Xometry

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PTFE

(Teflon)

Details

This is a highly slippery material with excellent resistance to extreme temperatures. It has outstanding insulating properties and is resistant to industrial chemicals. Due to its low coefficient of friction, it is widely used in the production of gears, bushings, slide plates, piston rings etc. Teflon's density and stiffness gives it easy machinability. However, its high coefficient of expansion and stress creep make it difficult to obtain tight tolerances.

Key Features

Slippery • Resistant to extreme temperatures

Thermal Properties

Property	Value
Heat deflection [°C]	260
Glass transition temperature [°C]	119
Vicat softening temperature [°C]	110
Coefficient of thermal expansion [K-1 · 10-6]	142
Thermal conductivity [W/m · K]	0.24
Specific heat capacity [J/kg · K]	1000
Melting point [°C]	327

Mechanical Properties

Property	Value
Tensile strength [MPa]	15 – 35
Modulus of elasticity [GPa]	0.4
Flexural strength [MPa]	14

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

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Flexural modulus [GPa]	0.49
Hardness	57
Impact strength [KJ/m^2]	13
Elongation at break [%]	300

PhysicalProperties

Property	Value
Density [g/cm^3]	2.16
Water Absorption [%]	0.01
Electrical Resistivity [ohm-cm]	17×10^{15}

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