Public printing recommendation

Extrudr DuraPro PA6 CF Black

MaterialID MAT0023

3DPIceland Labs

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WORKFLOW-RELIABILITY - Bug Fixes and Workflow Reliability

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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	Engineering axes	Public rank	MSRP USD/kg
54/100	**6/5**	**41 / 234**	**39.63**

Engineering profile

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 impact components

Measured strengths

- Layer adhesion: 46/100. Z-axis bonding is better than the material-family context.
- Consistency: 71/100. Repeatability is one of the stronger signals in this material profile.
- Tensile: 52/100. Tensile behavior is competitive against the material-family context.

- Stiffness: 75/100. Stiffness is a relative advantage in this comparison group.

Limitations

- Impact: 27/100. Avoid high impact or shock-loaded components without additional validation.
- Stiffness: 75/100. Expect less shape stability than the stronger materials in the same family.

Engineering trade-offs

- Stiffness is useful for shape stability, but impact tolerance is a separate limitation.

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.

- Reinforced filament: confirm an abrasion-resistant nozzle and manufacturer drying/storage requirements.
- Engineering/high-temperature family: confirm enclosure, ventilation, warping control and material-specific drying requirements.

Decision guidance

- Use this material for moderate requirements after checking the weakest axis.
- Review the listed alternatives if the application needs stronger overall performance.
- Avoid selecting it for impact-focused testing or shock-loaded designs.

Stronger same-family alternatives

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0210	Eryone Standard Black PA6 GF Black	Eryone	72/100	—	40/100
MAT0025	Extrudr DuraPro PA6 GF Black	Extrudr	59/100	47/100	48/100

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

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