

Ryton® PPS (Polyphenylene Sulfide)

PPS is a highly crystalline high temperature thermoplastic with an excellent balance of cost, temperature resistance, strength, chemical resistance and flame retardance. PPS is often used when long-term high-temperature performance and dimensional stability are a must, even in the presence of aggressive chemicals. In most applications, PPS is supplied as a filled compound with glass fiber, carbon fiber or mineral reinforcements.

- Excellent high temperature resistance
Some PPS compounds can operate continuously to 450 °F
- Flammability (UL 94) V-O/5VA
Very low smoke emission
- Excellent chemical, radiation and hydrolysis resistance
- Very resistant to creep, deformation under load and compression set
- Excellent tribological properties at elevated temperatures
- Very good electrical properties in certain formulations

Typical Applications:

Fuel Injectors	Manifolds	Pistons
Pumps	V-Packing Gaskets	Gears
Bearings		

Property	ASTM Test Method	Units	Ryton® PPS 40% GF	Ryton® PPS Bearing Grade
Physical				
Specific Gravity	D-792	g/cc	1.69	1.43
Color			Brown	Black
Filler Content		%	40	35
Mechanical				
Tensile Strength	D-638	psi	7,842	5,100
Tensile Elongation at break	D-638	%	1	1.5
Flexural Strength	D-790	psi	26,650	7,600
Izod Impact Strength (Notched)	D-256	ft-lb/in	0.9	1.6
Hardness	D-2240	Shore D	88	88
Thermal				
Heat Distortion Temperature	D-648	°F	500	
Electrical				
Dielectric Strength	D-149	V/mil	190	
Dielectric Constant	D-150	1 Mhz	3.7	9.34

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.