(248) 836-2099
DASI 3D SOLUTIONS

PPSF/PPSU
Production - Grade Thermoplastic

Website: www.dasi3dprinting.com
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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, EtOsterilization, plasma sterilization, chemical sterilization and radiation*. PPSF gives you the ability to manufacture Real Parts™ direct fromdigital files that are ideal for conceptual modeling, functional prototyping, manufacturing tools, and end-use-parts.

MECHANICAL PROPERTIES[1]	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[3]	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
Melt Point	- - - - - - - - -	Not Applicable[2]	Not Applicable[2]

ELECTRICAL PROPERTIES[4]	TEST METHOD	VALUE RANGE
Volume Resistivity	ASTM D257	1.5x10e14 - 5.0 x 10e13 ohm-cm
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/mil

The performance characteristics of these materials may vary according to application, operating conditions, or end use. Each user is responsible for determining that the Stratasys material is safe, lawful, and technically suitable for the intended application, as well as for identifying the proper disposal (or recycling) method consistent with applicable environmental laws and regulations.

Stratasys makes no warranties of any kind, express or implied, including, but not limited to, the warranties of mer-chantability, fitness for a particular use, or warranty against patent infringement.

ENVIRONMENTAL RESISTANCE[5]	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[3]	TEST METHOD	VALUE
Specific Gravity	ASTM D792	1.28
Flame Classification	UL 94	V-0
Rockwell Hardness	ASTM D785	M86
UL File Number	- - - - - - - - -	E345258

SYSTEM AVAILABILITY	LAYER THICKNESS CAPABILITY	SUPPORT STRUCTURE	AVAILABLE COLORS
Fortus 400mc	0.013 inch (0.330 mm)	BASS	Tan
Fortus 900mc	0.010 inch (0.254 mm)[6]		

***Stratasys has not done any sterilization testing on PPSF.**

1 Build orientation is on side long edge.
2 Due to amorphous nature, material does not display a melting point.
3 Literature value unless otherwise noted.
4 All Electrical Property values were generated from the average of test plaques built with default part density (solid). Test plaques were 4.0 x 4.0 x 0.1 inches (102 x 102 x 2.5 mm) and were built both in the flat and vertical orientation. The range of values is mostly the result of the difference in properties of test plaques built in the flat vs. vertical orientation.
5 Test results based on Stress Crack Resistance (24-hour immersion @ 23°C and @ 100°C).
6 0.013 inch (0.330 mm) layer thickness not available on Fortus 900mc.