



TECHTRON® PPS

Characteristics

- * Excellent Chemical Resistance
- * Essentially Zero Moisture Absorption
- * Machines to Tight Tolerances
- * Excels in Corrosive Environments to 425° F (220° C)
- * Good Electrical Insulating and Dielectric Properties

Description

PPS (polyphenylene sulfide) products offer the broadest resistance to chemicals of any advanced engineering plastic. They have no known solvents below 392° F (200° C) and offer inertness to steam, strong bases, fuels, and acids. Minimal moisture absorption and very low coefficient of linear thermal expansion, combined with a proprietary stress relieving process, make these PPS products ideally suited for precise tolerance machined components. In addition, PPS products exhibit excellent electrical characteristics and are inherently flame retardant.

Techtron PPS is easily machined to close tolerances using standard metal working equipment. It is ideal for structural applications in corrosive environments.

Forms Available

ROD	.250 to 5.00 " diameter, Lengths to 12 feet
TUBE	Custom produced as requested
PLATE	.250" to 2.000" thick, Widths to 24", Lengths to 48"
COLOR	Off White

Typical Property Values

MECHANICAL @ 73°F

Specific Gravity	
Tensile Strength	psi
Tensile Modulus of Elasticity	psi
Tensile Elongation (at Break)	%
Flexural Strength	psi
Flexural Modulus of Elasticity	psi
Shear Strength	psi
Compressive Strength, 10% Deformation	psi
Compressive Modulus of Elasticity	psi
Rockwell Hardness	M Scale
Izod Impact Strength, Notched	ft-lbs/in. of notch
Coefficient of Friction, Dynamic (Dry vs. Steel)	
Limiting PV (4 :1 Safety Factor Applied)	ft.lbs/in. ² min
Wear Factor	in ³ -min/ft.lbs. hr.
Water Absorption 24 hrs	% by wt.

THERMAL

Coefficient of Linear Expansion (-40°F to 300°F)	in./in./°F
Heat Deflection Temperature @264 psi	°F
Melting Point (Crystalline)	°F
Continuous Service Temperature in Air	°F
Thermal Conductivity	°F

ELECTRICAL

Dielectric Strength, Short Term	Volts/mil
Surface Resistivity	Ohms/Sq.
Dielectric Constant	1 MHz
Dissipation Factor	1 MHz

Techtron® PPS

1.35
13,500
500,000
15
21,000
575,000
9,000
21,500
430,000
95
0.60
0.40
3,000
2,400
0.01
2.8×10^{-5}
250
540
425
2.00
540
$>10^{13}$
3.00
0.0013

Techtron® HPV

1.43
10,900
540,000
5
10,500
535,000
15,500
342,000
84
1.40
0.20
8,750
62
0.01
3.3×10^{-5}
240
536
430
2.10
500
$>10^{13}$

(Properties listed above are provided for reference only, they should not be used for design specifications or quality control , Techtron is a registered Trademark of Quadrant EPP)