

**Polyphenylsulfone (PPSF / PPSU)
FDM Material Properties****MECHANICAL PROPERTIES¹**

	Test Method	Imperial	Metric
Tensile Strength, Type 1, 0.125	ASTM D638	8,000 psi	55 MPa
Tensile Modulus, Type 1, 0.125	ASTM D638	300,000 psi	2,068 MPa
Tensile Elongation, Type 1, 0.125	ASTM D638	3 %	3 %
Flexural Strength	ASTM D790	15,900 psi	110 MPa
Flexural Modulus	ASTM D790	320,000 psi	2,206 MPa
IZOD Impact, notched (73 C)	ASTM D256	1.1 ft-lb/in	

THERMAL PROPERTIES

Heat Deflection (HDT), 264 psi	ASTM D648	372 °F	189°C
Glass Transition (T _g)	DMA (SSYS)	446 °F	230°C
Melt Point		Not Applicable ²	Not Applicable ²

OTHER PROPERTIES

Specific Gravity	1.28
Vertical Burning Test (Flame)	UL94 -- V 0, 3.2 mm
Coefficient of Thermal Expansion	3.1*10 ⁻⁵ in/in F
Hardness (Rockwell)	M86
Dielectric S (kV/mm)	14.6
Dielectric C (60Hz)	3.45

ENVIRONMENTAL RESISTANCE³

Group	24 hr. @ 23c	24 hr. @ 100c
Antifreeze (Prestone), 50%	Passed	Passed
Gasoline-Unleaded	Passed	Not tested
Motor Oil 10W-40	Passed	Passed
Power Steering Fluid	Passed	Passed
Transmission Fluid	Passed	Passed
Windshield Washer Fluid, 50%	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

APPERANCE

- Tan (Silk)

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The information presented are 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.

Product specifications are subject to change without notice.

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 @ 23C and @ 100C)