

BambuLab Standard Indigo Blue PETG CF Blue

Material Engineering Report
MaterialID MAT0170

3DPiceland Engineering Platform

3DPiceland Labs

Generated with 3DPiceland Engineering Platform v60.0.6

WORKFLOW-RELIABILITY - Bug Fixes and Workflow Reliability

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Public-data contract: This static report contains only allowlisted material identity, public links, canonical MSRP and existing Verified Material Summary / governed score outputs. It excludes raw specimen rows and non-public operational data.

TEST COVERAGE

Complete

ENGINEERING AXES

6/6

PUBLIC MSRP

\$47.92 USD/kg

Material identity

MaterialID	MAT0170
Material	BambuLab Standard Indigo Blue PETG CF Blue
Manufacturer	BambuLab
Product line	Standard
Base material	PETG
Category	Standard
Variant / finish	—
Reinforcement	CF
Color	Blue

Governed engineering profile

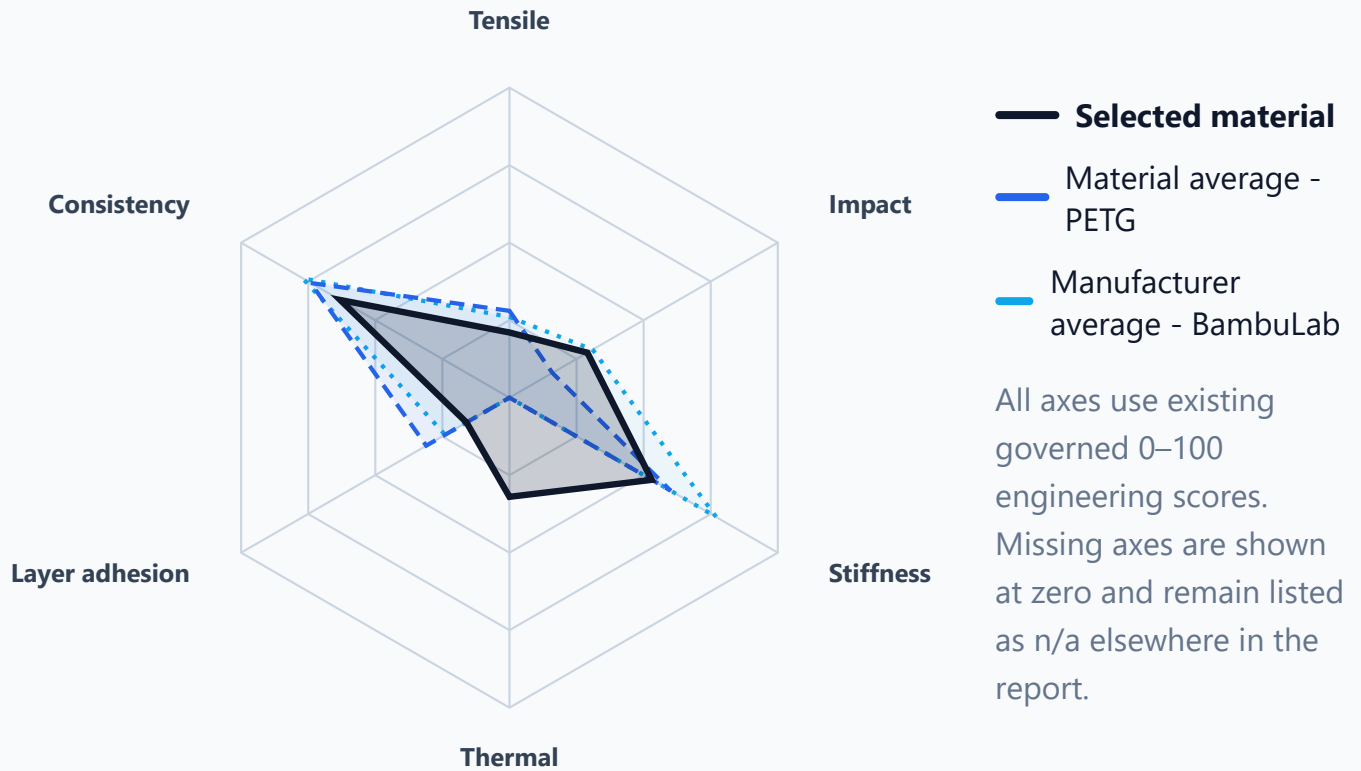
Overall	36/100
Tensile	21/100

Impact	29/100
Stiffness	53/100
Consistency	63/100
Layer adhesion	16/100
Thermal	32/100
Best available axis	consistency

Engineering score profile



Engineering radar



Fixture thermal result

63 °C · score 32/100 · method 3dp-thermal-deflection-fixture-v1
Nearby BlueDOT probe-indicated fixture temperature from a non-standard comparative 3DPlceland method; not ASTM D648, ISO 75, specimen temperature, certified HDT or a manufacturer limit.

