Public engineering report

Eryone Standard Black PA6 CF Black

Material Engineering Report
MaterialID MAT0212

3DPIceland Engineering Platform
3DPIceland Labs
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WORKFLOW-RELIABILITY - Bug Fixes and Workflow Reliability
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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	ENGINEERING AXES	PUBLIC MSRP
Partial	**3/6**	**$39.38 USD/kg**

Material identity

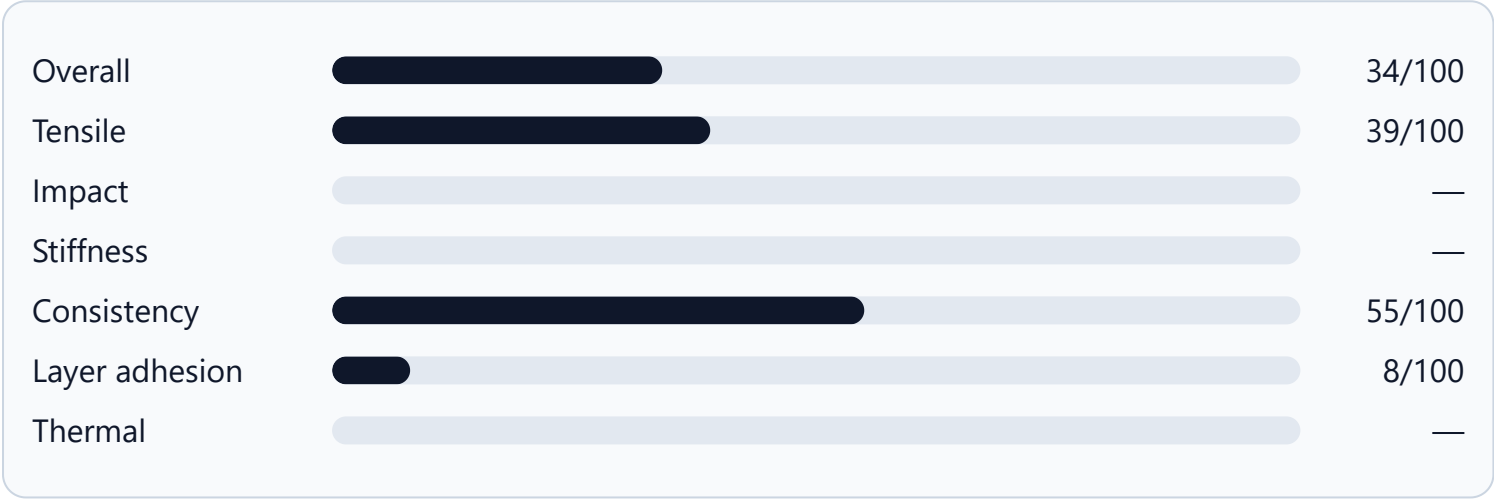
MaterialID	MAT0212
Material	Eryone Standard Black PA6 CF Black
Manufacturer	Eryone
Product line	Standard
Base material	PA6
Category	Engineering
Variant / finish	—
Reinforcement	CF
Color	Black

