

BambuLab Basic PLA Black

MaterialID MAT0107



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 52/100	Engineering axes 6/5	Public rank 64 / 234	MSRP USD/kg 43.92
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Engineering profile



Recommended applications

- Rigid brackets, fixtures and shape-stable prototypes
- Repeatable print jobs and production-style batches
- Cosmetic parts, concept models or low-load prototypes
- Avoid high tensile load applications
- Avoid high impact components

Measured strengths

- Layer adhesion: 39/100. Z-axis bonding is better than the material-family context.
- Consistency: 79/100. Repeatability is one of the stronger signals in this material profile.
- Stiffness: 95/100. Stiffness is a relative advantage in this comparison group.

Limitations

- Tensile: 26/100. 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: 39/100. 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.

Base-material printing guidance

Guidance	Minimum	Recommended	Maximum	Unit
Nozzle temperature	195	230	230	°C
Bed temperature	60	60	70	°C
Print speed	55	165	165	mm/s
Cooling	20	80	85	%
Guidance	Value		Unit	
Cooling guidance	High			
Drying temperature	50		°C	
Drying time	5		hours	
Enclosure	Not required			
Printer / G-code reference	PrusaCoreOneL			
Slicer profile reference	Prusament PLA			

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.
- Layer-adhesion evidence is weak; avoid critical Z-axis loading without additional validation.

Decision guidance

- Use this material for moderate requirements after checking the weakest axis.
- 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
MAT0069	ProtoPasta HTPLA Blood of My Enemies PLA Red	ProtoPasta	100/100	—	—
MAT0079	Polymaker PolyLight PLA Pro Black	Polymaker	65/100	35/100	52/100
MAT0109	Polymaker PolyMax PLA Black	Polymaker	64/100	32/100	62/100

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

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