

PTFE (Teflon)

PTFE is a crystalline polymer commonly known by its trade name, Teflon. Properties include extremely high melting point and exceptional resistance to chemicals. Being hydrophobic, non-wetting, non-stick, high density, and resistant to elevated temperatures, it is incredibly versatile.

Applications

Common applications include medical devices, food processing equipment, conveyor belt rollers, insulation on heating elements, bearings and bushings, electrical housings, hinges, and electrical insulation applications.

Key Product Benefits

- High Heat, Chemical and Electrical Resistance
- High Density
- Low Friction and Non-Stick Characteristic
- Machinability

Properties

Property	Test Method	Value (Imperial)	Value (Metric)
Density	ASTM D792	2.14-2.18 g/cm ³	2.14-2.18 g/cm ³
Shore Hardness (D Scale)	ASTM D2240	≥ 51	≥ 51
Tensile Strength	ISO 12086/ISO 527/ASTM D4894	3,335-3,917 psi	23-27 MPa
Elongation @ Break	ISO 12086/ISO 527/ASTM D4894	≥ 230%	≥ 230%
Compressive Strength @ 1% Deformation	ASTM D695	580-725 psi	4-5 N/mm ²
Dynamic Coefficient of Friction	ASTM D1894/ASTM D3702	0.05-0.06	0.05-0.06
Service Temperature (min-max)		-328°F/+500°F	-200°C/+260°C
Coefficient of Linear Thermal Expansion	ASTM D696		12-13 ((mm/mm)/°C) x 10 ⁻⁵
Dielectric Strength (specimen 0.5 mm thick)	ASTM D149	762-1,143 V/mil	30-45 kV/mm
Volume Resistivity	ASTM D257	10 ¹⁷ -10 ¹⁸ ohm-cm	10 ¹⁷ -10 ¹⁸ ohm-cm
Surface Resistivity	ASTM D257	10 ¹⁶ -10 ¹⁷ ohm	10 ¹⁶ -10 ¹⁷ ohm