Addigy® PA6/66-GF20 FR LS

FDM® Thermoplastic Filament

The information presented are typical values intended for reference and comparison purposes only.
They should no be used for design specifications or quality control purposes.

Overview

Addigy PA6/66-GF20 FR LS is a 20% glass-filled nylon polymer with fire-resistant, low-smoke properties and low levels of toxic fume emissions. PA6/66-GF20 FR LS complies with industry standards EN 455-45-2, NFPA 130, SMP 800-C and FAR 25.853, making it a desirable material for transportation industry applications.

Contents:

Ordering Information

Part Number	Description
Filament Canisters	
355-70020	PA6/66-GF20 FR LS, 92 cu in. - Fortus Plus
355-70090	SUP4000B, 92 cu in. - Fortus Plus
Printer Consumables	
511-10745-S	T20G tip
511-10401	T16 tip
325-00750-S	Nylon build sheet, 0.02 x 16 x 18.5 in. (0.51 x 406 x 470 mm)

Physical Properties

Property	Test Method	Typical Values	
		XY	XZ/ZX
Melting Point	ISO 11357, DSC	195 ˚C (383 ˚F)	

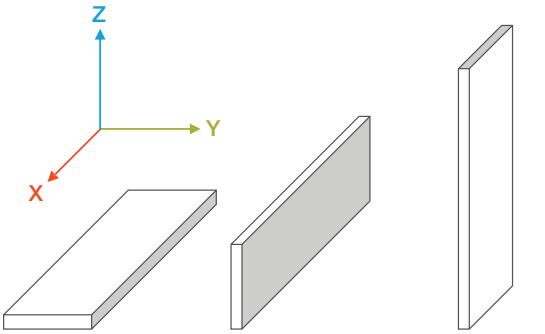
Data provided by Covestro.
DSC = differenital scanning calorimetry at 10°C/minute.

Mechanical Properties

Samples were printed with 0.010 in. (0.254 mm) layer heights on the Fortus 450mc. For the full test procedure please see the Stratasys Materials Test Procedure on www.stratasys.com.

Print Orientation

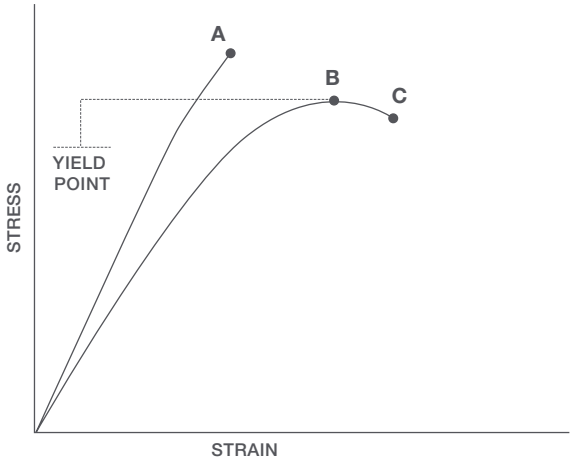
Parts created using FDM are anisotropic as a result of the printing process. Below is a reference of the different orientations used to characterize the material.



Flat (XY) On Edge (XZ) Upright (ZX)

Tensile Curves

Due to the anisotropic nature of FDM, tensile curves look different depending on orientation. Below is a guide of the two types of curves seen when printing tensile samples and what reported values mean.



A = Tensile at break, elongation at break (no yield point)
B = Tensile at yield, elongation at yield
C = Tensile at break, elongation at break

		XZ Orientation[1]	ZX Orientation[1]
Tensile Properties: ASTM D638			
Yield Strength	MPa	50.7 (2.0)	No yield
	psi	7350 (290)	No yield
Elongation @ Yield	%	3.5 (0.21)	No yield
Strength @ Break	MPa	50.0 (2.1)	24.7 (1.7)
	psi	7250 (300)	3580 (250)
Elongation @ Break	%	4.0 (0.31)	1.6 (0.33)
Modulus (Elastic)	GPa	4.14 (0.18)	2.60 (0.43)
	ksi	601 (26)	377 (62)
Flexural Properties: ASTM D790, Procedure A			
Peak Stress	MPa	105 (1.0)	51.8 (1.2)
	psi	15300 (150)	7510 (180)
Modulus	GPa	5.10 (0.097)	2.36 (0.038)
	ksi	740 (14)	343 (5.5)
Impact Properties: ASTM D256, ASTM D4812			
Unnotched	J/m	279 (28)	77.9 (15)
	ft*lb/in.	5.23 (0.53)	1.46 (0.28)

[1] Values in parenthesis are standard deviations.

Stratasys Headquarters

7665 Commerce Way,
Eden Prairie, MN 55344
+1 800 801 6491 (US Toll Free)
+1 952 937-3000 (Intl)
+1 952 937-0070 (Fax)

1 Holtzman St., Science Park,
PO Box 2496
Rehovot 76124, Israel
+972 74 745 4000
+972 74 745 5000 (Fax)

stratasys.com
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