Xometry

Datasheet ▸

Polystyrene (PS)

Details

This is a transparent, amorphous thermoplastic. It is hard, brittle, rigid and resistant to gamma radiation. It has good electrical properties and is easy to mold. Its tensile strength isabout 34MPa. However, it has poor resistance to chemicals and UV light. Its transparent nature makes it suitable for a variety of household items, toys, containers etc.

Key Features

Transparent • Hard • Brittle • Suitable for household items

Thermal Properties

Property	Value
Heat deflection [°C]	108
Glass transition temperature [°C]	100
Vicat softening temperature [°C]	90
Coefficient of thermal expansion [K-1 · 10-6]	10
Thermal conductivity [W/m · K]	0.17
Specific heat capacity [J/kg · K]	1200
Melting point [°C]	270

Mechanical Properties

Property	Value
Tensile strength [MPa]	16
Modulus of elasticity [GPa]	1.5
Flexural strength [MPa]	39

Note: All material data listed in Xometry's data sheets is sourced from trusted Original Equipment Manufacturers (OEMs), material distributors, and databases.

Xometry

Datasheet ▸

Flexural modulus [GPa]	2.9
Hardness	80
Impact strength [KJ/m^2]	7
Elongation at break [%]	35

PhysicalProperties

Property	Value
Density [g/cm^3]	1.05
Water Absorption [%]	0.01
Electrical Resistivity [ohm-cm]	16×10^{15}

Note: All material data listed in Xometry's data sheets is sourced from trusted Original Equipment Manufacturers (OEMs), material distributors, and databases.