

BambuLab Standard White ABS GF White

Material Engineering Report
MaterialID MAT0180

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

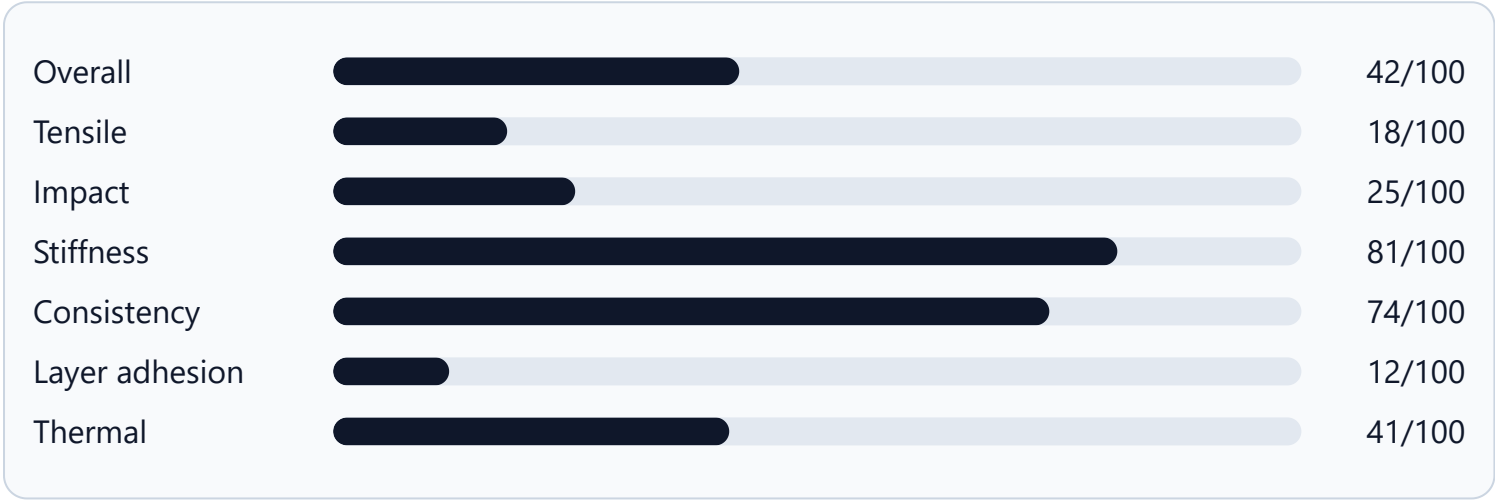
MaterialID	MAT0180
Material	BambuLab Standard White ABS GF White
Manufacturer	BambuLab
Product line	Standard
Base material	ABS
Category	Engineering
Variant / finish	—
Reinforcement	GF
Color	White

