Xometry

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PPE – PS

(Polyphenylene ether – polystyrene)

Details

This polymer is a blend of polyphenylene ether and polystyrene. It is highly ductile and exhibits good resistance to impact and good surface appearance. It has low moisture absorption and is dimensionally stable. Its tensile strength ranges from 30 – 80MPa at room temperature. It is typically used for valve components, water pumps and medical devices.

Key Features

Ductile • Resistant to impact • Strong

Thermal Properties

Property	Value
Heat deflection [°C]	100
Glass transition temperature [°C]	215
Coefficient of thermal expansion [K-1 · 10-6]	29
Thermal conductivity [W/m · K]	0.22
Specific heat capacity [J/kg · K]	1400
Melting point [°C]	200

Mechanical Properties

Property	Value
Tensile strength [MPa]	72
Modulus of elasticity [GPa]	2.2
Flexural strength [MPa]	109
Flexural modulus [GPa]	2.54

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Hardness	89
Impact strength [KJ/m^2]	6
Elongation at break [%]	30

PhysicalProperties

Property	Value
Density [g/cm^3]	1.07
Water Absorption [%]	0.06
Electrical Resistivity [ohm-cm]	10×10^{15}