

Thorwell Standard HIPS HIPS Blue

Material Engineering Report
MaterialID MAT0146

3DPiceland Engineering Platform
3DPiceland Labs

Generated with 3DPiceland Engineering Platform v60.0.6 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

\$32.00 USD/kg

Material identity

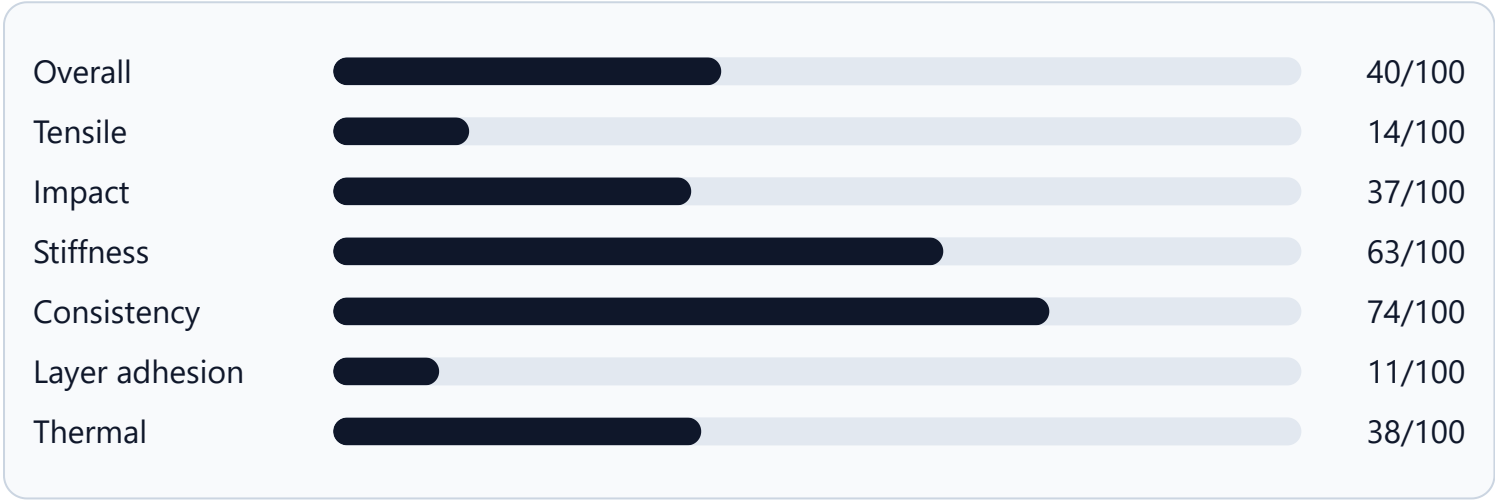
MaterialID	MAT0146
Material	Thorwell Standard HIPS HIPS Blue
Manufacturer	Thorwell
Product line	Standard
Base material	HIPS
Category	Engineering
Variant / finish	—
Reinforcement	—
Color	Blue

