Xometry

Manufacturing On Demand

Data Sheet: PEI

(Ultem)

Details

With a strong environmental resistance, this material is highly stiff and stable. It is rigid and retains its strength at high temperatures. It is resistant to heat and creep and has excellent electrical properties. It is flame retardant. It is typically used in engine components, temperature sensors, electronics and medical devices.

Key Features

Hard • Strong with low moisture absorption

Thermal Properties

Property	Value
Heat deflection [°C]	200
Glass transition temperature [°C]	215
Vicat softening temperature [°C]	210
Coefficient of thermal expansion [K-1 · 10-6]	56
Thermal conductivity [W/m · K]	0.22
Specific heat capacity [J/kg · K]	2000
Melting point [°C]	340

Mechanical Properties

Property	Value
Tensile strength [MPa]	129
Modulus of elasticity [GPa]	3.5
Flexural strength [MPa]	145

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Flexural modulus [GPa]	3.3
Hardness	165
Impact strength [KJ/m^2]	3.5
Elongation at break [%]	13

Physical Properties

Property	Value
Density [g/cm^3]	1.27
Water Absorption [%]	0.2
Electrical Resistivity [ohm-cm]	5×10^{15}

Reference

Datasheets provided by Xometry contain materials sourced through trusted OEMs, material distributors, and databases. Please visit Materialdatacenter.com for further information on this material.