

# BambuLab Standard

## Blue ABS Blue

Material Engineering Report  
MaterialID MAT0181

3DPiceland Engineering Platform

3DPiceland Labs

Generated with 3DPiceland Engineering Platform v60.0.6

WORKFLOW-RELIABILITY - Bug Fixes and Workflow Reliability

Generated 2026-08-25 19:02:26

**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

**\$35.92 USD/kg**

## Material identity

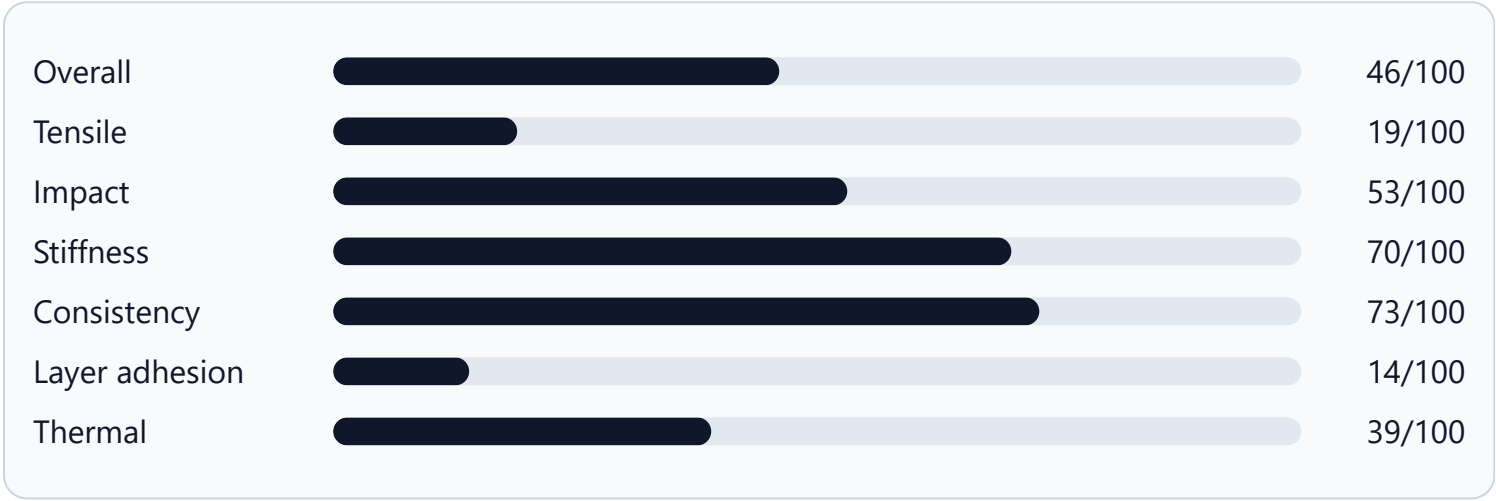
|                  |                                 |
|------------------|---------------------------------|
| MaterialID       | MAT0181                         |
| Material         | BambuLab Standard Blue ABS Blue |
| Manufacturer     | BambuLab                        |
| Product line     | Standard                        |
| Base material    | ABS                             |
| Category         | Engineering                     |
| Variant / finish | —                               |
| Reinforcement    | —                               |
| Color            | Blue                            |

## Governed engineering profile

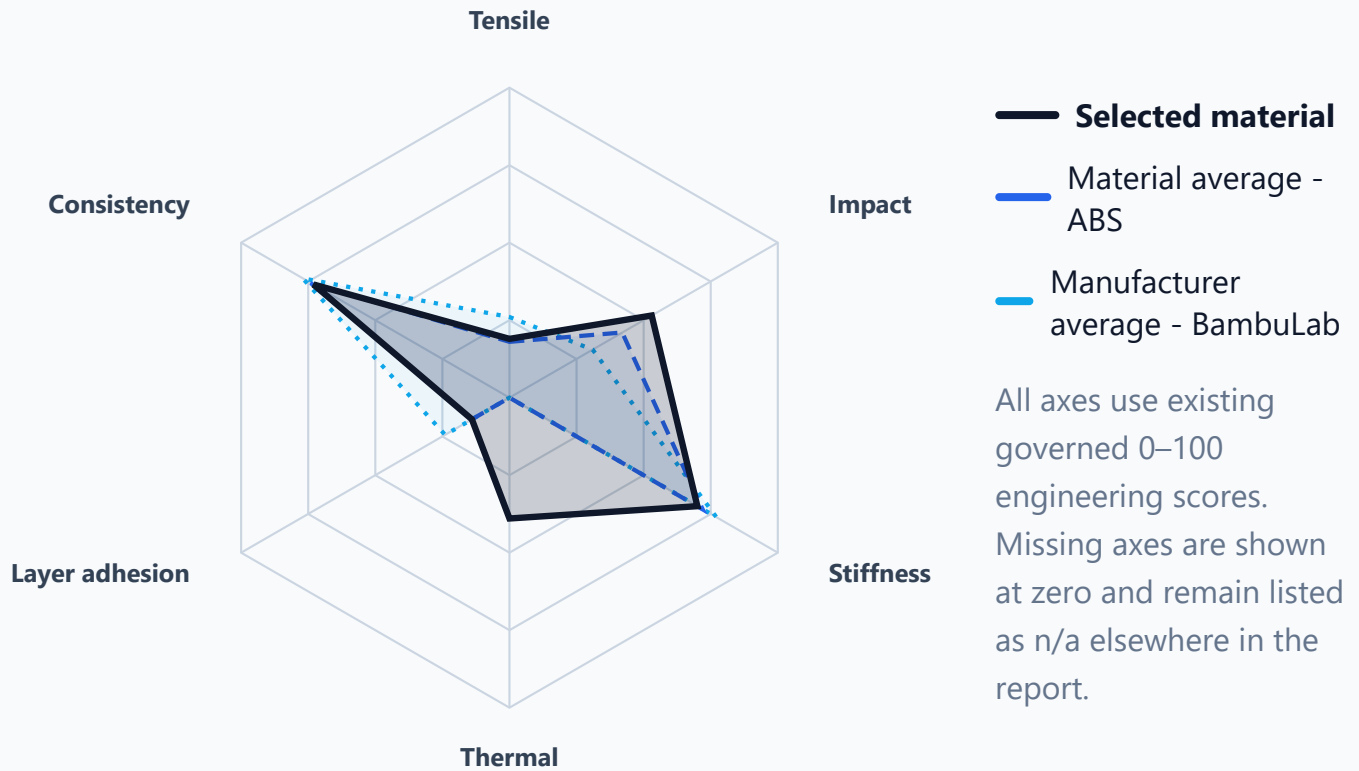
|         |        |
|---------|--------|
| Overall | 46/100 |
| Tensile | 19/100 |

