

Thorwell Standard Blue TPU Blue

Material Engineering Report
MaterialID MAT0260

3DP Iceland Engineering Platform
3DP Iceland Labs

Generated with 3DP Iceland Engineering Platform v70.0.4 DIRECT-
IMPACT-METHODOLOGY - Izod and Charpy Methodology
Generated 2026-10-04 18:07:33

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.

RIGID TEST COVERAGE

**No native results;
0/5 score families;
Izod/Charpy 0/2
measured, 0/2
scored; Overall
unavailable: missing
measurements or
references; policy
engineering-score-
v70-1**

ENGINEERING AXES

0/8

PUBLIC MSRP

\$40.00 USD/kg

Material identity

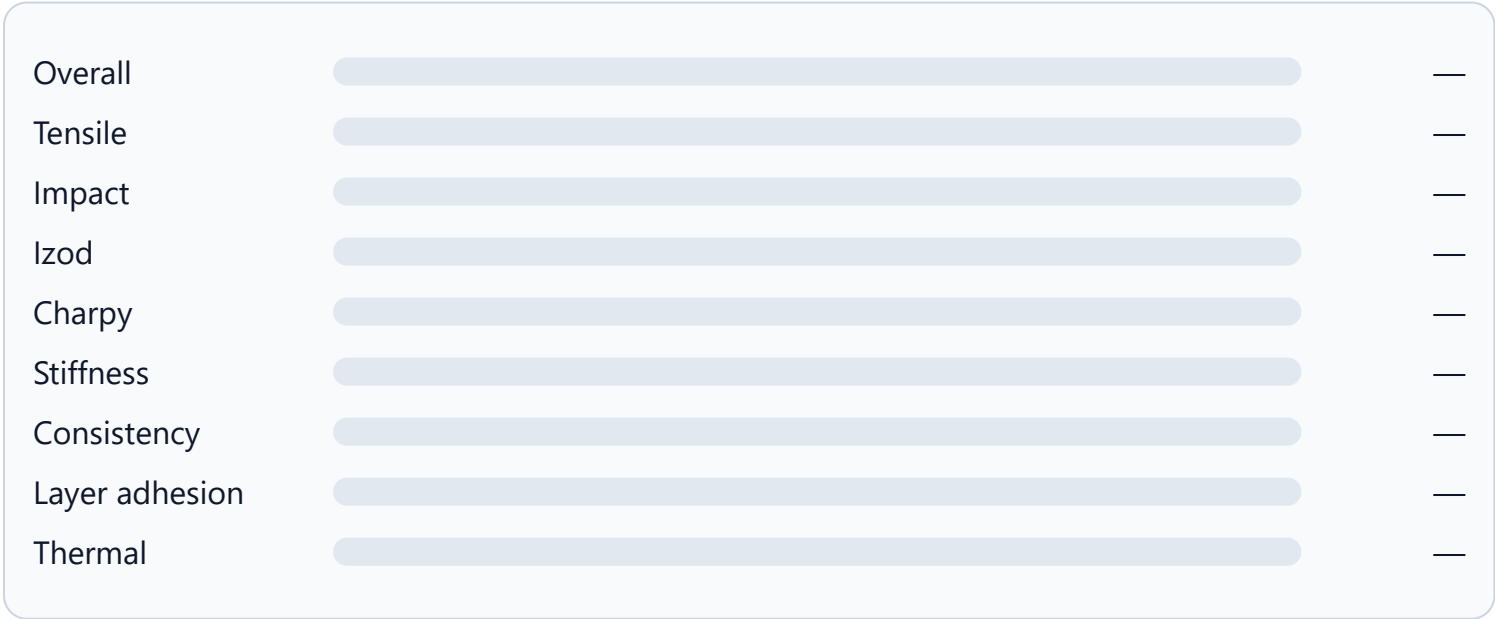
MaterialID	MAT0260
Material	Thorwell Standard Blue TPU Blue
Manufacturer	Thorwell
Product line	Standard
Base material	TPU
Category	Flexible
Variant / finish	—

Reinforcement	—
Color	Blue

Governed engineering profile

Overall	—
Tensile	—
Impact	—
Izod	—
Charpy	—
Stiffness	—
Consistency	—
Layer adhesion	—
Thermal	—
Best available axis	mechanical profile

Engineering score profile



Engineering radar



Fixture thermal result

— · score — · method —
—

Material and manufacturer context

Metric	Selected material	Material average	Manufacturer average
Overall	—	—	—
Tensile	—	27/100	25/100
Impact	—	—	—
Izod	—	48/100	—
Charpy	—	47/100	—
Stiffness	—	—	75/100
Consistency	—	92/100	69/100
Layer adhesion	—	25/100	21/100
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	—	—	—	—	—
Tensile flat	—	—	—	—	—
Impact upright	—	—	—	—	—
Impact flat	—	—	—	—	—
Izod	—	—	—	—	—
Charpy	—	—	—	—	—
Stiffness modulus	—	—	—	—	—
Stiffness deflection	—	—	—	—	—

