

BambuLab Basic PC White

Material Engineering Report
MaterialID MAT0168

3DPiceland Engineering Platform
3DPiceland Labs

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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

\$55.92 USD/kg

Material identity

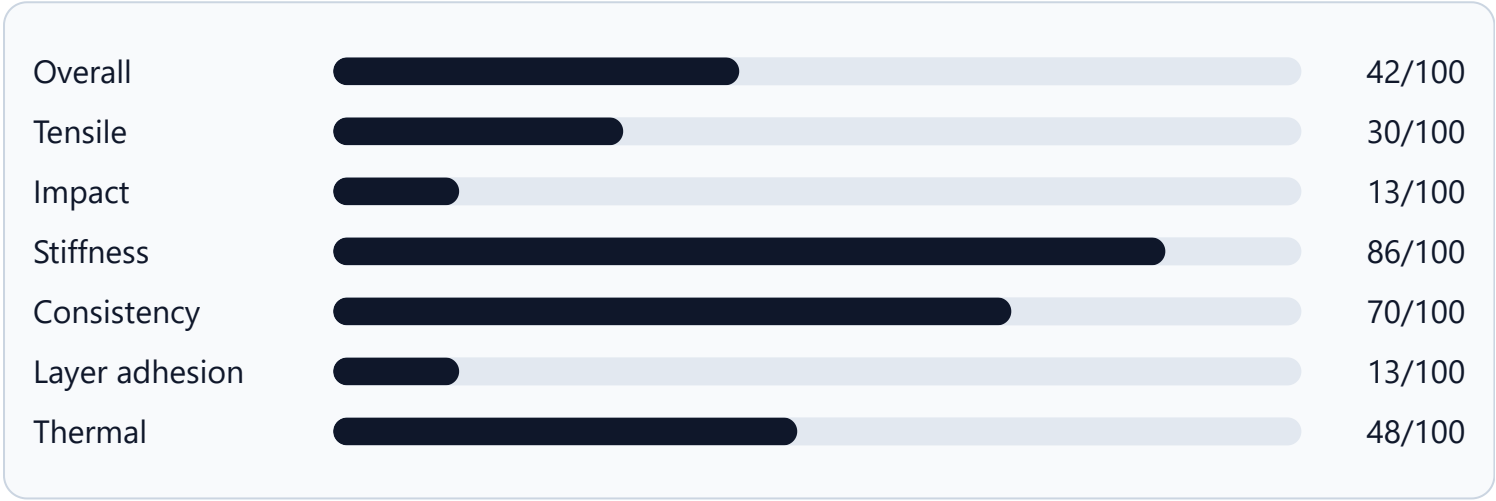
MaterialID	MAT0168
Material	BambuLab Basic PC White
Manufacturer	BambuLab
Product line	Basic
Base material	PC
Category	Engineering
Variant / finish	—
Reinforcement	—
Color	White

