

Tensile Properties		
ASTM D638 - Type V		
Property	Imperial	Metric
Toughness*	8.4 ft·lb/in ²	17.6 KJ/m ²
Tensile Modulus	69037 psi	476 MPa
Ultimate Tensile Strength	6642psi	45.8 MPa
Tensile Strength at Yield	6900 psi	47.6 MPa
Elongation at Yield	16%	16%
Elongation at Break	34%	34%
3D Printing Properties		
Property	Imperial	Metric
Expected Max Linear Print Speed	1.97 in/s	50 mm/s
Hardness, ASTM D2240	90D	90D
Solid Density, ASTM D792	5.7 x 10 ⁻² lb/in ³	1.57 g/cc
Impact Properties		
Property	Imperial	Metric
Notched Izod (machined), 23 C, ASTM D256	0.62 f·lb/in	33 J/m
Gardner Impact, 23 C, ASTM D5420	28 ft·lb	38 J
Thermal Properties		
Property	Imperial	Metric
Glass Transition by DSC, ASTM E1356	187 F	86 C
Glass Transition by DMA, ASTM D792	200 F	93 C
Heat Deflection Temperature, ASTM D648	169 F	76 C
Coefficient of Thermal Expansion, ASTM E832	32.8 x 10 ⁻⁴ in/inR	59 x 10 ⁻⁴ m/m·K
Heat Capacity, ASTM E1269	0.38 Btu/lb·°F	1,600 J/kg·K
Thermal Conductivity, ASTM C518	1.7 Btu·in/hr/ft ² /°F	0.25 W/m·K
Available Colors		
Natural		
Suggested Uses		
Nylon 680 is a pure polymer that is FDA approved. There are no additives used in the chemical manufacturing or extrusion processes. It also has a very high Tg of 93C, allowing it to be safely sanitized for FDA applications.		

*Toughness is not defined in ASTM D638 though can be calculated by taking the integral of the stress-strain curve collected by tensile data.