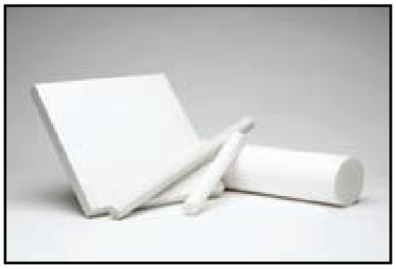
PTFE

PolyTetraFluoroEthylene



PTFE is a fluorocarbon-based polymer. PolyTetraFluoroEthylene is commonly abbreviated PTFE. The flouroplastic family offers plastics with high chemical resistance, low and high temperature capability, resistance to weathering, low friction, electrical thermal insulation, and "slipperiness".

PRODUCT COLORS:

- ● Black (PTFE® 25% Carbon-Filled)
- ○ White (PTFE®, PTFE 25% Glass-Filled)

GENERAL PROPERTIES	ASTM or UL Test	(Unfilled) Typical Values	(25% Glass Filled) Typical Values	(25% Carbon Filled) Typical Values
PHYSICAL				
Density (g/cm^3)	D792	2.13-2.19	2.25	2.08
Water Absorption, 24 hrs (%)	D570	< 0.01	0.02	0.05
MECHANICAL				
Tensile Strength (MPa)	D638	>20	2,100	1,900
Tensile Modulus (MPa)	D638	–	–	–
Tensile Elongation at Break (%)	D4894	>200	270	75
Flexural Strength (psi)	D790	–	1,950	2,300
Flexural Modulus (psi)	D790	–	190,000	160,000
Compressive Strength (MPa)	D695	>4	1,000	1,700
Compressive Modulus (psi)	D695	–	110,000	87,000
Hardness, Shore D	D2240	>54	D60	D62
IZOD Notched Impact (ft-lb/in)	D256	–	–	–
THERMAL				
Coeff. of Thermal Expansion (x 10^{-5} in./in./°C)	D696	12-15	6.4	6
Heat Deflection Temp (°F / °C) at 264 psi	D648	–	150 / 65	150 / 65
Melting Temp (°F / °C)	D3418	–	635 / 335	635 / 335
Max Operating Temp (°F / °C)	–	–	500 / 260	500 / 260
Thermal Conductivity (W/m.K)	C177	0.34	3.1	4.5
Flammability Rating	UL94	V-O	V-O	V-O
ELECTRICAL				
Dielectric Strength (kV/mm)	D149	>30	–	–
Dielectric Constant at 1 MHz	D150	–	2.4	–
Dissipation Factor at 1 MHz	D150	–	0.05	–
Volume Resistivity (ohm.cm)	D257	> 10^{18}	> 10^{15}	–
Surfuce Resistivity (ohm)	D257	> 10^{17}	–	–

NOTE: The information contained here in is typical values intended for reference only. They should NOT be used as a basis for design specifications or quality control.