Material and manufacturer context

Metric	Selected material	Material average	Manufacturer average
Overall	36/100	42/100	47/100
Tensile	21/100	28/100	26/100
Impact	29/100	16/100	31/100
Stiffness	53/100	60/100	77/100
Consistency	63/100	74/100	77/100
Layer adhesion	16/100	31/100	24/100
Thermal	32/100	—	—

Verified measurement results

Existing Verified Material Summary outputs. The public renderer does not read raw specimen rows or recalculate these values.

Measurement	Average	Std. deviation	CV	Samples	Confidence
Tensile upright	4.597 MPa	2.757 MPa	60%	9	9/10
Tensile flat	29.435 MPa	6.919 MPa	23.5%	8	8/10
Impact upright	89.818 kJ/m ²	29.642 kJ/m ²	33%	10	10/10
Impact flat	483.779 kJ/m ²	133.906 kJ/m ²	27.7%	10	10/10
Stiffness modulus	1604.454 MPa	—	—	—	—
Stiffness deflection	3.382 mm	—	—	—	—

Measurement provenance

Canonical per-module measured dates from SQLite, shown in unambiguous ISO format. Missing dates are not inferred.

Module	Measured date
Tensile	Not recorded
Impact	Not recorded
Stiffness	Not recorded
Thermal	Not recorded

Engineering interpretation

Summary: BambuLab Standard Indigo Blue PETG CF Blue has a specialized or limited engineering profile. It is below its material-family average by 5,8 points and below its manufacturer average by 10,6 points. Its strongest measured axis is Consistency, while the weakest axis is Layer Adhesion.

Data-driven review: BambuLab Standard Indigo Blue PETG CF Blue is best understood as a limited-use material that should be validated carefully before functional use. Compared with the current verified dataset, it ranks better than 5% overall, is below the material-family average by 5,8 points, and is below the manufacturer average by 10,6 points. Its strongest engineering signal is Consistency, while Layer Adhesion is the main limitation to consider before using it for demanding applications.

BEST FEATURE

Consistency

MAIN LIMITATION

Layer Adhesion

DATASET POSITION

Better than 5%
223 / 234

Strengths

- Impact: 29/100. Impact behavior is competitive against the material-family context.

Limitations

- Tensile: 21/100. Avoid using this as the primary choice for tensile-loaded parts.
- Impact: 29/100. Avoid high impact or shock-loaded components without additional validation.
- Consistency: 63/100. Repeatability may not be the best reason to choose this filament.
- Layer adhesion: 16/100. Z-axis performance should be treated with caution.

Engineering trade-offs

- Good repeatability does not compensate for low tensile capability in load-bearing designs.
- The report should be read as a suitability warning rather than a general-purpose recommendation.

Recommended applications

- Cosmetic parts, concept models or low-load prototypes
- Avoid high tensile load applications
- Avoid high impact components

Metric rankings and percentiles

Metric	Score	Rank	Percentile
Overall	36/100	223 / 234	Better than 5%
Tensile	21/100	174 / 226	Better than 23%
Impact	29/100	70 / 226	Better than 69%
Stiffness	53/100	197 / 223	Better than 12%
Consistency	63/100	225 / 231	Better than 3%
Layer adhesion	16/100	165 / 226	Better than 27%
Thermal	32/100	83 / 209	Better than 61%

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.

Better alternatives

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0236	Yasin Standard Black PETG CF Black	Yasin	50/100	30/100	20/100
MAT0198	Siraya Tech Fiberheart Black PETG Pro CF Black	Siraya Tech	49/100	33/100	19/100
MAT0060	ColorFabb XT PETG Pink	ColorFabb	48/100	—	—

Peer context

Highest-scoring same-base-material peers from the current governed dataset. This context is descriptive and is not recalculated by the public renderer.

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0236	Yasin Standard Black PETG CF Black	Yasin	50/100	30/100	20/100

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0198	Siraya Tech Fiberheart Black PETG Pro CF Black	Siraya Tech	49/100	33/100	19/100
MAT0060	ColorFabb XT PETG Pink	ColorFabb	48/100	—	—
MAT0062	IC3D Standard PETG Green-Yellow	IC3D	48/100	26/100	—
MAT0165	Winkle Standard Ash Gray PETG Gray	Winkle	46/100	30/100	14/100
MAT0225	Spectrum Premium Iceland Blue PETG Blue	Spectrum	46/100	33/100	17/100
MAT0063	IC3D Standard PETG Yellow	IC3D	46/100	26/100	—
MAT0235	Yasin Standard Black PETG GF Black	Yasin	45/100	27/100	21/100

Public links

[Manufacturer website](#) [Download PDF](#)

Methodology and limitations

Results are comparative 3DPIceland measurements from home-built test equipment. Thermal is a nearby BlueDOT probe-indicated fixture temperature, not ASTM D648, ISO 75 or specimen temperature. Missing evidence remains n/a. Scores and test results are not recalculated by this publishing layer and do not replace certified manufacturer datasheets or accredited laboratory testing.

- [Testing methodology](#)
- [Engineering methodology whitepaper](#)