Governed engineering profile

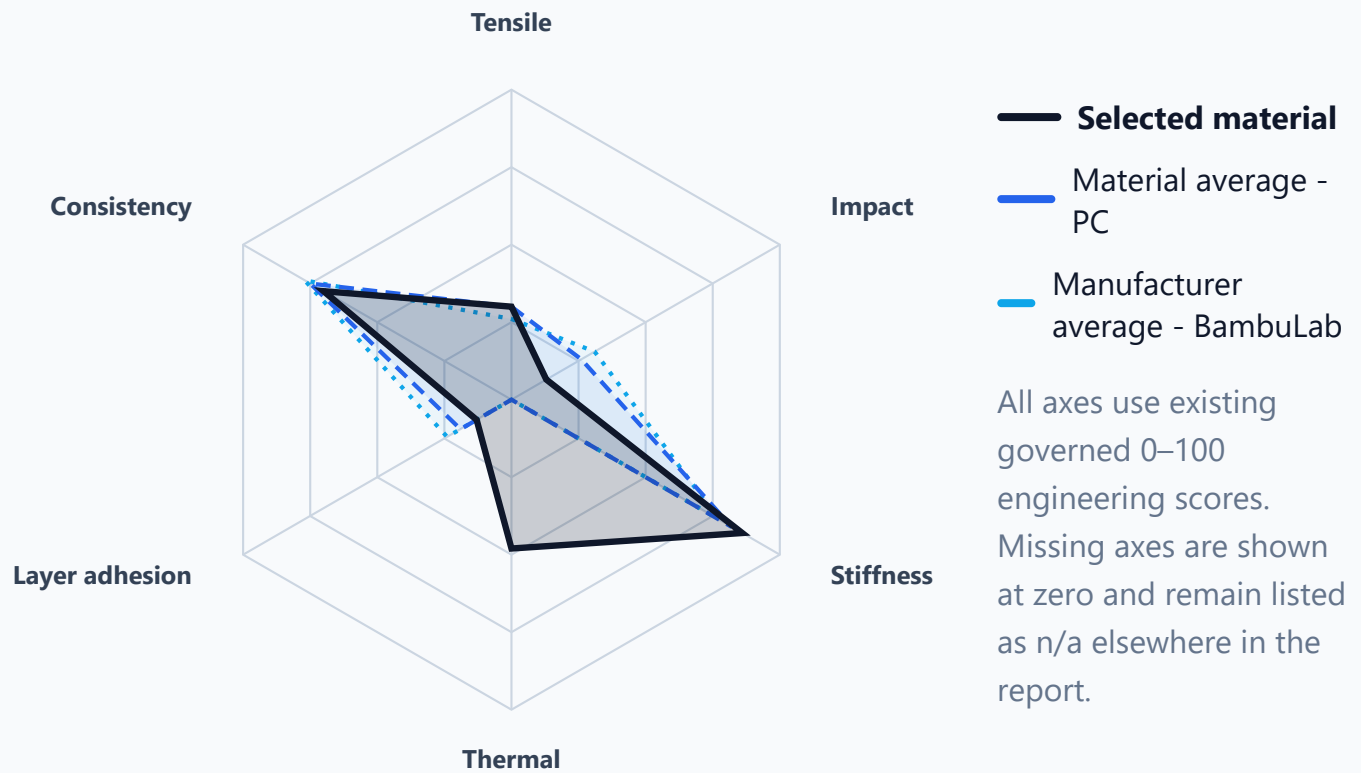
Overall	42/100
Tensile	30/100

Impact	13/100
Stiffness	86/100
Consistency	70/100
Layer adhesion	13/100
Thermal	48/100
Best available axis	stiffness

Engineering score profile



Engineering radar



Fixture thermal result

95 °C · score 48/100 · 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	42/100	46/100	47/100
Tensile	30/100	30/100	26/100
Impact	13/100	26/100	31/100
Stiffness	86/100	82/100	77/100
Consistency	70/100	75/100	77/100
Layer adhesion	13/100	19/100	24/100
Thermal	48/100	—	—

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	5.399 MPa	3.177 MPa	58.9%	10	10/10
Tensile flat	43.143 MPa	9.908 MPa	23%	10	10/10
Impact upright	103.361 kJ/m ²	23.694 kJ/m ²	22.9%	10	10/10
Impact flat	157.075 kJ/m ²	26.156 kJ/m ²	16.7%	10	10/10
Stiffness modulus	2569.808 MPa	—	—	—	—
Stiffness deflection	2.112 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 Basic PC White has a specialized or limited engineering profile. It is below its material-family average by 4,2 points and below its manufacturer average by 4,8 points. Its strongest measured axis is Stiffness, while the weakest axis is Layer Adhesion.

Data-driven review: BambuLab Basic PC White is best understood as a repeatable material for cosmetic, concept and low-load prototype work. Compared with the current verified dataset, it ranks better than 24% overall, is below the material-family average by 4,2 points, and is below the manufacturer average by 4,8 points. Its strongest engineering signal is Stiffness, while Layer Adhesion is the main limitation to consider before using it for demanding applications.

BEST FEATURE

Stiffness

MAIN LIMITATION

Layer Adhesion

DATASET POSITION

Better than 24%
179 / 234

Strengths

- Stiffness: 86/100. Stiffness is a relative advantage in this comparison group.

Limitations

- Tensile: 30/100. Avoid using this as the primary choice for tensile-loaded parts.
- Impact: 13/100. Avoid high impact or shock-loaded components without additional validation.
- Layer adhesion: 13/100. 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.

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

Metric rankings and percentiles

Metric	Score	Rank	Percentile
Overall	42/100	179 / 234	Better than 24%
Tensile	30/100	98 / 226	Better than 57%
Impact	13/100	199 / 226	Better than 12%
Stiffness	86/100	93 / 223	Better than 59%
Consistency	70/100	201 / 231	Better than 13%
Layer adhesion	13/100	184 / 226	Better than 19%
Thermal	48/100	19 / 209	Better than 91%

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
MAT0033	Prusa3D Prusament PC Blend PC Black	Prusa3D	56/100	39/100	46/100
MAT0029	Prusa3D Prusament PC Blend PC CF Black	Prusa3D	55/100	35/100	32/100
MAT0032	Prima Creator PrimaSelect PC Black	Prima Creator	46/100	26/100	21/100

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
MAT0033	Prusa3D Prusament PC Blend PC Black	Prusa3D	56/100	39/100	46/100
MAT0029	Prusa3D Prusament PC Blend PC CF Black	Prusa3D	55/100	35/100	32/100

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0032	Prima Creator PrimaSelect PC Black	Prima Creator	46/100	26/100	21/100
MAT0028	Prima Creator PrimaSelect PC CF Black	Prima Creator	45/100	38/100	21/100
MAT0034	Yasin Standard Black PC Plus Black	Yasin	35/100	12/100	21/100

Public links

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

Methodology and limitations

Results are comparative 3DPlceland 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](#)