

PTFE

Low friction engineering plastic with outstanding chemical, high temp, and weathering resistance



PTFE (polytetrafluoroethylene) is a soft, low friction fluoropolymer with outstanding chemical and weathering resistance. PTFE is stable at temperatures up to 500°F and it is often used in high temperature environments. PTFE also has excellent electrical insulating properties.

PTFE is available in a variety of formulations including unfilled, glass-filled, and bearing grades.

PTFE Material Options

Virgin (Unfilled) Grade PTFE – Unfilled PTFE, made from virgin PTFE resin, is extremely soft and formable and it is often used for chemical resistant seals and gaskets.

Glass-Filled PTFE – Glass-filled PTFE has enhanced strength and stiffness.

Bearing Grades of PTFE – Bearing grades of PTFE have extremely low friction and high service temperatures. They are frequently specified for high performance bearings and bushings, particularly in applications that require resistance to corrosive chemicals.

Reprocessed PTFE – Reprocessed PTFE is made from recycled material.

PTFE is widely used for:

- Seals and gaskets
- Valve and fitting components
- Pump parts
- Manifolds
- Semiconductor equipment
- Scientific equipment
- Chemical resistant tubing
- Bearings and bushings (bearing grades)

Performance characteristics:

- Outstanding chemical resistance
- Extremely low friction
- Soft and formable
- Good weathering resistance
- Performs well at elevated temperatures

Common brands:

- Teflon®
- Rulon®
- Fluorosint®

Available in:



Sheet

Rod

TYPICAL PROPERTIES OF PTFE

	UNITS	ASTM TEST	PTFE
Tensile strength	psi	D638	1,500 - 3,000
Flexural modulus	psi	D790	72,000
Izod impact (notched)	ft-lbs/in of notch	D256	3.5
Heat deflection temperature @ 66 psi	°F	D648	250
Maximum continuous service temperature in air	°F		500
Water absorption (immersion 24 hours)	%	D570	<0.01
Coefficient of linear thermal expansion	in/in/°F x 10 ⁻⁵	D696	8.9
Coefficient of friction (dynamic)			0.10

Values may vary according to brand name. Please ask your Curbell Plastics representative for more specific information about an individual brand.