Nylon 910

(Alloy 910)

Technical Data Sheet

Tensile Properties ASTM D638 - Type V		
Property	**Imperial**	**Metric**
Toughness*	8.7 ft·lb/in2	18.2 KJ/m2
Tensile Modulus	72931 psi	502 MPa
Ultimate Tensile Strength	7738 psi	53.4 MPa
Tensile Strength at Yield	8100 psi	55.8 MPa
Elongation at Yield	18%	18%
Elongation at Break	32%	32%
3D Printing Properties		
Property	**Imperial**	**Metric**
Expected Max Linear Print Speed	1.97 in/s	50 mm/s
Hardness, **ASTM D2240**	85D	85D
Solid Density, **ASTM D792**	3.9 x 10-2 lb/in3	1.08 g/cc
Impact Properties		
Property	**Imperial**	**Metric**
Notched Izod (machined), 23 C, **ASTM D256**	0.7 f·lb/in	37 J/m
Gardner Impact, 23 C, **ASTM D5420**	0.74 ft·lb	32 J
Thermal Properties		
Property	**Imperial**	**Metric**
Glass Transition by DSC, **ASTM E1356**	169 F	76 C
Glass Transition by DMA, **ASTM D792**	180 F	82 C
Heat Deflection Temperature, **ASTM D648**	149 F	65 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/ft²/°F	0.25 W/m·K
Available Colors		
Natural		
Suggested Uses		
Nylon 910 is the absolute highest strength and abrasion resistant material we have ever printed with using FDM printers. This makes it an excellent substitution for small ABS parts that need the highest durability 3D printing can provide.		

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

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