Governed engineering profile

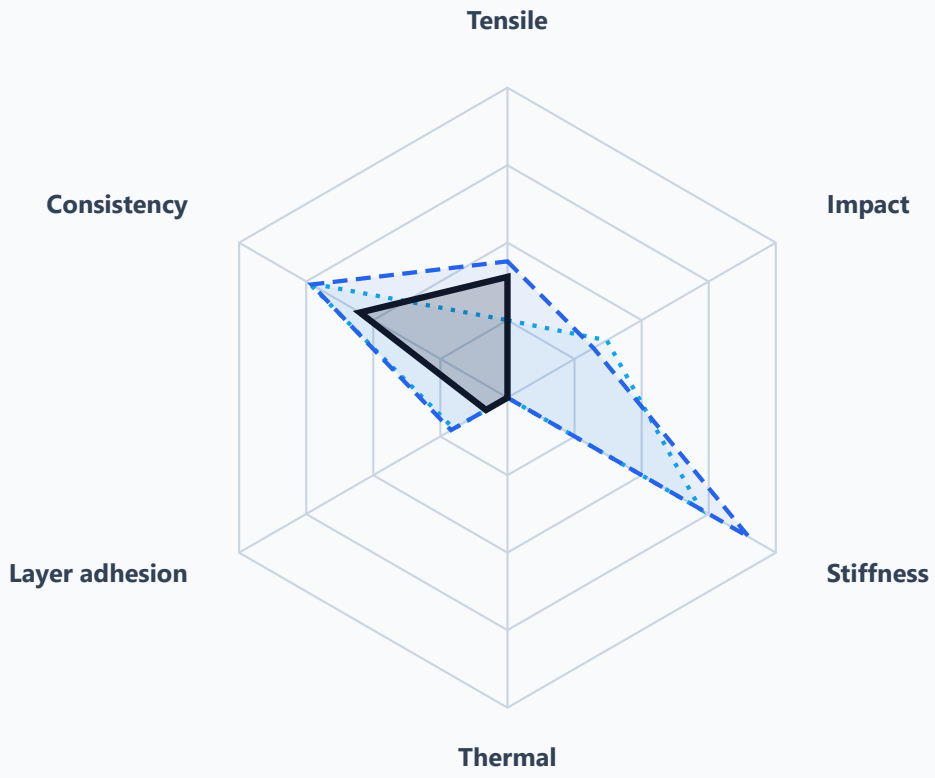
Overall	34/100
Tensile	39/100

Impact	—
Stiffness	—
Consistency	55/100
Layer adhesion	8/100
Thermal	—
Best available axis	consistency

Engineering score profile



Engineering radar



All axes use existing governed 0–100 engineering scores. Missing axes are shown at zero and remain listed as n/a elsewhere in the report.

Fixture thermal result

— · score — · method —
—

Material and manufacturer context

Metric	Selected material	Material average	Manufacturer average
Overall	34/100	53/100	46/100
Tensile	39/100	44/100	25/100
Impact	—	32/100	37/100
Stiffness	—	90/100	72/100
Consistency	55/100	73/100	74/100
Layer adhesion	8/100	21/100	20/100
Thermal	—	—	—

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	4.614 MPa	2.692 MPa	58.3%	8	8/10
Tensile flat	58.355 MPa	9.191 MPa	15.8%	10	10/10
Impact upright	—	—	—	—	—
Impact flat	—	—	—	—	—
Stiffness modulus	—	—	—	—	—
Stiffness deflection	—	—	—	—	—

Measurement provenance

Canonical per-module measured dates from SQLite, shown in unambiguous ISO format. Missing dates are not inferred.

Module	Measured date
Tensile	2026-08-01
Impact	Not recorded
Stiffness	Not recorded
Thermal	Not recorded

Engineering interpretation

Summary: Eryone Standard Black PA6 CF Black has a low engineering profile. It is below its material-family average by 18,8 points and below its manufacturer average by 12,3 points. Its strongest measured axis is Consistency, while the weakest axis is Layer Adhesion.

Data-driven review: Eryone Standard Black PA6 CF Black is best understood as a limited-use material that should be validated carefully before functional use. Compared with the current verified dataset, it ranks better than 2% overall, is below the material-family average by 18,8 points, and is below the manufacturer average by 12,3 points. 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 2%

231 / 234

Strengths

- Best available signal: Consistency at 55/100.

Limitations

- Tensile: 39/100. Avoid using this as the primary choice for tensile-loaded parts.
- Consistency: 55/100. Repeatability may not be the best reason to choose this filament.
- Layer adhesion: 8/100. 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.

Recommended applications

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

Metric rankings and percentiles

Metric	Score	Rank	Percentile
Overall	34/100	231 / 234	Better than 2%
Tensile	39/100	13 / 226	Better than 95%
Impact	—	—	—
Stiffness	—	—	—
Consistency	55/100	228 / 231	Better than 2%
Layer adhesion	8/100	220 / 226	Better than 3%
Thermal	—	—	—

Decision guidance

- Use this material mainly for low-load, visual or experimental parts.
- Review the listed alternatives if the application needs stronger overall performance.
- Avoid selecting it for impact-focused testing or shock-loaded designs.

Better 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
MAT0023	Extrudr DuraPro PA6 CF Black	Extrudr	54/100	52/100	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
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
MAT0023	Extrudr DuraPro PA6 CF Black	Extrudr	54/100	52/100	27/100
MAT0026	Yasin Standard Black PA6 GF Black	Yasin	51/100	44/100	21/100
MAT0024	Yasin Standard Black PA6 CF Black	Yasin	51/100	41/100	24/100
MAT0027	Yasin Standard Clear PA6 Clear	Yasin	48/100	42/100	30/100

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**
