

Yasin Standard Black PA6 CF Black

Material Engineering Report
MaterialID MAT0024

3DPiceland Engineering Platform
3DPiceland Labs
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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

Complete

ENGINEERING AXES

6/6

PUBLIC MSRP

\$32.96 USD/kg

Material identity

MaterialID	MAT0024
Material	Yasin Standard Black PA6 CF Black
Manufacturer	Yasin
Product line	Standard
Base material	PA6
Category	Engineering
Variant / finish	—
Reinforcement	CF
Color	Black

Governed engineering profile

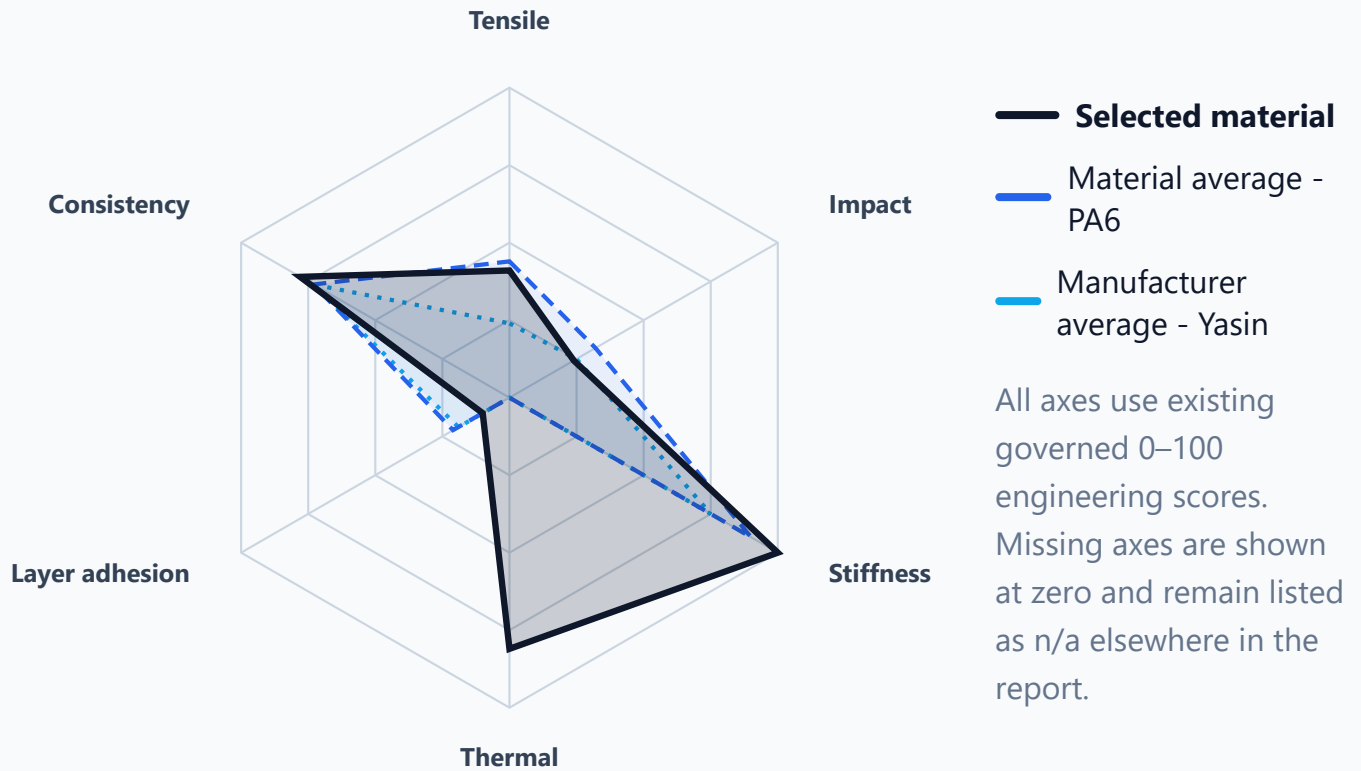
Overall	51/100
Tensile	41/100

Impact	24/100
Stiffness	100/100
Consistency	78/100
Layer adhesion	10/100
Thermal	81/100
Best available axis	stiffness

Engineering score profile



Engineering radar



Fixture thermal result

162 °C · score 81/100 · 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	51/100	53/100	43/100
Tensile	41/100	44/100	24/100
Impact	24/100	32/100	25/100
Stiffness	100/100	90/100	75/100
Consistency	78/100	73/100	73/100
Layer adhesion	10/100	21/100	19/100
Thermal	81/100	—	—

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	6.075 MPa	2.739 MPa	45.1%	10	10/10
Tensile flat	59.216 MPa	7.293 MPa	12.3%	10	10/10
Impact upright	129.757 kJ/m ²	29.586 kJ/m ²	22.8%	10	10/10
Impact flat	344.129 kJ/m ²	21.04 kJ/m ²	6.1%	10	10/10
Stiffness modulus	3075.204 MPa	—	—	—	—
Stiffness deflection	1.765 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: Yasin Standard Black PA6 CF Black has a specialized or limited engineering profile. It is below its material-family average by 2,1 points and above its manufacturer average by 7,6 points. Its strongest measured axis is Stiffness, while the weakest axis is Layer Adhesion.

Data-driven review: Yasin Standard Black PA6 CF Black is best understood as a repeatable material for cosmetic, concept and low-load prototype work. Compared with the current verified dataset, it ranks better than 67% overall, is roughly aligned with the material-family average, and is above the manufacturer average by 7,6 points. Its strongest engineering signal is Stiffness, while Layer Adhesion is the main limitation to consider before using it for demanding applications.

BEST FEATURE

Stiffness

MAIN LIMITATION

Layer Adhesion

DATASET POSITION

Better than 67%
79 / 234

Strengths

- Consistency: 78/100. Repeatability is one of the stronger signals in this material profile.
- Stiffness: 100/100. Stiffness is a relative advantage in this comparison group.

Limitations

- Impact: 24/100. Avoid high impact or shock-loaded components without additional validation.
- Layer adhesion: 10/100. Z-axis performance should be treated with caution.

Engineering trade-offs

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

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

Metric rankings and percentiles

Metric	Score	Rank	Percentile
Overall	51/100	79 / 234	Better than 67%
Tensile	41/100	8 / 226	Better than 97%

Metric	Score	Rank	Percentile
Impact	24/100	100 / 226	Better than 56%
Stiffness	100/100	1 / 223	Better than 100%
Consistency	78/100	106 / 231	Better than 55%
Layer adhesion	10/100	202 / 226	Better than 11%
Thermal	81/100	2 / 209	Better than 100%

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.

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
MAT0027	Yasin Standard Clear PA6 Clear	Yasin	48/100	42/100	30/100

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0212	Eryone Standard Black PA6 CF Black	Eryone	34/100	39/100	—

Public links

[Manufacturer website](#) [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](#)