

Polyphenylsulfone (PPSF / PPSU)

Mechanical Properties ¹	Test Method	Imperial	Metric
Tensile Strength, Type 1, 0.125 Tensile Modulus, Type 1, 0.125 Tensile Elongation, Type 1, 0.125 Flexural Strength Flexural Modulus IZOD Impact, notched (73 C)	ASTM D638 ASTM D638 ASTM D638 ASTM D790 ASTM D790 ASTM D256	8,000 psi 300,000 psi 3% 15,900 psi 320,000 psi 1.1 ft-lb/in	55 MPa 2,068 MPa 3% 110 MPa 2,206 MPa 58.73 J/m
Thermal Properties	Test Method	Imperial	Metric
Heat Deflection (HDT), 264 psi Glass Transition (T _g) Coefficient of Thermal Expansion Melt Point	ASTM D648 DMA (SSYS)	372° F 446° F 3.1*10 ⁻⁵ in/in F Not Applicable ²	189° C 230° C Not Applicable ²
Other Properties	Test Method	Value	
Specific Gravity Vertical Burning Test (Flame) Hardness (Rockwell) Dielectric S (kV/mm) Dielectric C (60Hz)	ASTM D792 UL94 ASTM D785 IEC 60112 IEC 60250	1.28 V 0, 3.2 mm M86 14.6 3.45	
Environmental resistance ³	24 hr. @ 23c	24 hr. @ 100c	
Antifreeze (Prestone), 50% Gasoline-Unleaded Motor Oil 10W-40 Power Steering Fluid Transmission Fluid Windshield Washer Fluid, 50%	Passed Passed Passed Passed Passed Passed	Passed Not tested Passed Passed Passed Not tested	

SPECIAL PROPERTIES

Although Stratasys has not done any testing on the sterilization of PPSF, other companies have used PPSF for sterilization. PPSF has been sterilized used in the following:

- Steam Autoclave
- EtO Sterilization
- Plasma Sterilization
- Chemical Sterilization
- Radiation

FDM SYSTEM AVAILABILITY

- FDM Titan **TI**

APPEARANCE

- Tan (Silk)

The information presented includes typical values intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. End-use material performance can be impacted (+/-) by, but not limited to, part design, end-use conditions, test conditions, etc. Actual values will vary with build conditions.

¹ Build orientation is on side edge. ² Due to amorphous nature, material does not exhibit a melting point. ³ Test results based on Stress Crack Resistance (24 Hr. Immersion @ 23° C and @ 100°C).

For more information about Stratasys systems and materials, contact your representative +1 888.480.3548 or visit www.stratasys.com

