

Yasin Standard Black PETG GF Black

Material Engineering Report
MaterialID MAT0235

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

Complete

ENGINEERING AXES

6/6

PUBLIC MSRP

\$28.16 USD/kg

Material identity

MaterialID	MAT0235
Material	Yasin Standard Black PETG GF Black
Manufacturer	Yasin
Product line	Standard
Base material	PETG
Category	Standard
Variant / finish	—
Reinforcement	GF
Color	Black

Governed engineering profile

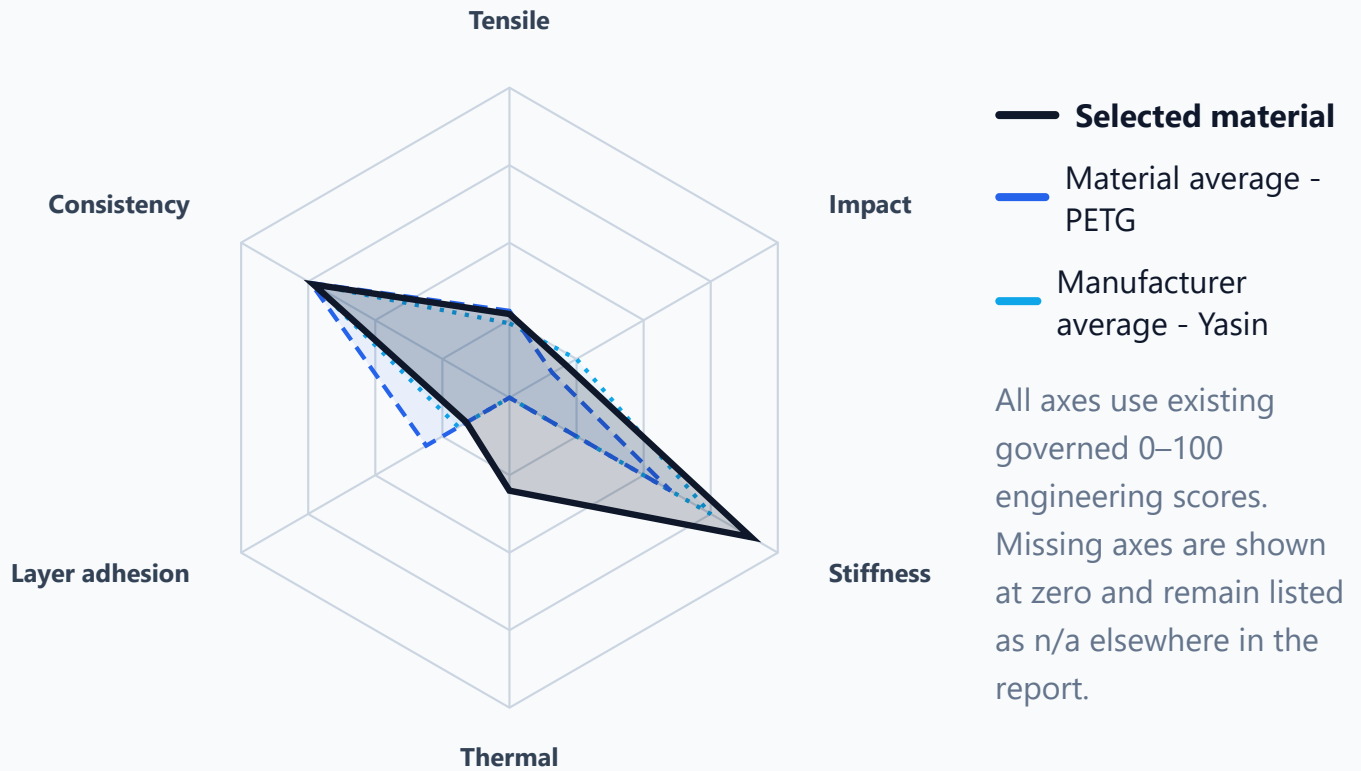
Overall	45/100
Tensile	27/100

Impact	21/100
Stiffness	90/100
Consistency	73/100
Layer adhesion	16/100
Thermal	30/100
Best available axis	stiffness

