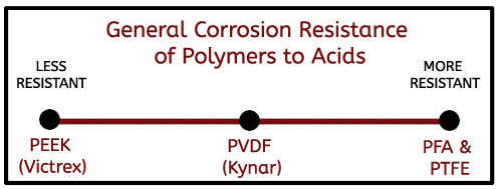
EXTREME Bolt & Fastener

TECHNICAL DATA
PTFE

PTFE polymer fasteners are known for their outstanding chemical resistance and are virtually inert to most organics, acids and bases – even hydrofluoric acid. PTFE can even provide protection from harsh environments up to 260°C / 500°F. In addition to their chemical resistance, PTFE fasteners are also bio-inert and won't leach or contaminate sensitive pharmaceutical and food products or processes. Compared to PEEK or PVDF, PTFE offers the best all-around corrosion resistance especially at elevated temperatures. The trade of is much lower strength.



Properties & Data

Property	ASTM or UL Test	Teflon® PTFE
PHYSICAL		
Density (lb/in³) (g/cm³)	D792	0.078 (2.2)
Water Absorption, 24 hrs (%)	D570	< 0.01
MECHANICAL		
Strength/Weight Ratio	Tensile Strength / Density (g/cc)	1800
Tensile Strength (psi)	D638	3,900
Tensile Modulus (psi)	D638	80,000
Tensile Elongation at Break (%)	D638	300
Flexural Strength (psi)	D790	No Break
Flexural Modulus (psi)	D790	72,000
Hardness, Rockwell, R/M Scale	D785	R58
IZOD Impact Notched (ft-lb/in)	D256	3.5
THERMAL		
Coefficient of Linear Thermal Expansion (x 10-5 in./in./°F)	D696	7.5
Heat Deflection Temp (°F / °C) at 264 psi	D648	132 / 55
Melting Temp (°F / °C)	D3418	635 / 335
Max Operating Temp (°F / °C)	-	500 / 260
Thermal Conductivity (BTU-in/ft²-hr-°F)	C177	1.7
Flammability Rating	UL94	V-O
ELECTRICAL		
Dielectric Strength (V/mil) short time, 1/8" thick	D149	600
Dielectric Constant at 1 MHz	D150	2.1
Dissipation Factor at 1 MHz	D150	< 0.0002
Volume Resistivity (ohm-cm) at 50% RH	D257	> 10^{18}

Key Benefits

- Excellent chemical resistance even at elevated temperatures
- Usable to 260°C / 500°F
- Bio-inert. Will not contaminate or leach into sensitive processes
- High purity for pharmaceuticals and foods
- Excellent electrical insulator

PTFE - Tensile Data

Temperature (°F)	Ultimate Tensile (ksi)	Yield Strength at 0.2% Offset (ksi)	Elongation %
-420	-	19.0	-
-320	-	16.0	-
-200	-	11.5	-
-100	-	7.7	-
-68	-	3.8	-
32	-	1.8	-
73	3.9	1.3	300
158	-	0.8	-
250	-	0.5	-

Our Engineers Are Here to Help

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