|                     |             |
|---------------------|-------------|
| Impact              | 53/100      |
| Stiffness           | 70/100      |
| Consistency         | 73/100      |
| Layer adhesion      | 14/100      |
| Thermal             | 39/100      |
| Best available axis | consistency |

## Engineering score profile



## Engineering radar



## Fixture thermal result

**77 °C** · score 39/100 · method 3dp-thermal-deflection-fixture-v1  
Nearby BlueDOT probe-indicated fixture temperature from a non-standard comparative 3DPIceland 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        | 46/100            | 45/100           | 47/100               |
| Tensile        | 19/100            | 18/100           | 26/100               |
| Impact         | 53/100            | 42/100           | 31/100               |
| Stiffness      | 70/100            | 72/100           | 77/100               |
| Consistency    | 73/100            | 74/100           | 77/100               |
| Layer adhesion | 14/100            | 14/100           | 24/100               |
| Thermal        | 39/100            | —                | —                    |

# 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      | 3.879 MPa                 | 2.315 MPa                | 59.7% | 9       | 9/10       |
| Tensile flat         | 26.809 MPa                | 6.023 MPa                | 22.5% | 10      | 10/10      |
| Impact upright       | 163.087 kJ/m <sup>2</sup> | 33.965 kJ/m <sup>2</sup> | 20.8% | 10      | 10/10      |
| Impact flat          | 890.888 kJ/m <sup>2</sup> | 37.322 kJ/m <sup>2</sup> | 4.2%  | 10      | 10/10      |
| Stiffness modulus    | 2108.711 MPa              | —                        | —     | —       | —          |
| Stiffness deflection | 2.573 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 Blue ABS Blue has a specialized or limited engineering profile. It is above its material-family average by 1,3 points and below its manufacturer average by 1,1 points. Its strongest measured axis is Consistency, while the weakest axis is Layer Adhesion.

**Data-driven review:** BambuLab Standard Blue ABS Blue 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 45% overall, is roughly aligned with the material-family average, and is roughly aligned with the manufacturer average. 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 45%**  
129 / 234

Strengths

- Consistency: 73/100. Repeatability is one of the stronger signals in this material profile.
- Impact: 53/100. Impact behavior is competitive against the material-family context.
- Stiffness: 70/100. Stiffness is a relative advantage in this comparison group.

Limitations

- Tensile: 19/100. Avoid using this as the primary choice for tensile-loaded parts.
- Layer adhesion: 14/100. 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

- 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

Metric rankings and percentiles

| Metric  | Score  | Rank      | Percentile      |
|---------|--------|-----------|-----------------|
| Overall | 46/100 | 129 / 234 | Better than 45% |

| Metric         | Score  | Rank      | Percentile      |
|----------------|--------|-----------|-----------------|
| Tensile        | 19/100 | 191 / 226 | Better than 16% |
| Impact         | 53/100 | 18 / 226  | Better than 92% |
| Stiffness      | 70/100 | 144 / 223 | Better than 36% |
| Consistency    | 73/100 | 177 / 231 | Better than 24% |
| Layer adhesion | 14/100 | 173 / 226 | Better than 24% |
| Thermal        | 39/100 | 56 / 209  | Better than 74% |

## 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.

## 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 |

| MaterialID | Material                                         | Manufacturer | Overall | Tensile | Impact |
|------------|--------------------------------------------------|--------------|---------|---------|--------|
| 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 |
| MAT0005    | Extrudr DuraPro ABS Blue                         | Extrudr      | 44/100  | 16/100  | 47/100 |
| MAT0241    | Yasin Standard Blue ABS Blue                     | Yasin        | 44/100  | 17/100  | 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](#)