

PA6-CF Printing Guide

DRYING, NOZZLE AND PROCESS VALIDATION

Use these settings as a controlled starting point. Validate the material on the target printer, part geometry and production environment before releasing a customer or production profile.

1. Dry the Material

Typical starting point: 80 C for 8-12 hours. Feed from a dry box during long jobs. Moisture may cause popping, bubbles, rough surfaces and weak or inconsistent layer adhesion.

2. Use Wear-Resistant Hardware

Use a hardened steel or other abrasion-resistant nozzle. A 0.4-0.6 mm nozzle is recommended as a practical starting range. Standard brass nozzles can wear quickly with carbon fiber compounds.

3. Temperature and Environment

Setting	Starting Range	Validation Point
Nozzle	260-290 C	Stable flow and layer bonding
Bed	80-110 C	First-layer adhesion without distortion
Enclosure	Recommended	Reduced warping and more stable cooling
Cooling fan	Low to moderate	Tune for bridges and layer strength
Print speed	Moderate	Confirm extrusion consistency first

4. Production Validation

Print a temperature tower, dimensional coupon and representative functional part. Record drying history, nozzle type, orientation, layer height and post-processing. Revalidate after changing the printer, nozzle, production environment or material batch.

5. Storage

Reseal immediately after use with fresh desiccant. Store in a low-humidity dry box or sealed barrier bag. Dry again when moisture symptoms appear or after extended exposure.

Technical Notice

Printing conditions vary by machine and application. The settings above are starting recommendations and do not certify final printed-part performance.