

Thorwell Standard Blue TPE Blue

Material Engineering Report
MaterialID MAT0259

3DPiceland Engineering Platform
3DPiceland Labs

Generated with 3DPiceland 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

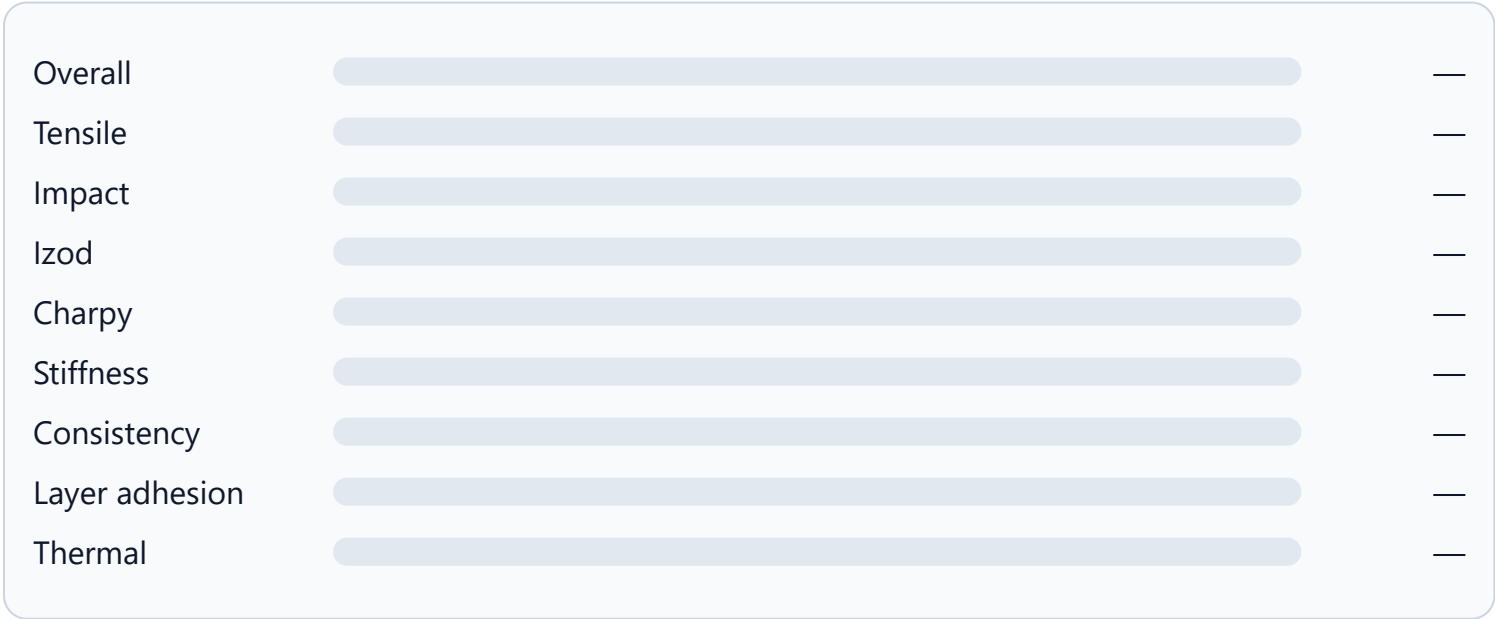
MaterialID	MAT0259
Material	Thorwell Standard Blue TPE Blue
Manufacturer	Thorwell
Product line	Standard
Base material	TPE
Category	Flexible
Variant / finish	—

