

Public printing recommendation

Bedrock 3D Standard Natural PA6 Natural

MaterialID MAT0247



3DPiceland Labs
Generated with 3DPiceland Engineering Platform v70.0.4
DIRECT-IMPACT-METHODOLOGY - Izod and Charpy
Methodology
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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
41/100

Engineering axes
7/8

Public rank
50 / 80

MSRP USD/kg
72.96

Engineering profile



Recommended applications

- Cosmetic parts, concept models or low-load prototypes
- Avoid high impact components

Measured strengths

- Layer adhesion: 28/100. Z-axis bonding is better than the material-family context.

Limitations

- Izod/Charpy impact family: 2/100. Validate impact or shock-loaded components against their application requirements.
- Stiffness: 66/100. Expect less shape stability than the stronger materials in the same family.
- Consistency: 62/100. Repeatability may not be the best reason to choose this filament.
- Layer adhesion: 28/100. Z-axis performance should be treated with caution.

Engineering trade-offs

- 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	280	280	295	°C
Bed temperature	105	110	110	°C
Print speed	11	65	65	mm/s
Cooling	10	10	15	%
Guidance	Value		Unit	
Cooling guidance	Low			
Drying temperature	100		°C	
Drying time	12		hours	
Enclosure	Required			
Printer / G-code reference	PrusaCoreOneL			
Slicer profile reference	Yasin PA6			

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.
- Review the listed alternatives if the application needs stronger overall performance.
- Validate impact-focused or shock-loaded designs against the measured Izod/Charpy results.

Stronger same-family alternatives

MaterialID	Material	Manufacturer	Overall	Tensile	Impact	Izod	Charpy
MAT0023	Extrudr DuraPro PA6 CF Black	Extrudr	52/100	52/100	—	n/a	n/a
MAT0025	Extrudr DuraPro PA6 GF Black	Extrudr	52/100	47/100	—	n/a	n/a
MAT0248	Bedrock 3D Standard Black PA6 HighTemp CF Black	Bedrock 3D	51/100	48/100	—	n/a	n/a

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

Charpy Impact Strength · 2026-09-29
Instrument readings in kJ/m²
Mean 1.667 kJ/m²; Std. Dev 0.676 kJ/m²; CV 40.568%; Samples 10; Confidence 10
No break 0; invalid 0; excluded 0.
Comparative measurements; standard conformity unverified.

Izod Impact Strength · 2026-09-29
Instrument readings in kJ/m²
Mean 1.965 kJ/m²; Std. Dev 0.697 kJ/m²; CV 35.483%; Samples 9; Confidence 9
No break 0; invalid 0; excluded 0.
Comparative measurements; standard conformity unverified.

reports/printing-recommendations/MAT0247/

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.

