stomdevice

SLS POWDERS

formlabs

Nylon 11 CF Powder

Carbon Fiber Reinforced, for Strong and Lightweight parts

Get the best of nylon and carbon fiber with this highly stable, high-performance material, perfect for end-use applications that require both high stiffness and superior strength and can take an impact.

Nylon 11 CF Powder is specifically developed for use on the Fuse 1+ 30W.

Functional composite prototypes

Tooling, Jigs, Fixtures

Replacement and spare alternatives to metal parts

High-impact equipment



V1 **FLP11C01**

* May not be available in all regions

Prepared 06 . 22 . 2022

Rev. 01 06 . 22 . 2022

To the best of our knowledge the information contained herein is accurate. However, Formlabs, Inc. makes no warranty, expressed or implied, regarding the accuracy of these results to be obtained from the use thereof.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

MATERIAL PROPERTIES DATA

Nylon 11 CF Powder

	METRIC [1,2]			IMPERIAL [1,2]			METHOD
Tensile Properties	X	Y	Z	X	Y	Z	
Ultimate Tensile Strength	69 MPa	52 MPa	38 MPa	10 ksi	7.6 ksi	5.5 ksi	ASTM D 638-14 Type 1
Tensile Modulus	5.3 GPa	2.8 GPa	1.6 GPa	770 ksi	410 ksi	240 ksi	ASTM D 638-14 Type 1
Elongation at Break	9%	15%	5%	9%	15%	5%	ASTM D 638-14 Type 1
Mechanical Properties							
Flexural Strength	110 MPa			16 ksi			ASTM D 790-15
Flexural Modulus	4.2 GPa			610 ksi			ASTM D 790-15
Notched Izod	74 J/m			1.4 ft-lb/in			ASTM D256-10
Thermal Properties							
Heat Deflection Temp. @ 1.8 MPa	178 °C			352 °F			ASTM D 648-16
Heat Deflection Temp. @ 0.45 MPa	188 °C			370 °F			ASTM D 648-16
Vicat Softening Temperature	188 °C			370 °F			ASTM D 1525

[1] Material properties may vary with part geometry, print orientation and temperature.

[2] Parts were printed using Fuse 1+ 30W, with Nylon 11 CF Powder. Parts were conditioned at 50% relative humidity and 23 °C for 7 days before testing.

SOLVENT COMPATIBILITY

Percent weight gain over 24 hours for a printed 1 x 1 x 1 cm cube immersed in respective solvent:

Solvent	24 hr weight gain, %	Solvent	24 hr weight gain, %
Acetic Acid 5%	0.2	Mineral oil, heavy	1.0
Acetone	0.2	Mineral oil, light	1.3
Bleach ~5% NaOCl	0.2	Salt Water (3.5% NaCl)	0.2
Butyl Acetate	0.2	Skydrol 5	0.8
Diesel Fuel	0.6	Sodium hydroxide solution (0.025% pH = 10)	0.2
Diethyl glycol monomethyl ether	0.5	Strong Acid (HCl Conc)	0.8
Hydraulic Oil	1.0	TPM	0.8
Hydrogen peroxide (3%)	0.2	Water	0.1
Isooctane	0.0	Xylene	0.2
Isopropyl Alcohol	0.2		

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