

PPSF

Production-Grade Thermoplastic for Fortus 3D Production Systems

Mechanical Properties¹

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

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Thermal Properties³

Property	Test Method	Metric	English
Heat Deflection (HDT) @ 264 psi	ASTM D648	189°C	372°F
Glass Transition Temperature (T _g)	DMA (SSYS)	230°C	446°F
Coefficient of Thermal Expansion	ASTM D696	5.5 ^{.05} mm/mm/°C	3.1 ^{.05} in/in/°F

Electrical Properties⁴

Property	Test Method	Value Range
Volume Resistivity	ASTM D257	1.5x10 ¹⁴ - 5.0x10 ¹³ 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/mil

Environmental Resistance⁵

Property	24 hours @ 23°C (73°F)	24 hours @ 100°C (212°F)
Antifreeze (Prestone), 50%	Passed	Passed
Gasoline-Unleaded	Passed	Not Tested

Environmental Resistance (continued)

Property	24 hours @ 23°C (73°F)	24 hours @ 100°C (212°F)
Motor Oil 10W-40	Passed	Passed
Power Steering Fluid	Passed	Passed
Transmission Fluid	Passed	Passed
Windshield Washer Fluid, 50%	Passed	Not Tested

Other³

Property	Test Method	Value
Specific Gravity	ASTM D792	1.28
Flame Classification	UL 94	V-0
Rockwell Hardness	ASTM D785	M86

Data sheets provided by Xometry contain material sourced through trusted OEMs, material distributors, and databases. Please visit Stratasys.com for further information on this material.

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