

PA6-CF Printing Guide

Practical starting settings for engineering-grade nylon carbon fiber filament

1. Dry Before Printing

Dry the filament at 80°C for 8–12 hours before printing. Keep it in a dry box during long jobs. Moist PA6-CF may produce bubbles, rough surfaces, weak layer bonding and unstable extrusion.

2. Hardware

Use a hardened steel nozzle because carbon fiber reinforcement is abrasive. A 0.4–0.6 mm nozzle is recommended. Confirm the printer hot end can safely maintain the selected temperature.

3. Starting Settings

Nozzle: 260–290°C. Bed: 80–110°C. Enclosure: recommended. Use moderate print speed and tune cooling conservatively to protect interlayer adhesion.

4. Bed Adhesion

Use a clean build surface and a suitable nylon-compatible adhesive or surface treatment. A brim may help on larger parts. Avoid excessive first-layer compression.

5. Validation

Print a small functional coupon before production. Validate dimensional accuracy, layer bonding, stiffness and heat performance using the same orientation and post-processing planned for the final part.

Important

These settings are starting points. Printer design, environmental humidity, geometry, nozzle, orientation and post-processing affect results. Printed parts must be independently validated for the intended application.

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