Xometry

Datasheet

PMMA

Details

This material is the most common form of clear, moldable thermoplastic, often used in place of glass due to its higher resistance. It has good weather and chemical resistance with adequate surface hardness. Acrylic has easy moldability and can be formed into various shapes and sizes. It is used for transparent applications such as windows, frames etc

Key Features

Hard • Resistant to weather and chemicals

Thermal Properties

Property	Value
Heat deflection [°C]	95
Glass transition temperature [°C]	90 - 105
Vicat softening temperature [°C]	>110
Coefficient of thermal expansion [K-1 · 10-6]	23
Thermal conductivity [W/m · K]	0.187 – 0.209
Specific heat capacity [J/kg · K]	1470

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Mechanical Properties

Property	Value
Tensile strength [MPa]	64.8 – 83.4
Modulus of elasticity [GPa]	3.2
Flexural strength [MPa]	65
Flexural modulus [GPa]	3.21
Hardness	102
Impact strength [J/cm]	12
Elongation at break [%]	4

Physical Properties

Property	Value
Density [g/cm³]	1.19
Water Absorption [%]	0.2
Electrical Resistivity [ohm-cm]	15×10^{15}