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
Izod	Not recorded
Charpy	Not recorded
Stiffness	Not recorded
Thermal	Not recorded

Engineering interpretation

Summary: Thorwell Standard Blue TPU Blue has a profile awaiting complete scoring evidence. It is without enough material-family average context and without enough manufacturer average context. Its strongest measured axis is No scored metric, while the weakest axis is No scored metric.

Data-driven review: Thorwell Standard Blue TPU Blue has incomplete scoring evidence or pending method references. Overall suitability and ranking are unavailable. Available scored axes can be inspected separately; missing scores do not establish weak material performance.

BEST FEATURE

No scored metric

MAIN LIMITATION

No scored metric

DATASET POSITION

Strengths

- No scored strength is available yet.

Limitations

- No scored limitation can be established from the available evidence.

Engineering trade-offs

- Complete scoring evidence and approved method references are required before assessing an overall balance of properties.

Recommended applications

- Application guidance awaits sufficient measured evidence and approved score references

Metric rankings and percentiles

Metric	Score	Rank	Percentile
Overall	—	—	—
Tensile	—	—	—
Impact	—	—	—
Izod	—	—	—
Charpy	—	—	—
Stiffness	—	—	—
Consistency	—	—	—
Layer adhesion	—	—	—
Thermal	—	—	—

Decision guidance

- Overall suitability is unavailable until the required measurements and method references are complete.

Better alternatives

MaterialID	Material	Manufacturer	Overall	Tensile	Impact	Izod	Charpy
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	Izod	Charpy
MAT0253	Bedrock 3D Standard Black TPU 64D Black	Bedrock 3D	—	—	—	n/a	n/a
MAT0256	Bedrock 3D Standard Black TPU Foaming Black	Bedrock 3D	—	—	—	n/a	n/a
MAT0255	Bedrock 3D Standard Natural TPU 85A Natural	Bedrock 3D	—	—	—	n/a	n/a
MAT0254	Bedrock 3D Standard White TPU 95A White	Bedrock 3D	—	—	—	n/a	n/a
MAT0257	Prima Creator Select Black TPU Black	Prima Creator	—	—	—	n/a	n/a
MAT0261	Prusa3D Prusament Jet Black TPU 95A Black	Prusa3D	—	—	—	n/a	n/a
MAT0200	Siraya Tech Fiberheart Black TPU 67D GF Black	Siraya Tech	—	27/100	—	n/a	n/a

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](#)

Flexible Material Testing

Comparative in-house measurements; n = independent specimens. Separate test groups; Overall unchanged.

Method	Result	Condition	Mean	n	SD	CV %	Range	Not reached
eaacea91	Apparent Compressive Stress at 20% Strain (MPa)	10 s hold · 2 mm displacement · cycle 1	3.942	10	0.08	2.031	3.835–4.103	0
eaacea91	Apparent Compressive Stress at 20% Strain (MPa)	30 s hold · 2 mm displacement · cycle 1	3.724	10	0.078	2.101	3.631–3.898	0
eaacea91	Compression Force at 20% Strain (N)	10 s hold · 2 mm displacement · cycle 1	250.8	10	5.095	2.031	244–261	0
eaacea91	Compression Force at 20% Strain (N)	30 s hold · 2 mm displacement · cycle 1	236.9	10	4.977	2.101	231–248	0
eaacea91	Force reduction from 10 s to 30 s at 20% Strain (%)	first compression only · 2 mm displacement	5.543	10	0.387	6.98	4.918–6	0
eaacea91	Force retention at 20% Strain (%)	10–30 s · 2 mm displacement · cycle 1	94.457	10	0.387	0.41	94–95.082	0
eaacea91	Residual height loss after recovery (%)	20% compression · 30 s compressed hold · 60 s rest · 10 mm initial height · cycle 1	1.21	10	0.185	15.313	0.9–1.5	0
ed381ba8	Shore A Hardness (Shore A)	10 s reading · 8 mm	90.1	1	—	—	90.1–90.1	0

Shore location statistics

Within each specimen; specimen numbers are local to each test group. SD uses the sample formula. These readings do not increase independent n.

Method	Scale	Condition	Specimen	Readings	Mean	Location SD	Location CV %
ed381ba8	Shore A Hardness	10 s reading · 8 mm	1	5	90.1	2.382	2.644