



PPSF/PPSU (polyphenylsulfone) material has the greatest heat and chemical resistance of all Stratasys materials - ideal for aerospace, automotive and medical applications. Stratasys FDM (Fused Deposition Modeling) systems manufacture parts using PPSF/PPSU material that are not only mechanically superior, but also dimensionally accurate, accurately predicting end-product performance. Users can also sterilize PPSF via steam autoclave, EtO sterilization, plasma sterilization, chemical sterilization and radiation⁵. PPSF/PPSU gives you the ability to manufacture Real Parts™ direct from digital files.

Mechanical Properties ¹	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	ASTM D256	1.1 ft-lb/in	58.73 J/m
IZOD Impact, unnotched	ASTM D256	3.1 ft-lb/in	165.5 J/m

Thermal Properties ³	Test Method	Imperial	Metric
Heat Deflection Temperature @ 264 psi	ASTM D648	372° F	189° C
Glass Transition Temperature (T _g)	DMA (SSYS)	446° F	230° C
Coefficient of Thermal Expansion	ASTM D696	3.1x10 ⁻⁵ in/in F	5.5x10 ⁻⁵ mm/mm/C
Melt Point	-----	Not Applicable ²	Not Applicable ²

Other ³	Test Method	Value
Specific Gravity	ASTM D792	1.28
Flame Classification	UL 94	V 0, 3.2 mm
Rockwell Hardness	ASTM D785	M86
Dielectric Strength kV/mm	IEC 60112	14.6
Dielectric Constant 60Hz	IEC 60250	3.45

Environmental Resistance ⁴	24 hr. @ 23°C	24 hr. @ 100°C
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

► See reverse for system availability.

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. Tested parts were built on Titan Ti, 0.010 inch slice (0.245mm).

¹ Build orientation is on side edge. ² Due to amorphous nature, material does not exhibit a melting point. ³ Literature value unless otherwise noted. ⁴ Test results based on Stress Crack Resistance (24 Hr. Immersion @ 23° C and @ 100°C). ⁵ Stratasys has not done any sterilization testing on PPSF.

System Availability	Layer Thickness Capability	Support Structure	Color
FDM 400mc FDM 900mc	0.013 inch (0.330 mm)* 0.010 inch (0.254 mm)	BASS	 Tan

*0.013 inch (0.330 mm) layer thickness not available on FDM 900mc

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

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