

# Material Properties

## PTFE Filled PPS

### Material code: 7501

It is a proprietary bearing grade PPS (polyphenylene sulfide) based material. Internally lubricated and reinforced, it exhibits good tribological properties over a wide range of PV values and temperatures as a bearing material. Due to carbon fiber reinforcement, it has good load bearing capability.

Physical Properties	ASTM Method	Typical Values
Specific Gravity	D792	1.84 gr/cm <sup>3</sup>
Water Absorption (24 hrs. @ 74°F)	D570	0.05 %
Color	N/A	Black
<b>Mechanical Properties</b>		
Tensile Strength	D1708	1850 psi
Elongation	D1708	
• At Break		4.0%
Flexural Strength	D790	4500 psi
Flexural Modulus	D790	140,000 psi
Compressive Strength	D695	3200 psi
Compressive Modulus	D695	110,000 psi
Impact Strength (Izod, notched)	D256	1 ft-lb/in
Hardness	Shore D	65
<b>Tribological Properties</b>		
Coefficient of friction	D3702	
• Static		0.34
• Dynamic		0.29
Wear rate (PV: 20,000 psi-fpm)	D3702	1.9 uin/min
<b>Thermal Properties</b>		
Coefficient of Linear Thermal Expansion (78-400°F)	D696	55 10 <sup>-6</sup> °F
Heat Deflection Temperature (F/C @ 264 psi)	D648	210°F
Glass Transition Temperature (T <sub>g</sub> )	D3418	266°F
Melting Point		480°F
Continuous Service Temperature (Max @ no load)		621°F
<b>Electrical Properties</b>		
Volume Resistivity (ohm-cm) @ 50% RH	D257	10 <sup>8</sup> ohm-cm
Dielectric Strength	D149	KV/mm
Dielectric Constant	D150	Hz, 200°F

**Note:** Property values should be interpreted as typical rather than minimum value. All technical information and recommendations are presented in good faith, and based upon laboratory and real-world tests believe to be reliable and practical. However, K.C. Seals, Inc. cannot guarantee the accuracy or completeness of this information, and it is the customers' responsibility to determine product suitability to any given application.

