

Jabil PA 0600 Filament

Technical Data Sheet

Product Description

Jabil's PA 0600 filament is a polyamide/polyketone alloy with high stiffness, good wear resistance, low friction and self-lubricating characteristics. The high stiffness and self-lubricating qualities make post-print machining, such as fly cuts, thread taps and heat stakes, simple and effective.

Advantages

Compared to other tribologically similar polymers such as POM and PVDF, which are commonly used for similar applications, PA 0600 releases no odors or toxic fumes during processing, exhibits low warp and has similar dynamic and static coefficient of friction. PA 0600 is an excellent materials choice for applications where high dimensional stability and lubricity are required.

Storage and Use

PA 0600 is highly hygroscopic, meaning it will quickly absorb and retain moisture from the atmosphere, affecting visual quality and mechanical properties. For best results, print and store filament in a dry environment. If necessary, dry filament in an oven at up to 75 °C (165 °F) for 6 - 12 hours.



For the latest print profiles, search for Jabil Engineered Materials in the Cura Marketplace.

For complete copies of the Print Settings and the Printing & Drying Guide, visit our [PA 0600 Webpage](#).

Properties

Mechanical Properties - Dry as Printed¹

| | Test Condition | Typical Value | Method |
|---------------------------------|---------------------|---------------|-------------------|
| Tensile Modulus (MPa) | XY coupons, Ambient | 2660 | ASTM D638, Type I |
| Tensile Elongation at Break (%) | | 4.8 | |
| Ultimate Tensile Strength (MPa) | | 49.0 | |
| Flexural Modulus (MPa) | XY coupons, Ambient | 2330 | ASTM D790 |
| Flexural Strength (MPa) | | 83 | |
| Flexural Strain (%) | | >5 | |
| Izod Impact, Notched (J/m) | XY coupons, Ambient | 32.4 | ASTM D256 |
| Izod Impact, Un-notched (J/m) | XY coupons, Ambient | 451 | |

1. Testing conducted on bars printed at a layer height of 0.20 mm and 240 °C and tested at <0.20 wt% moisture. Typical values are for reference only.

Mechanical Properties - Moisture Conditioned¹

| | Test Condition | Typical Value | Method |
|---------------------------------|---------------------|---------------|-------------------|
| Tensile Modulus (MPa) | XY coupons, Ambient | 1570 | ASTM D638, Type I |
| Tensile Elongation at Break (%) | | 24.9 | |
| Ultimate Tensile Strength (MPa) | | 29.7 | |
| Flexural Modulus (MPa) | XY coupons, Ambient | 1110 | ASTM D790 |
| Flexural Strength (MPa) | | 40.6 | |
| Flexural Strain (%) | | >5 | |
| Izod Impact, Notched (J/m) | XY coupons, Ambient | 68.5 | ASTM D256 |
| Izod Impact, Un-notched (J/m) | XY coupons, Ambient | 822 | |

1. Testing conducted on bars printed at a layer height of 0.20 mm and 240 °C and tested after 14 conditioning for 14 days at 23 °C and 50 % RH. Typical values are for reference only.

Thermal Properties

| | Test Condition | Typical Value | Method |
|----------------------------------|----------------|---------------|--------|
| Heat Deflection Temperature (°C) | 0.455 MPa | 103 | DMA |
| Heat Deflection Temperature (°C) | 1.82 MPa | 43 | |
| Melt Temperature, Peak (°C) | 20°C/min ramp | 188 | DSC |

Other Physical Properties

| | Test Condition | Typical Value | Method |
|------------------------------|----------------|---------------|-----------|
| Density (g/cm ³) | Ambient | 1.26 | ASTM D792 |

Dimensional Properties

| | Test Condition | Typical Value | Method |
|----------------------------------|--------------------------|------------------------|------------------|
| Diameter: Mean, Indiv. Axis (mm) | In-line, 100% inspection | 1.75±0.05 2.85±0.05 | Laser Micrometer |

Disclaimer: The information in this technical data sheet, including material properties, are obtained from testing representative samples under carefully controlled conditions and are provided for reference only. Material properties may be impacted by storage, handling, processing equipment/parameters, and product design, among other factors. The information is not a substitute for user testing to determine fitness for any specific use and the user is responsible for ensuring safe and lawful use of the product.

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