Properties:

	Value	Test Conditions
Tensile Strength (ASTM D638)	750 kg/cm ² (10600 lb/in ²)	6 mm/min
Tensile Elongation (ASTM D638)	10%	6 mm/min
Flexural Strength (ASTM D790)	1200 kg/cm ² (17000 lb/in ²)	2.8 mm/min
Izod Impact Strength (ASTM D256 – Notched)	2.0 kg-cm/cm (0.37 ft-lb/in)	6.4 mm
Hardness (ASTM D785)	95 M Scale	

Go beyond the panel... and go to the next level!

Thermal Properties:

	Value	Test Conditions
Melt Flow Index (ASTM D1238)	1.8 g/10 min	230°C, 3.8 kg
Vicat Softening Temperature (ASTM D1525)	115°C (239°F)	1 kg, 50°C/hr
Heat Distortion Temperature (ASTM D648)	102°C (216°F)	Unannealed

Notes:

1. Typical values above measured at 23°C.