

# Prusa3D Prusament PC Blend PC Black

Material Engineering Report  
MaterialID MAT0033

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

**\$49.78 USD/kg**

## Material identity

|                  |                                     |
|------------------|-------------------------------------|
| MaterialID       | MAT0033                             |
| Material         | Prusa3D Prusament PC Blend PC Black |
| Manufacturer     | Prusa3D                             |
| Product line     | Prusament                           |
| Base material    | PC                                  |
| Category         | Engineering                         |
| Variant / finish | —                                   |
| Reinforcement    | —                                   |
| Color            | Black                               |

## Governed engineering profile

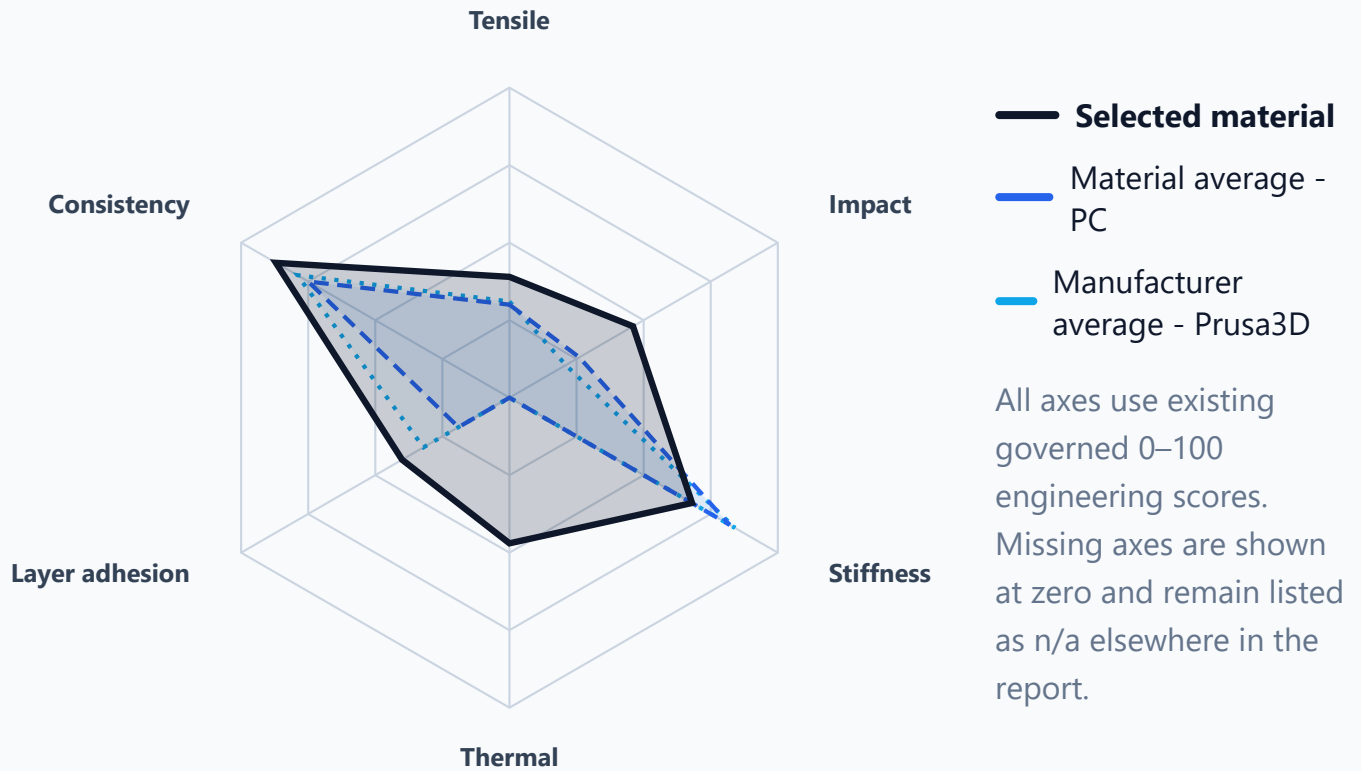
|         |        |
|---------|--------|
| Overall | 56/100 |
| Tensile | 39/100 |

|                     |             |
|---------------------|-------------|
| Impact              | 46/100      |
| Stiffness           | 68/100      |
| Consistency         | 87/100      |
| Layer adhesion      | 40/100      |
| Thermal             | 47/100      |
| Best available axis | consistency |

