

PTFE (polytetrafluoroethylene)



PTFE is a soft, low friction fluoropolymer with outstanding chemical resistance 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. Unfilled PTFE is extremely soft and formable and it is often used for chemical resistant seals and gaskets. Glass-filled PTFE has enhanced strength and stiffness. 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.

PTFE sheet, rod, and tube are available in virgin grade, which is made from virgin PTFE resin as well as reprocessed or mechanical grade, which is made from recycled material.

KEY CHARACTERISTICS:

- Outstanding chemical resistance
- Extremely low friction
- Soft and formable
- Good bearing and wear properties (bearing grades)
- Good weathering resistance
- Performs well at elevated temperatures
- FDA compliant grades available

APPLICATIONS:

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

PTFE TYPICAL PROPERTIES:

	Units	ASTM Test	PTFE
Tensile strength	psi	D-638	1,500-3,000
Flexural modulus	psi	D-790	72,000
Izod impact (notched)	ft-lbs/in of notch	D-256	3.5
Heat deflection temperature @66 psi	°F	D-648	250
Maximum continuous service temperature in air	°F		500
Water absorption (immersion 24 hours)	%	D-570	<0.01
Coefficient of linear thermal expansion	in/in/°Fx10 ⁻⁵	D-696	8.9
Coefficient of friction (dynamic)			0.10

Standard Sizes: SHEET: 48"x48" (0.03"-3.0" thick) ROD: diameter 0.125"-12.0" TUBE: OD 0.3125"-2.5"

Length, width, thickness, and diameter tolerances vary by size and by manufacturer • Custom sizes and colors available upon request • Many of our materials are available as films with thicknesses of 0.029" or less. Values may vary according to brand name. Please ask your Curbell Plastics representative for more specific information about an individual brand.

Curbell Plastics has been supplying plastic sheet, rod, tube, films, adhesives, sealants, and prototyping materials for over 70 years

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