

BambuLab Basic PET CF Black

MaterialID MAT0166



3DPiceland Labs
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WORKFLOW-RELIABILITY - Bug Fixes and Workflow
Reliability
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Guidance boundary: values below are shared base-material guidance resolved only through the canonical BaseMaterialId link. They are not manufacturer-, spool- or printer-specific validated settings. Missing fields remain Not recorded.

Overall 46/100	Engineering axes 6/5	Public rank 132 / 234	MSRP USD/kg 126.40
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Engineering profile



Recommended applications

- Rigid brackets, fixtures and shape-stable prototypes
- Cosmetic parts, concept models or low-load prototypes
- Avoid high tensile load applications
- Avoid high impact components

Measured strengths

- Stiffness: 99/100. Stiffness is a relative advantage in this comparison group.

Limitations

- Tensile: 25/100. Avoid using this as the primary choice for tensile-loaded parts.
- Impact: 21/100. Avoid high impact or shock-loaded components without additional validation.
- Layer adhesion: 17/100. Z-axis performance should be treated with caution.

Engineering trade-offs

- Good repeatability does not compensate for low tensile capability in load-bearing designs.
- Stiffness is useful for shape stability, but impact tolerance is a separate limitation.
- The report should be read as a suitability warning rather than a general-purpose recommendation.

Base-material printing guidance

Guidance	Minimum	Recommended	Maximum	Unit
Nozzle temperature	290	290	300	°C
Bed temperature	110	110	120	°C
Print speed	11	67	67	mm/s
Cooling	10	10	15	%
Guidance	Value		Unit	
Cooling guidance	Low			
Drying temperature	65		°C	
Drying time	6		hours	
Enclosure	Required			
Printer / G-code reference	PrusaCoreOneL			
Slicer profile reference	Siraya Tech PET			

Print workflow checks

- Confirm nozzle temperature, bed temperature, speed, cooling and drying requirements from the manufacturer profile or spool label.
- Print a small validation part before committing to a long, costly or safety-relevant print.
- Orient the part so the governing load does not rely on an unverified or weak engineering axis.
- Reinforced filament: confirm an abrasion-resistant nozzle and manufacturer drying/storage requirements.
- Layer-adhesion evidence is weak; avoid critical Z-axis loading without additional validation.

Decision guidance

- Use this material mainly for low-load, visual or experimental parts.
- Review the listed alternatives if the application needs stronger overall performance.
- Do not choose it as a tensile-strength benchmark material.
- Avoid selecting it for impact-focused testing or shock-loaded designs.

Stronger same-family alternatives

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0195	Siraya Tech Fiberheart Black PET CF Black	Siraya Tech	51/100	35/100	27/100

Confirm exact settings against the manufacturer profile, spool label and actual printer/material combination. Results do not replace application-specific validation.

[Testing methodology](#) · [Download PDF](#)

reports/printing-recommendations/MAT0166/