## Engineering score profile



## Engineering radar



## Fixture thermal result

**93 °C** · score 47/100 · 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        | 56/100            | 46/100           | 49/100               |
| Tensile        | 39/100            | 30/100           | 31/100               |
| Impact         | 46/100            | 26/100           | 21/100               |
| Stiffness      | 68/100            | 82/100           | 84/100               |
| Consistency    | 87/100            | 75/100           | 79/100               |
| Layer adhesion | 40/100            | 19/100           | 32/100               |
| Thermal        | 47/100            | —                | —                    |

## 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      | 17.673 MPa                | 3.075 MPa                 | 17.4% | 10      | 10/10      |
| Tensile flat         | 43.928 MPa                | 1.09 MPa                  | 2.5%  | 10      | 10/10      |
| Impact upright       | 61.026 kJ/m <sup>2</sup>  | 7.986 kJ/m <sup>2</sup>   | 13.1% | 10      | 10/10      |
| Impact flat          | 855.617 kJ/m <sup>2</sup> | 164.425 kJ/m <sup>2</sup> | 19.2% | 10      | 10/10      |
| Stiffness modulus    | 2038.809 MPa              | —                         | —     | —       | —          |
| Stiffness deflection | 2.662 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:** Prusa3D Prusament PC Blend PC Black has a balanced mid-range engineering profile. It is above its material-family average by 9,4 points and above its manufacturer average by 6,5 points. Its strongest measured axis is Consistency, while the weakest axis is Tensile.

**Data-driven review:** Prusa3D Prusament PC Blend PC Black is best understood as a balanced material for general functional prototypes. Compared with the current verified dataset, it ranks better than 89% overall, is above the material-family average by 9,4 points, and is above the manufacturer average by 6,5 points. Its strongest engineering signal is Consistency, while Tensile is the main limitation to consider before using it for demanding applications.

BEST FEATURE

Consistency

MAIN LIMITATION

Tensile

DATASET POSITION

Better than 89%  
26 / 234

Strengths

- Layer adhesion: 40/100. Z-axis bonding is better than the material-family context.
- Consistency: 87/100. Repeatability is one of the stronger signals in this material profile.
- Impact: 46/100. Impact behavior is competitive against the material-family context.
- Tensile: 39/100. Tensile behavior is competitive against the material-family context.

Limitations

- Tensile: 39/100. Avoid using this as the primary choice for tensile-loaded parts.
- Stiffness: 68/100. Expect less shape stability than the stronger materials in the same family.

Engineering trade-offs

- Good repeatability does not compensate for low tensile capability in load-bearing designs.

Recommended applications

- Repeatable print jobs and production-style batches

Metric rankings and percentiles

| Metric  | Score  | Rank     | Percentile      |
|---------|--------|----------|-----------------|
| Overall | 56/100 | 26 / 234 | Better than 89% |

| Metric         | Score  | Rank      | Percentile      |
|----------------|--------|-----------|-----------------|
| Tensile        | 39/100 | 19 / 226  | Better than 92% |
| Impact         | 46/100 | 37 / 226  | Better than 84% |
| Stiffness      | 68/100 | 155 / 223 | Better than 31% |
| Consistency    | 87/100 | 9 / 231   | Better than 97% |
| Layer adhesion | 40/100 | 48 / 226  | Better than 79% |
| Thermal        | 47/100 | 20 / 209  | Better than 91% |

## Decision guidance

- Use this material for moderate requirements after checking the weakest axis.

## Better alternatives

| MaterialID                                                                                   | Material | Manufacturer | Overall | Tensile | Impact |
|----------------------------------------------------------------------------------------------|----------|--------------|---------|---------|--------|
| No stronger same-base-material alternatives were identified in the current governed dataset. |          |              |         |         |        |

## 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 |
|------------|----------------------------------------|---------------|---------|---------|--------|
| 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 |
| MAT0028    | Prima Creator PrimaSelect PC CF Black  | Prima Creator | 45/100  | 38/100  | 21/100 |
| MAT0168    | BambuLab Basic PC White                | BambuLab      | 42/100  | 30/100  | 13/100 |
| MAT0034    | Yasin Standard Black PC Plus Black     | Yasin         | 35/100  | 12/100  | 21/100 |

## Public links

[Manufacturer website](#)
[Video review](#)
[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](#)