

Public printing recommendation

Bedrock 3D Standard Black ABS Plus Black

MaterialID MAT0246

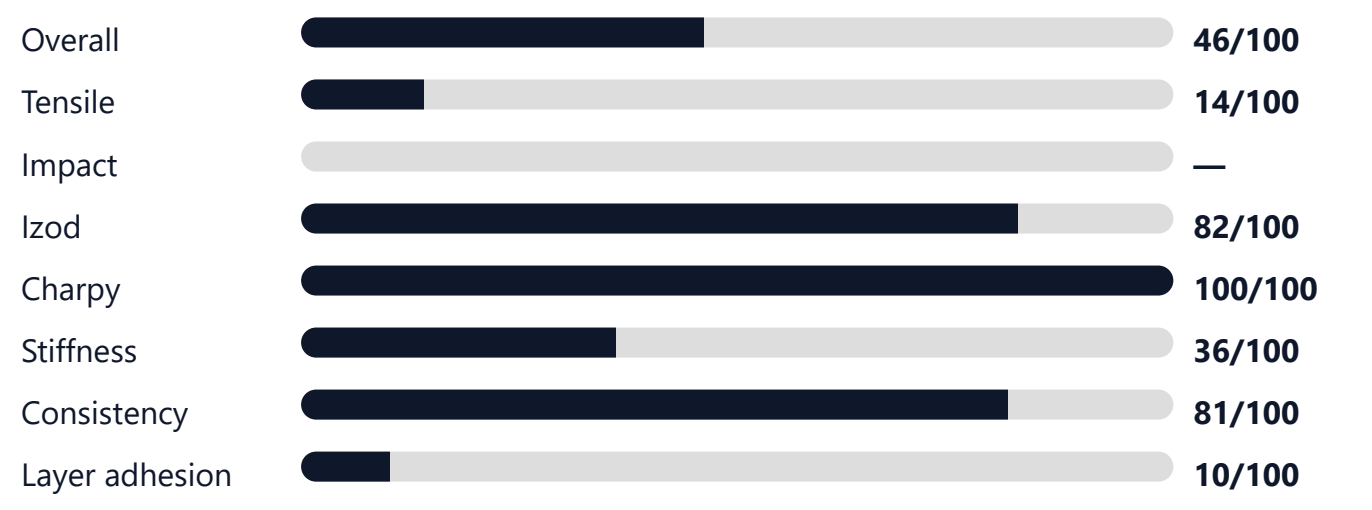


3DPiceland Labs
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DIRECT-IMPACT-METHODOLOGY - Izod and Charpy
Methodology
2026-10-04 18:12:06

Guidance boundary: values below are shared base-material guidance resolved only through the canonical BaseMaterialId link. They are not manufacturer-, spool- or printer-specific validated settings. Missing fields remain Not recorded.

Overall 46/100	Engineering axes 7/8	Public rank 28 / 80	MSRP USD/kg 31.81
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Engineering profile



Recommended applications

- Impact-aware parts where toughness matters
- Repeatable print jobs and production-style batches
- Cosmetic parts, concept models or low-load prototypes
- Avoid high tensile load applications

Measured strengths

- Consistency: 81/100. Repeatability is one of the stronger signals in this material profile.
- Izod/Charpy impact family: 91/100. The two-method impact score is competitive against the material-family context.

Limitations

- Tensile: 14/100. Avoid using this as the primary choice for tensile-loaded parts.
- Stiffness: 36/100. Expect less shape stability than the stronger materials in the same family.
- Layer adhesion: 10/100. 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.

Base-material printing guidance

Guidance	Minimum	Recommended	Maximum	Unit
Nozzle temperature	250	255	265	°C
Bed temperature	110	110	110	°C
Print speed	55	165	165	mm/s
Cooling	15	20	20	%
Guidance	Value			Unit
Cooling guidance	Low			
Drying temperature	75			°C
Drying time	6			hours
Enclosure	Required			
Printer / G-code reference	PrusaCoreOneL			
Slicer profile reference	Prusa Buddy3D ABS			

Print workflow checks

- Confirm nozzle temperature, bed temperature, speed, cooling and drying requirements from the manufacturer profile or spool label.
- Print a small validation part before committing to a long, costly or safety-relevant print.
- Orient the part so the governing load does not rely on an unverified or weak engineering axis.

- Engineering/high-temperature family: confirm enclosure, ventilation, warping control and material-specific drying requirements.
- Layer-adhesion evidence is weak; avoid critical Z-axis loading without additional validation.

Decision guidance

- Use this material mainly for low-load, visual or experimental parts.
- Do not choose it as a tensile-strength benchmark material.

Stronger same-family alternatives

MaterialID	Material	Manufacturer	Overall	Tensile	Impact	Izod	Charpy
Confirm exact settings against the manufacturer profile, spool label and actual printer/material combination. Results do not replace application-specific validation.							

[Testing methodology](#) · [Download PDF](#)

Izod and Charpy Impact Strength

Izod Impact Strength · 2026-09-29
Instrument readings in kJ/m²
Mean 65.708 kJ/m²; Std. Dev 9.686 kJ/m²; CV 14.741%; Samples 9; Confidence 9
No break 0; invalid 0; excluded 0.
Comparative measurements; standard conformity unverified.

Charpy Impact Strength · 2026-09-29
Instrument readings in kJ/m²
Mean 123.714 kJ/m²; Std. Dev 9.88 kJ/m²; CV 7.986%; Samples 10; Confidence 10
No break 0; invalid 0; excluded 0.
Comparative measurements; standard conformity unverified.

reports/printing-recommendations/MAT0246/

Score policy engineering-score-v70-1: Overall requires tensile, stiffness, consistency, layer adhesion and the Izod/Charpy impact family, each with equal weight. Both impact methods and configured versioned references are required. Missing results and unconfigured scores remain n/a. Legacy Impact is historical only; thermal remains separate. Engineering-axis counts describe displayed evidence, not Overall completeness.