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

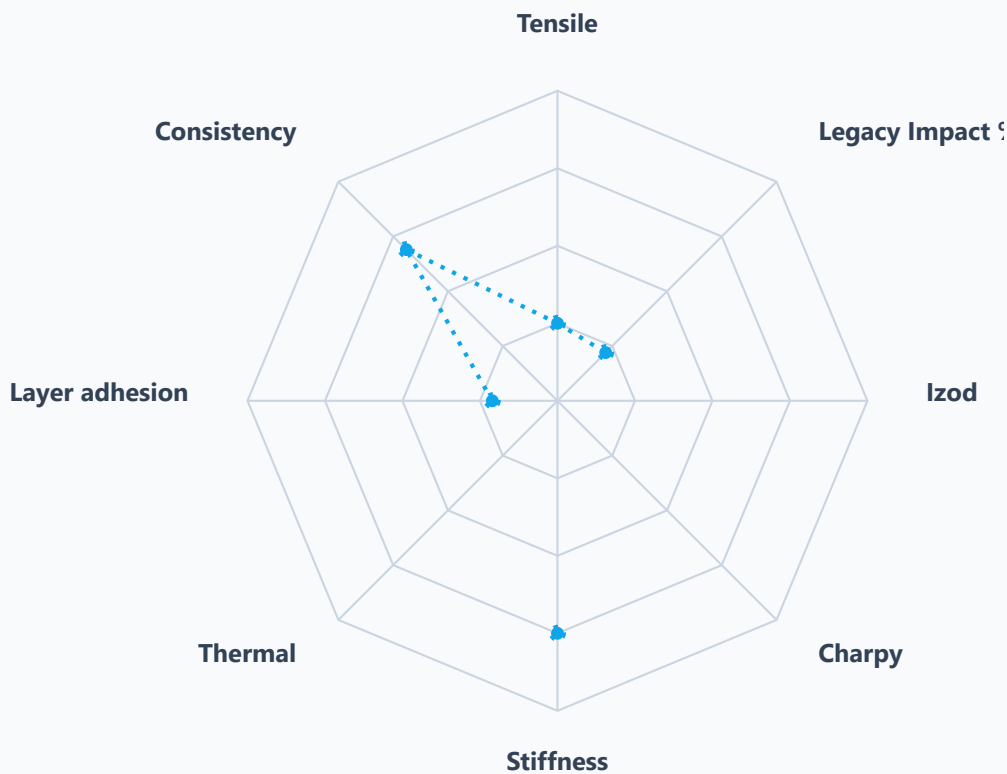
— **Selected material**

— Material average -
TPE

— Manufacturer
average - Thorwell

Legacy Impact radar: —.
This historical visual
reference is the mean
corrected Flat/Upright
result divided by the
matching rig capacity; it
is not a modern
engineering score.

Izod and Charpy use
versioned method
references and together
form one equally
weighted impact family.
Overall requires all five
families and both
calibrated methods;
incomplete profiles are
not ranked. Legacy
Impact and thermal are
outside Overall. Missing
axes have gaps with no
marker or filled polygon;
measured zero retains a
centre marker.



Fixture thermal result

— · score — · method —

—

Material and manufacturer context

Metric	Selected material	Material average	Manufacturer average
Overall	—	—	—
Tensile	—	—	25/100
Impact	—	—	—
Izod	—	—	—
Charpy	—	—	—
Stiffness	—	—	75/100
Consistency	—	—	69/100
Layer adhesion	—	—	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 TPE 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 TPE 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
MAT0258	Yasin Standard Black TPE Black	Yasin	—	—	—	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](#)

Stable public path: reports/materials/MAT0259/ · Canonical HTML: index.html · PDF printed from this HTML.

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	3.809	10	0.062	1.617	3.725–3.898	0
eaacea91	Apparent Compressive Stress at 20% Strain (MPa)	30 s hold · 2 mm displacement · cycle 1	3.567	10	0.052	1.461	3.505–3.663	0
eaacea91	Compression Force at 20% Strain (N)	10 s hold · 2 mm displacement · cycle 1	242.3	10	3.917	1.617	237–248	0
eaacea91	Compression Force at 20% Strain (N)	30 s hold · 2 mm displacement · cycle 1	226.9	10	3.315	1.461	223–233	0

Method	Result	Condition	Mean	n	SD	CV %	Range	Not reached
eaacea91	Force reduction from 10 s to 30 s at 20% Strain (%)	first compression only · 2 mm displacement	6.346	10	1.272	20.038	4.979–9.677	0
eaacea91	Force retention at 20% Strain (%)	10–30 s · 2 mm displacement · cycle 1	93.654	10	1.272	1.358	90.323–95.021	0
eaacea91	Residual height loss after recovery (%)	20% compression · 30 s compressed hold · 60 s rest · 10 mm initial height · cycle 1	4	10	1.069	26.719	1–4.6	0
ed381ba8	Shore A Hardness (Shore A)	10 s reading · 8 mm	90.9	1	—	—	90.9–90.9	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	90.9	1.025	1.127