Governed engineering profile

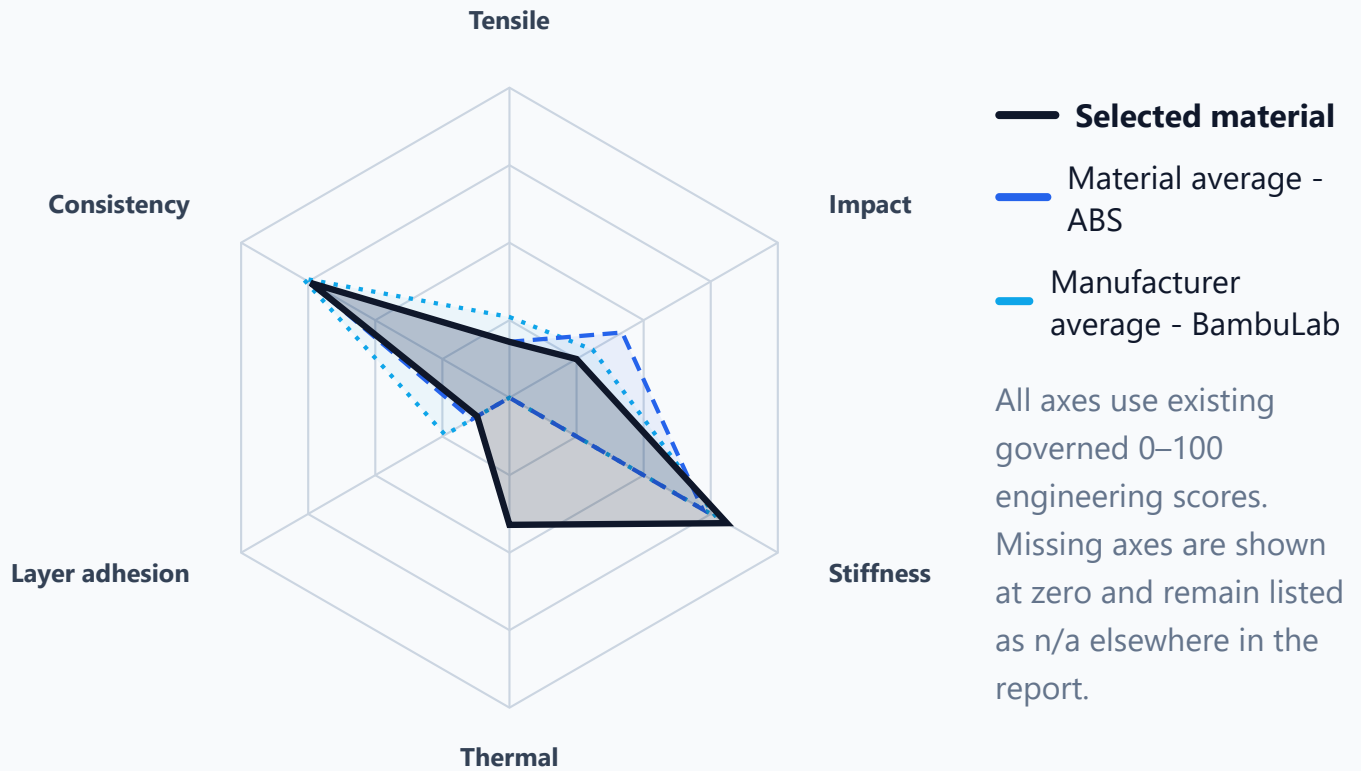
Overall	42/100
Tensile	18/100

Impact	25/100
Stiffness	81/100
Consistency	74/100
Layer adhesion	12/100
Thermal	41/100
Best available axis	stiffness

Engineering score profile



Engineering radar



Fixture thermal result

81 °C · score 41/100 · 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	45/100	47/100
Tensile	18/100	18/100	26/100
Impact	25/100	42/100	31/100
Stiffness	81/100	72/100	77/100
Consistency	74/100	74/100	77/100
Layer adhesion	12/100	14/100	24/100
Thermal	41/100	—	—

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	2.905 MPa	1.299 MPa	44.7%	9	9/10
Tensile flat	25.225 MPa	6.282 MPa	24.9%	10	10/10
Impact upright	124.677 kJ/m ²	36.735 kJ/m ²	29.5%	10	10/10
Impact flat	384.219 kJ/m ²	18.104 kJ/m ²	4.7%	10	10/10
Stiffness modulus	2427.792 MPa	—	—	—	—
Stiffness deflection	2.235 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 White ABS GF White has a specialized or limited engineering profile. It is below its material-family average by 2,8 points and below its manufacturer average by 5,2 points. Its strongest measured axis is Stiffness, while the weakest axis is Layer Adhesion.

Data-driven review: BambuLab Standard White ABS GF 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 22% overall, is roughly aligned with the material-family average, and is below the manufacturer average by 5,2 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 22%

184 / 234

Strengths

- Consistency: 74/100. Repeatability is one of the stronger signals in this material profile.
- Stiffness: 81/100. Stiffness is a relative advantage in this comparison group.

Limitations

- Tensile: 18/100. Avoid using this as the primary choice for tensile-loaded parts.
- Impact: 25/100. Avoid high impact or shock-loaded components without additional validation.
- Layer adhesion: 12/100. 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
- Repeatable print jobs and production-style batches
- 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	184 / 234	Better than 22%
Tensile	18/100	199 / 226	Better than 12%
Impact	25/100	87 / 226	Better than 62%
Stiffness	81/100	113 / 223	Better than 50%
Consistency	74/100	170 / 231	Better than 27%
Layer adhesion	12/100	190 / 226	Better than 16%
Thermal	41/100	47 / 209	Better than 78%

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
MAT0006	Prima Creator PrimaValue Dark Gray ABS Gray	Prima Creator	52/100	24/100	54/100
MAT0202	Siraya Tech Fiberheart White ABS High Temp White	Siraya Tech	49/100	21/100	54/100
MAT0207	Siraya Tech Fiberheart Black ABS Core CF Black	Siraya Tech	49/100	24/100	27/100

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
MAT0006	Prima Creator PrimaValue Dark Gray ABS Gray	Prima Creator	52/100	24/100	54/100
MAT0202	Siraya Tech Fiberheart White ABS High Temp White	Siraya Tech	49/100	21/100	54/100
MAT0207	Siraya Tech Fiberheart Black ABS Core CF Black	Siraya Tech	49/100	24/100	27/100
MAT0003	Prusa3D Buddy3D ABS Black	Prusa3D	48/100	19/100	53/100
MAT0007	FilaFarm Standard ABS Orange	FilaFarm	47/100	—	41/100
MAT0152	Thorwell Standard ABS ABS Yellow	Thorwell	47/100	20/100	53/100
MAT0181	BambuLab Standard Blue ABS Blue	BambuLab	46/100	19/100	53/100
MAT0005	Extrudr DuraPro ABS Blue	Extrudr	44/100	16/100	47/100

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](#)