



# PTFE

## Polytetrafluoroethylene

### Description and Overview

PTFE, also known under the brand name Teflon®<sup>1</sup>, is a soft fluoropolymer mechanical plastic with exceptional resistance to high temperatures, chemicals, corrosion and stress cracking.

PTFE features impressive heat, mechanical toughness, electrical and low friction properties, making it the material of choice for many high heat and low friction applications.

PTFE plastic is available in FDA approved, electrical, mechanical, glass-filled and bearing grades.

### Applications and Uses

PTFE is soft and formable, often used for chemically resistant seals and gaskets. With strong electrical properties, PTFE is also used in many aerospace and computer applications. Glass-filled PTFE has enhanced strength and stiffness properties.

- Bearings and bushings
- Gears
- Slide plates
- Gaskets
- Valve stem seals, valve seats
- Chute liners
- Pump parts
- Cable insulation
- Connector assemblies
- Electrical sleeves
- Semiconductor equipment
- Scientific, medical equipment
- Chemical resistant tubing
- Shims
- Oven plates
- Non-stick and release coating



PTFE is available in virgin, mechanical, & glass blend grades.

Full sheet: 48" x 48" (0.030" through 1" thick)  
Rod: (0.25" through 4.0" diameter)

### Properties and Specifications

Property	Mechanical	Virgin
Specific Gravity	2.15	2.15-2.2
Elongation at Break	75-200%	75-200%
Tensile Strength (psi)	1,500-2,400	1,500-2,400
Water Absorption @ Saturation	<0.01%	<0.01%
Dielectric Constant (1k cps)	2.26	2.26
Dielectric Strength (volts/mil.)	450	450
Minimum Service Temperature	-328.F	-328.F
Maximum Service Temperature	500.F	500.F
Affixable Properties	Mech	Mech

Properties are typical.  
Chem is an abbreviation for chemically affixed with glues, chemicals, or adhesive.  
Mech is an abbreviation for mechanically affixed bonding.  
Field testing is recommended for any application.  
<sup>1</sup>Teflon® is a registered trademark of E. I. du Pont de Nemours and Company.

