

IC3D Standard PETG Yellow

Material Engineering Report
MaterialID MAT0063

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

Partial

ENGINEERING AXES

4/6

PUBLIC MSRP

\$39.00 USD/kg

Material identity

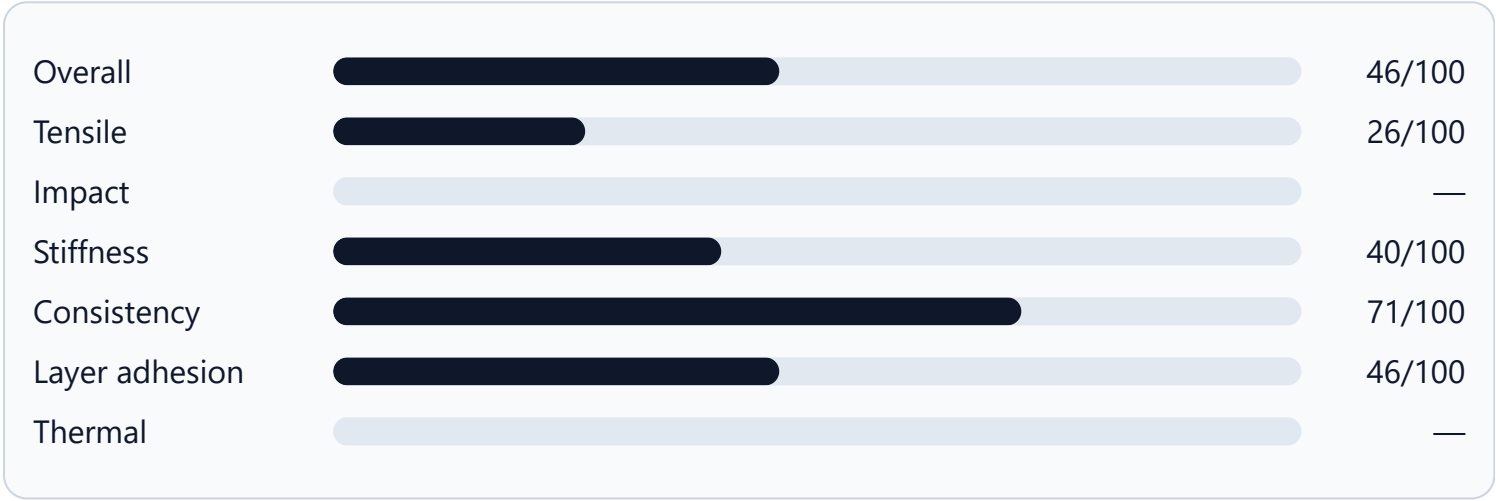
MaterialID	MAT0063
Material	IC3D Standard PETG Yellow
Manufacturer	IC3D
Product line	Standard
Base material	PETG
Category	Standard
Variant / finish	—
Reinforcement	—
Color	Yellow

