

Thorwell Standard ASA ASA Yellow

Material Engineering Report
MaterialID MAT0148

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

\$33.60 USD/kg

Material identity

MaterialID	MAT0148
Material	Thorwell Standard ASA ASA Yellow
Manufacturer	Thorwell
Product line	Standard
Base material	ASA
Category	Engineering
Variant / finish	—
Reinforcement	—
Color	Yellow

Governed engineering profile

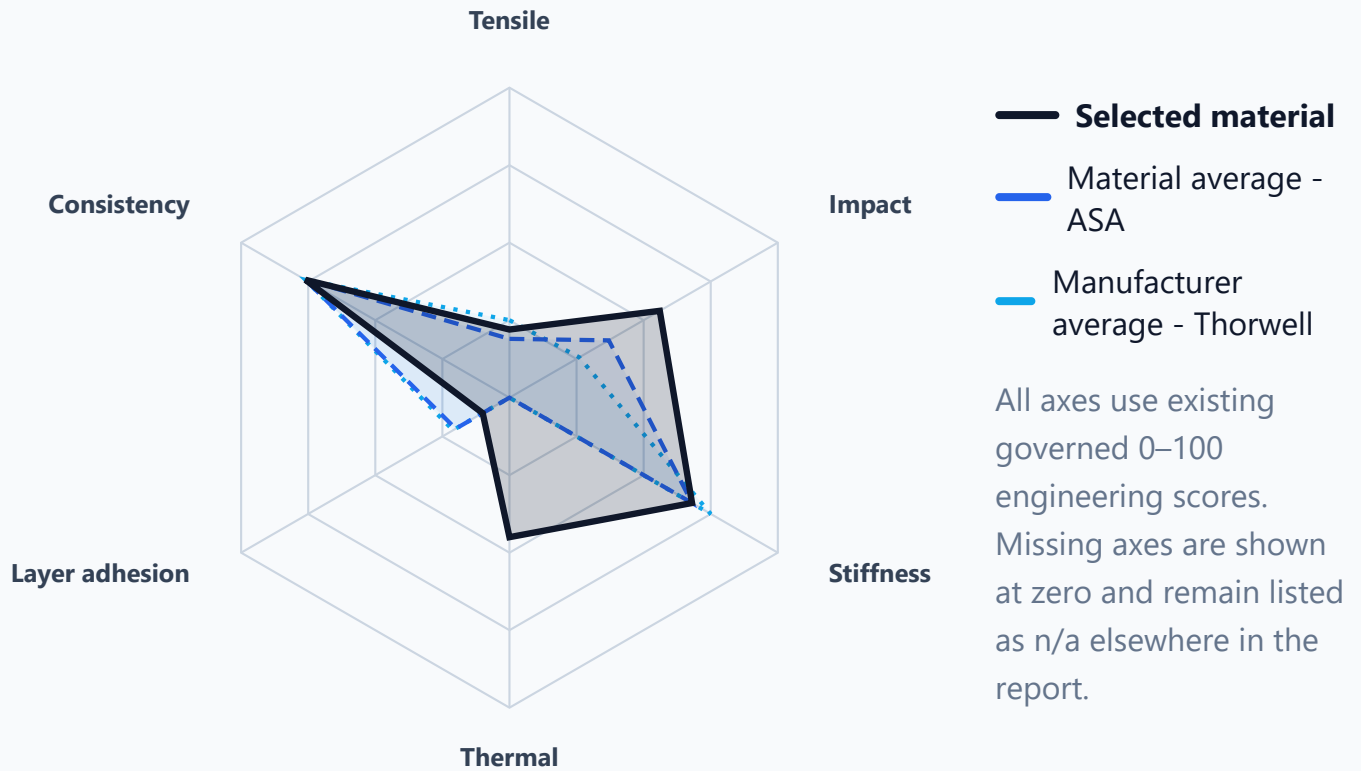
Overall	46/100
Tensile	22/100

Impact	56/100
Stiffness	68/100
Consistency	76/100
Layer adhesion	10/100
Thermal	45/100
Best available axis	consistency

Engineering score profile



Engineering radar



Fixture thermal result

89 °C · score 45/100 · 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	46/100	44/100	45/100
Tensile	22/100	19/100	25/100
Impact	56/100	37/100	26/100
Stiffness	68/100	68/100	75/100
Consistency	76/100	76/100	76/100
Layer adhesion	10/100	20/100	21/100
Thermal	45/100	—	—

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	3.213 MPa	1.727 MPa	53.8%	9	9/10
Tensile flat	31.838 MPa	5.602 MPa	17.6%	10	10/10
Impact upright	133.149 kJ/m ²	22.614 kJ/m ²	17%	10	10/10
Impact flat	985.817 kJ/m ²	52.853 kJ/m ²	5.4%	10	10/10
Stiffness modulus	2050.136 MPa	—	—	—	—
Stiffness deflection	2.647 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: Thorwell Standard ASA ASA Yellow has a specialized or limited engineering profile. It is above its material-family average by 2,3 points and above its manufacturer average by 1,9 points. Its strongest measured axis is Consistency, while the weakest axis is Layer Adhesion.

Data-driven review: Thorwell Standard ASA ASA 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 50% overall, is roughly aligned with the material-family average, and is roughly aligned with the manufacturer average. 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 50%
119 / 234

Strengths

- Consistency: 76/100. Repeatability is one of the stronger signals in this material profile.
- Impact: 56/100. Impact behavior is competitive against the material-family context.

Limitations

- Tensile: 22/100. Avoid using this as the primary choice for tensile-loaded parts.
- Layer adhesion: 10/100. Z-axis performance should be treated with caution.

Engineering trade-offs

- Good repeatability does not compensate for low tensile capability in load-bearing designs.
- 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

Metric rankings and percentiles

Metric	Score	Rank	Percentile
Overall	46/100	119 / 234	Better than 50%
Tensile	22/100	165 / 226	Better than 27%
Impact	56/100	12 / 226	Better than 95%

Metric	Score	Rank	Percentile
Stiffness	68/100	150 / 223	Better than 33%
Consistency	76/100	148 / 231	Better than 36%
Layer adhesion	10/100	206 / 226	Better than 9%
Thermal	45/100	25 / 209	Better than 89%

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.

Better alternatives

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0014	Extrudr DuraPro Emerald Green ASA Green	Extrudr	51/100	21/100	49/100

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
MAT0014	Extrudr DuraPro Emerald Green ASA Green	Extrudr	51/100	21/100	49/100
MAT0015	Prusa3D Prusament ASA Pro Green	Prusa3D	48/100	23/100	44/100
MAT0211	Eryone Standard Black ASA High Speed Black	Eryone	48/100	19/100	50/100
MAT0016	Extrudr DuraPro ASA Red	Extrudr	48/100	19/100	50/100
MAT0216	Eryone Standard White ASA White	Eryone	46/100	23/100	51/100
MAT0017	Yasin Standard White ASA White	Yasin	46/100	21/100	51/100

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0179	BambuLab Standard Blue ASA Blue	BambuLab	45/100	22/100	45/100
MAT0012	Prusa3D Prusament Galaxy Black ASA Black	Prusa3D	45/100	18/100	42/100

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](#)