Governed engineering profile

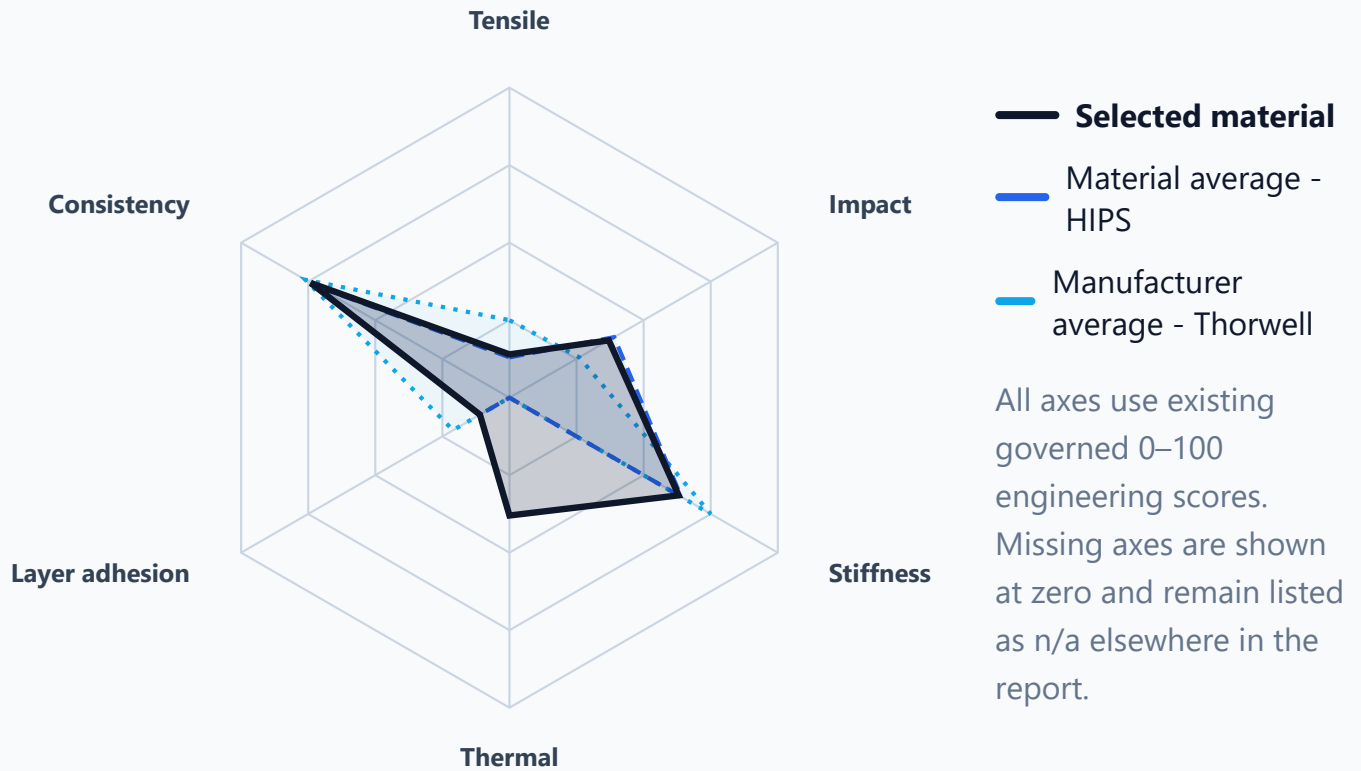
Overall	40/100
Tensile	14/100

Impact	37/100
Stiffness	63/100
Consistency	74/100
Layer adhesion	11/100
Thermal	38/100
Best available axis	consistency

Engineering score profile



Engineering radar



Fixture thermal result

76 °C · score 38/100 · 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	40/100	40/100	45/100
Tensile	14/100	13/100	25/100
Impact	37/100	39/100	26/100
Stiffness	63/100	64/100	75/100
Consistency	74/100	72/100	76/100
Layer adhesion	11/100	11/100	21/100
Thermal	38/100	—	—

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	2.192 MPa	0.715 MPa	32.6%	4	4/10
Tensile flat	19.995 MPa	4.734 MPa	23.7%	10	10/10
Impact upright	123.182 kJ/m ²	35.166 kJ/m ²	28.5%	8	8/10
Impact flat	612.586 kJ/m ²	39.533 kJ/m ²	6.5%	10	10/10
Stiffness modulus	1882.778 MPa	—	—	—	—
Stiffness deflection	2.882 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 HIPS HIPS Blue has a specialized or limited engineering profile. It is below its material-family average by 0,2 points and below its manufacturer average by 4,9 points. Its strongest measured axis is Consistency, while the weakest axis is Layer Adhesion.

Data-driven review: Thorwell Standard HIPS HIPS Blue 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 12% overall, is roughly aligned with the material-family average, and is below the manufacturer average by 4,9 points. 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 12%
206 / 234

Strengths

- Consistency: 74/100. Repeatability is one of the stronger signals in this material profile.

Limitations

- Tensile: 14/100. Avoid using this as the primary choice for tensile-loaded parts.
- Impact: 37/100. Avoid high impact or shock-loaded components without additional validation.
- Layer adhesion: 11/100. 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	40/100	206 / 234	Better than 12%

Metric	Score	Rank	Percentile
Tensile	14/100	219 / 226	Better than 4%
Impact	37/100	52 / 226	Better than 77%
Stiffness	63/100	178 / 223	Better than 21%
Consistency	74/100	168 / 231	Better than 28%
Layer adhesion	11/100	196 / 226	Better than 14%
Thermal	38/100	58 / 209	Better than 73%

Decision guidance

- Use this material mainly for low-load, visual or experimental parts.
- Do not choose it as a tensile-strength benchmark material.

Better alternatives

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
No stronger same-base-material alternatives were identified in the current governed dataset.					

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
MAT0240	Yasin Standard White HIPS White	Yasin	40/100	12/100	42/100

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](#)