Governed engineering profile

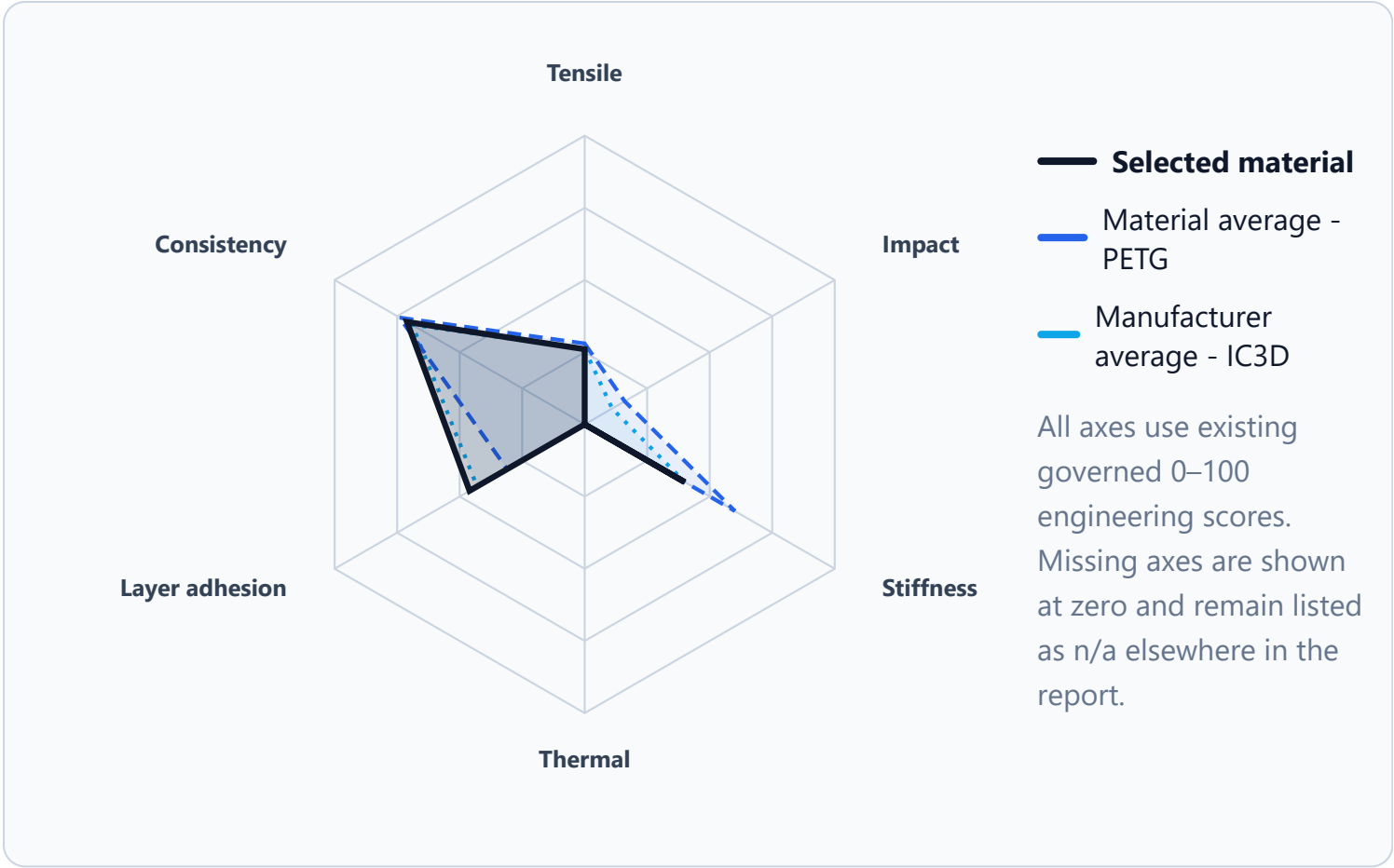
Overall	46/100
Tensile	26/100

Impact	—
Stiffness	40/100
Consistency	71/100
Layer adhesion	46/100
Thermal	—
Best available axis	consistency

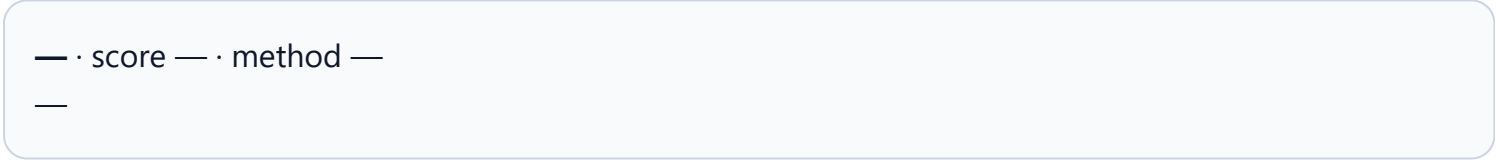
Engineering score profile



Engineering radar



Fixture thermal result



Material and manufacturer context

Metric	Selected material	Material average	Manufacturer average
Overall	46/100	42/100	41/100
Tensile	26/100	28/100	26/100
Impact	—	16/100	11/100
Stiffness	40/100	60/100	40/100
Consistency	71/100	74/100	69/100
Layer adhesion	46/100	31/100	43/100
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	13.074 MPa	3.784 MPa	28.9%	10	10/10
Tensile flat	28.255 MPa	3.81 MPa	13.5%	10	10/10
Impact upright	—	—	—	—	—
Impact flat	—	—	—	—	—
Stiffness modulus	1186.574 MPa	—	—	—	—
Stiffness deflection	4.573 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: IC3D Standard PETG Yellow has a specialized or limited engineering profile. It is above its material-family average by 3,6 points and above its manufacturer average by 4,3 points. Its strongest measured axis is Consistency, while the weakest axis is Tensile.

Data-driven review: IC3D Standard PETG Yellow 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 44% overall, is above the material-family average by 3,6 points, and is above the manufacturer average by 4,3 points. Its strongest engineering signal is Consistency, while Tensile is the main limitation to consider before using it for demanding applications.

BEST FEATURE

Consistency

MAIN LIMITATION

Tensile

DATASET POSITION

Better than 44%
131 / 234

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.

Limitations

- Tensile: 26/100. Avoid using this as the primary choice for tensile-loaded parts.
- Stiffness: 40/100. Expect less shape stability than the stronger materials in the same family.

Engineering trade-offs

- Good repeatability does not compensate for low tensile capability in load-bearing designs.
- The report should be read as a suitability warning rather than a general-purpose recommendation.

Recommended applications

- 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	46/100	131 / 234	Better than 44%
Tensile	26/100	142 / 226	Better than 38%
Impact	—	—	—
Stiffness	40/100	217 / 223	Better than 3%
Consistency	71/100	191 / 231	Better than 18%
Layer adhesion	46/100	28 / 226	Better than 88%
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.
- 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
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
MAT0235	Yasin Standard Black PETG GF Black	Yasin	45/100	27/100	21/100
MAT0171	BambuLab Basic Gray PETG Gray	BambuLab	45/100	34/100	14/100

Public links

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](#)