Engineering score profile



Engineering radar



Fixture thermal result

59 °C · score 30/100 · method 3dp-thermal-deflection-fixture-v1
Nearby BlueDOT probe-indicated fixture temperature from a non-standard comparative 3DPlceland 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	45/100	42/100	43/100
Tensile	27/100	28/100	24/100
Impact	21/100	16/100	25/100
Stiffness	90/100	60/100	75/100
Consistency	73/100	74/100	73/100
Layer adhesion	16/100	31/100	19/100
Thermal	30/100	—	—

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	6.016 MPa	3.812 MPa	63.4%	9	9/10
Tensile flat	36.591 MPa	7.789 MPa	21.3%	10	10/10
Impact upright	139.103 kJ/m ²	15.722 kJ/m ²	11.3%	10	10/10
Impact flat	278.959 kJ/m ²	30.791 kJ/m ²	11%	10	10/10
Stiffness modulus	2713.415 MPa	—	—	—	—
Stiffness deflection	2 mm	—	—	—	—

Measurement provenance

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

Module	Measured date
Tensile	2026-08-19
Impact	2026-08-20
Stiffness	2026-08-20
Thermal	2026-08-20

Engineering interpretation

Summary: Yasin Standard Black PETG GF Black has a specialized or limited engineering profile. It is above its material-family average by 3,3 points and above its manufacturer average by 2,5 points. Its strongest measured axis is Stiffness, while the weakest axis is Layer Adhesion.

Data-driven review: Yasin Standard Black PETG GF 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 42% overall, is above the material-family average by 3,3 points, and is roughly aligned with the manufacturer average. 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 42%
136 / 234

Strengths

- Consistency: 73/100. Repeatability is one of the stronger signals in this material profile.
- Impact: 21/100. Impact behavior is competitive against the material-family context.
- Stiffness: 90/100. Stiffness is a relative advantage in this comparison group.

Limitations

- Tensile: 27/100. Avoid using this as the primary choice for tensile-loaded parts.
- Impact: 21/100. Avoid high impact or shock-loaded components without additional validation.
- Layer adhesion: 16/100. Z-axis performance should be treated with caution.

Engineering trade-offs

- Good repeatability does not compensate for low tensile capability in load-bearing designs.
- Stiffness is useful for shape stability, but impact tolerance is a separate limitation.
- The report should be read as a suitability warning rather than a general-purpose recommendation.

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 tensile load applications
- Avoid high impact components

Metric rankings and percentiles

Metric	Score	Rank	Percentile
Overall	45/100	136 / 234	Better than 42%
Tensile	27/100	130 / 226	Better than 43%
Impact	21/100	126 / 226	Better than 45%
Stiffness	90/100	75 / 223	Better than 67%
Consistency	73/100	176 / 231	Better than 24%
Layer adhesion	16/100	157 / 226	Better than 31%
Thermal	30/100	98 / 209	Better than 54%

Decision guidance

- Use this material mainly for low-load, visual or experimental parts.
- Review the listed alternatives if the application needs stronger overall performance.
- Do not choose it as a tensile-strength benchmark material.
- Avoid selecting it for impact-focused testing or shock-loaded designs.

Better alternatives

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0236	Yasin Standard Black PETG CF Black	Yasin	50/100	30/100	20/100
MAT0198	Siraya Tech Fiberheart Black PETG Pro CF Black	Siraya Tech	49/100	33/100	19/100

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
MAT0236	Yasin Standard Black PETG CF Black	Yasin	50/100	30/100	20/100
MAT0198	Siraya Tech Fiberheart Black PETG Pro CF Black	Siraya Tech	49/100	33/100	19/100

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0060	ColorFabb XT PETG Pink	ColorFabb	48/100	—	—
MAT0062	IC3D Standard PETG Green-Yellow	IC3D	48/100	26/100	—
MAT0165	Winkle Standard Ash Gray PETG Gray	Winkle	46/100	30/100	14/100
MAT0225	Spectrum Premium Iceland Blue PETG Blue	Spectrum	46/100	33/100	17/100
MAT0063	IC3D Standard PETG Yellow	IC3D	46/100	26/100	—
MAT0171	BambuLab Basic Gray PETG Gray	BambuLab	45/100	34/100	14/100

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](#)