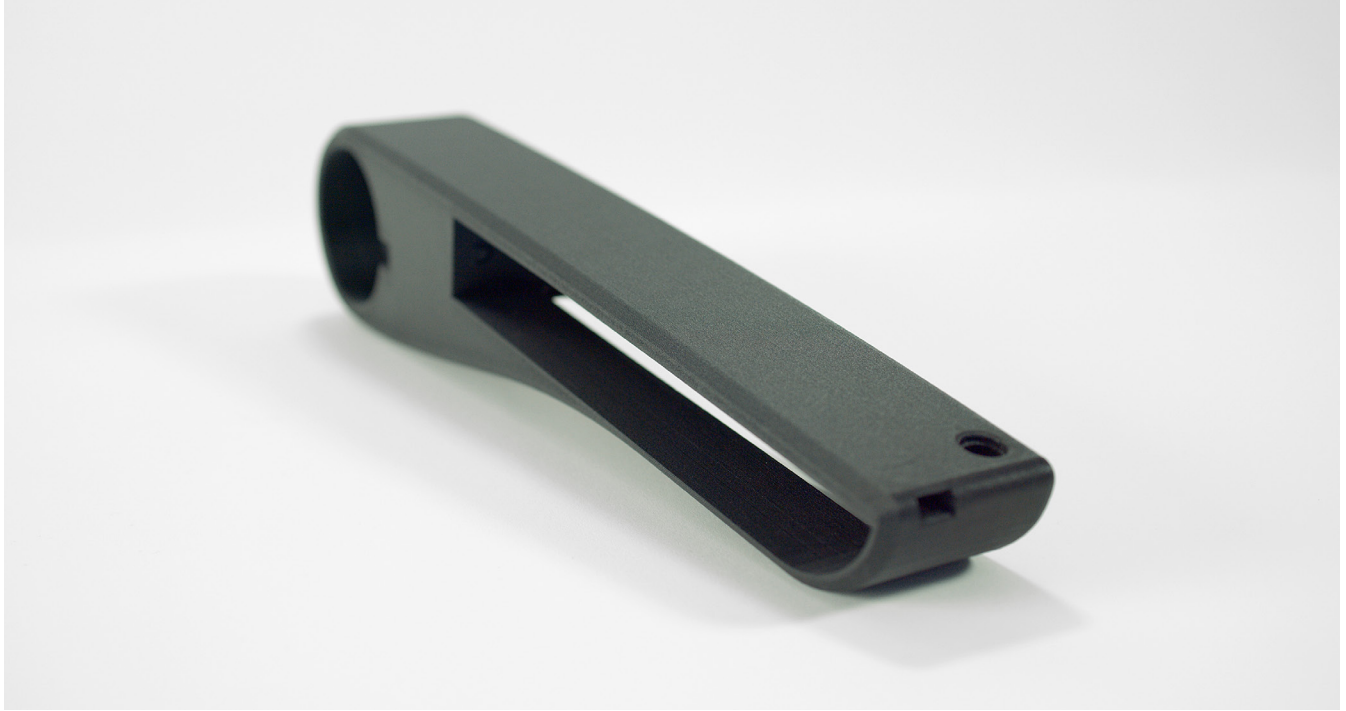


Addigy® PA6/66-GF20 FR LS



FDM® Thermoplastic Filament

The information presented are typical values intended for reference and comparison purposes only. They should not 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 45545-2, NFPA 130, SMP 800-C and FAR 25.853, making it a desirable material for transportation industry applications.

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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 | 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.

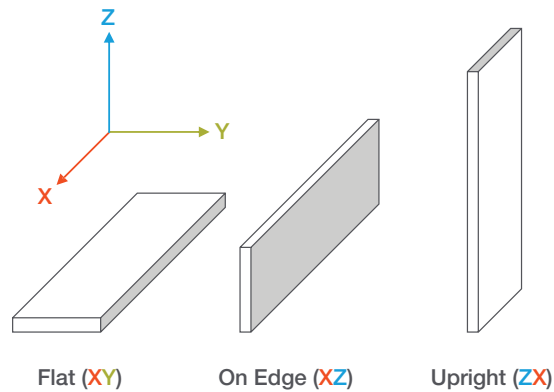
DSC = differential scanning calorimetry at 10°C/minute.

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](http://www.stratasys.com) on www.stratasys.com.

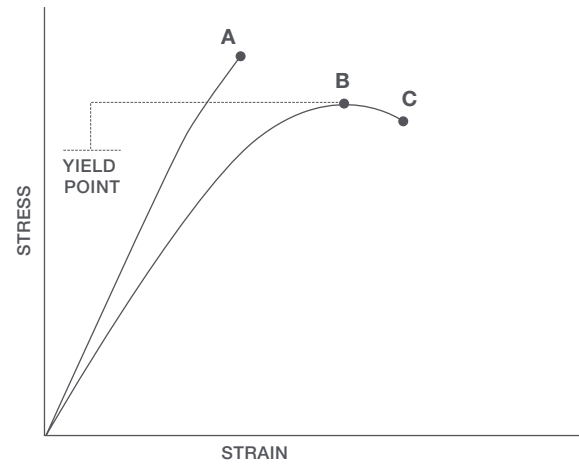
Print Orientation

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.



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 | | | |
| Notched | J/m | 58.0 (3.3) | 21.4 (3.1) |
| | ft*lb/in. | 1.09 (0.062) | 0.401 (0.058) |
| 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.

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