

PPSF

PPSF/PPSU (polyphenylsulfone) material has the greatest heat and chemical resistance of all Fortus materials - ideal for aerospace, automotive and medical applications. PPSF parts manufactured on Fortus® 3D Production Systems are not only mechanically superior, but also dimensionally accurate, to better predict end-product performance. Users can also sterilize PPSF via steam autoclave, EtO sterilization, plasma sterilization, chemical sterilization and radiation*. PPSF gives you the ability to manufacture real parts direct from digital files that are ideal for conceptual modeling, functional prototyping, manufacturing tools, and end-use-parts.

MECHANICAL PROPERTIES	TEST METHOD	ENGLISH	METRIC
Tensile Strength (Type 1, 0.125", 0.2"/min)	ASTM D638	8,000 psi	55 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	300,000 psi	2,100 MPa
Tensile Elongation (Type 1, 0.125", 0.2"/min)	ASTM D638	3%	3%
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	15,900 psi	110 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	320,000 psi	2,200 MPa
IZOD Impact, notched (Method A, 23°C)	ASTM D256	1.1 ft-lb/in	58.7 J/m
IZOD Impact, un-notched (Method A, 23°C)	ASTM D256	3.1 ft-lb/in	165.5 J/m

THERMAL PROPERTIES	TEST METHOD	ENGLISH	METRIC
Heat Deflection (HDT) @ 264 psi	ASTM D648	372°F	189°C
Glass Transition Temperature (Tg)	DMA (SSYS)	446°F	230°C
Coefficient of Thermal Expansion	ASTM D696	3.1 E -05 in/in/°F	5.5 E -05 mm/mm/°C

ELECTRICAL PROPERTIES	TEST METHOD	VALUE RANGE
Volume Resistivity	ASTM D257	1.5x10e14 - 5.0 x 10e13 ohms
Dielectric Constant	ASTM D150-98	3.2 - 3.0
Dissipation Factor	ASTM D150-98	.0015 - .0011
Dielectric Strength	ASTM D149-09, Method A	290 - 80 V/mm
Dielectric Strength	IEC 60112	14.6 kV/mm
Dielectric Constant @ 60 Hz	IEC 60250	3.45

ENVIRONMENTAL RESISTANCE	24 HOURS @ 23°C (73°F)	24 HOURS @ 100°C (212°F)
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

OTHER TEST	METHOD	VALUE
Specific Gravity	ASTM D792	1.28
Classification	UL 94	V0 (0.126", 3.2 mm)
Rockwell Hardness	ASTM D785	M86

SYSTEM AVAILABILITY	LAYER THICKNESS CAPABILITY	SUPPORT STRUCTURE	AVAILABLE COLORS
Fortus 900mc	0.013 inch (0.330 mm)	BASS	Tan
	0.010 inch (0.254 mm)		

Actual part properties may vary slightly from those listed above based on processing parameters, operating conditions, and material usage. Forecast3D makes no warranties of materials for any particular application, nor does it make a warranty of any type, expressed or implied, including, but not limited to, the warranties of merchantability for a particular purpose.

Forecast3D is a world class Rapid Manufacturing facility located in Carlsbad CA specializing in high-quality rapid prototyping, 3D printing (SLA, SLS, FDM, Objet, and DMLS), short-run manufacturing and CNC machining, and is well known for its unique ProCAST RTV & Hybrid Tooling capabilities.