



Nylon 12 CF

LASER SINTERING MATERIAL SPECIFICATIONS

Highlights

- Carbon fiber filled Nylon 12
- Resistance to extreme temperatures and wear
- Optimal reproduction of detail
- High stiffness, high tensile strength
- Electrostatically dissipative

Applications

- Underhood components
- Wind tunnel display models
- Well suited to applications which require superior thermal properties, with maximum performance and an extremely high SLS strength to weight ratio

TYPICAL PHYSICAL PROPERTIES

MECHANICAL PROPERTIES	TEST METHOD	ENGLISH		METRIC	
		XY AXIS	ZX AXIS	XY AXIS	ZX AXIS
Color/Appearance	Visual	Dark Grey		Dark Grey	
Density	DIN 53466	0.0387 lb/in ³		1.07 g/cm ³	
Elongation at Break	ASTM D638	5.7%	5.3%	5.7%	5.3%
Flexural Strength	ASTM D790	16,400 psi	10,200 psi	113 MPa	70 MPa
Flexural Modulus	ASTM D790	880,000 psi	360,000 psi	6,067 MPa	2,482 MPa
Heat Deflection Temp @66 psi	ASTM D648	354°F	350°F	179°C	177°C
Heat Deflection Temp @264 psi	ASTM D648	341°F	260°F	172°C	127°C
Tensile Modulus	ASTM D638	530,000 psi	357,000 psi	3,654 MPa	2,461 MPa
Tensile Strength	ASTM D638	8,750 psi	7,500 psi	60 MPa	51 MPa
Izod Impact Strength (Notched)	ASTM D256	.753 ft-lb in	.428 ft-lb in	40.2 J/m	22.9 J/m
Coefficient of Thermal Expansion: 77°F-212°F (25°C-100°C)	ASTM E831	124.5 µin/in°F		224.1 µm/m°C	
Coefficient of Thermal Expansion: 212°F-338°F (100°C-170°C)	ASTM E831	176.6 µin/in°F		317.9 µm/m°C	
Volume Resistance	—	—		6.0E+02 - 7.8E+03 ohms-cm	
Surface Resistance	—	2.9E+10 - 3.2E+10 ohms		—	
Voltage Field	—	<50 volts		—	

The information presented represents typical values intended for reference and comparison purposes only. It should not be used for design specifications or quality control purposes. End-use material performance can be impacted (+/-) by, but not limited to, part design, end-use conditions, test conditions, color etc. Actual values will vary with build conditions. Product specifications are subject to change without notice.

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XZ = X or "on edge"

XY = Y or "flat"

ZX = or "upright"

