

# Yasin Standard Black PA6 GF Black

Material Engineering Report  
MaterialID MAT0026

3DPiceland Engineering Platform  
3DPiceland Labs

Generated with 3DPiceland Engineering Platform v60.0.6 WORKFLOW-  
RELIABILITY - Bug Fixes and Workflow Reliability  
Generated 2026-08-25 19:02:26

**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

**\$30.56 USD/kg**

## Material identity

|                  |                                   |
|------------------|-----------------------------------|
| MaterialID       | MAT0026                           |
| Material         | Yasin Standard Black PA6 GF Black |
| Manufacturer     | Yasin                             |
| Product line     | Standard                          |
| Base material    | PA6                               |
| Category         | Engineering                       |
| Variant / finish | —                                 |
| Reinforcement    | GF                                |
| Color            | Black                             |

## Governed engineering profile

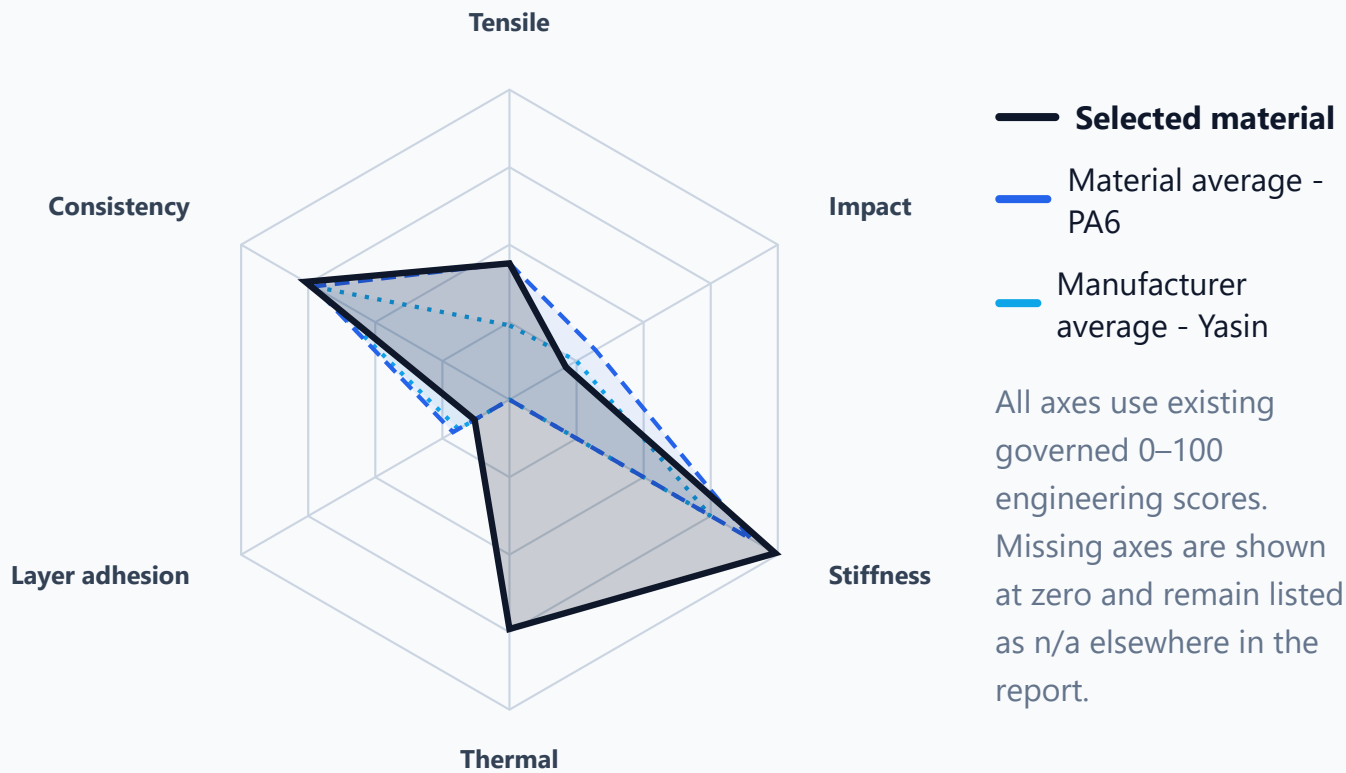
|         |        |
|---------|--------|
| Overall | 51/100 |
| Tensile | 44/100 |

|                     |           |
|---------------------|-----------|
| Impact              | 21/100    |
| Stiffness           | 99/100    |
| Consistency         | 76/100    |
| Layer adhesion      | 13/100    |
| Thermal             | 74/100    |
| Best available axis | stiffness |

## Engineering score profile



## Engineering radar



## Fixture thermal result

**148 °C** · score 74/100 · 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        | 44/100            | 44/100           | 24/100               |
| Impact         | 21/100            | 32/100           | 25/100               |
| Stiffness      | 99/100            | 90/100           | 75/100               |
| Consistency    | 76/100            | 73/100           | 73/100               |
| Layer adhesion | 13/100            | 21/100           | 19/100               |
| Thermal        | 74/100            | —                | —                    |

## 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      | 7.89 MPa                  | 2.43 MPa                 | 30.8% | 10      | 10/10      |
| Tensile flat         | 63.061 MPa                | 13.15 MPa                | 20.9% | 10      | 10/10      |
| Impact upright       | 127.182 kJ/m <sup>2</sup> | 23.904 kJ/m <sup>2</sup> | 18.8% | 10      | 10/10      |
| Impact flat          | 297.668 kJ/m <sup>2</sup> | 75.787 kJ/m <sup>2</sup> | 25.5% | 10      | 10/10      |
| Stiffness modulus    | 2976.004 MPa              | —                        | —     | —       | —          |
| Stiffness deflection | 1.823 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 GF 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 7,7 points. Its strongest measured axis is Stiffness, while the weakest axis is Layer Adhesion.

**Data-driven review:** Yasin Standard Black PA6 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 67% overall, is roughly aligned with the material-family average, and is above the manufacturer average by 7,7 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%**  
78 / 234

Strengths

- Consistency: 76/100. Repeatability is one of the stronger signals in this material profile.
- Stiffness: 99/100. Stiffness is a relative advantage in this comparison group.

Limitations

- Impact: 21/100. Avoid high impact or shock-loaded components without additional validation.
- Layer adhesion: 13/100. 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 | 78 / 234 | Better than 67% |
| Tensile | 44/100 | 3 / 226  | Better than 99% |

| Metric         | Score  | Rank      | Percentile      |
|----------------|--------|-----------|-----------------|
| Impact         | 21/100 | 119 / 226 | Better than 48% |
| Stiffness      | 99/100 | 38 / 223  | Better than 83% |
| Consistency    | 76/100 | 152 / 231 | Better than 35% |
| Layer adhesion | 13/100 | 185 / 226 | Better than 19% |
| Thermal        | 74/100 | 4 / 209   | Better than 99% |

## 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 |
| 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 |

| 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](#)