

Bedrock 3D Standard Black PC/ABS FR Black

Material Engineering Report
MaterialID MAT0245

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

Partial; 4/5 score families; Izod/Charpy 0/2 measured, 0/2 scored; Overall unavailable: missing measurements or references; policy engineering-score-v70-1

ENGINEERING AXES

5/8

PUBLIC MSRP

\$72.96 USD/kg

Material identity

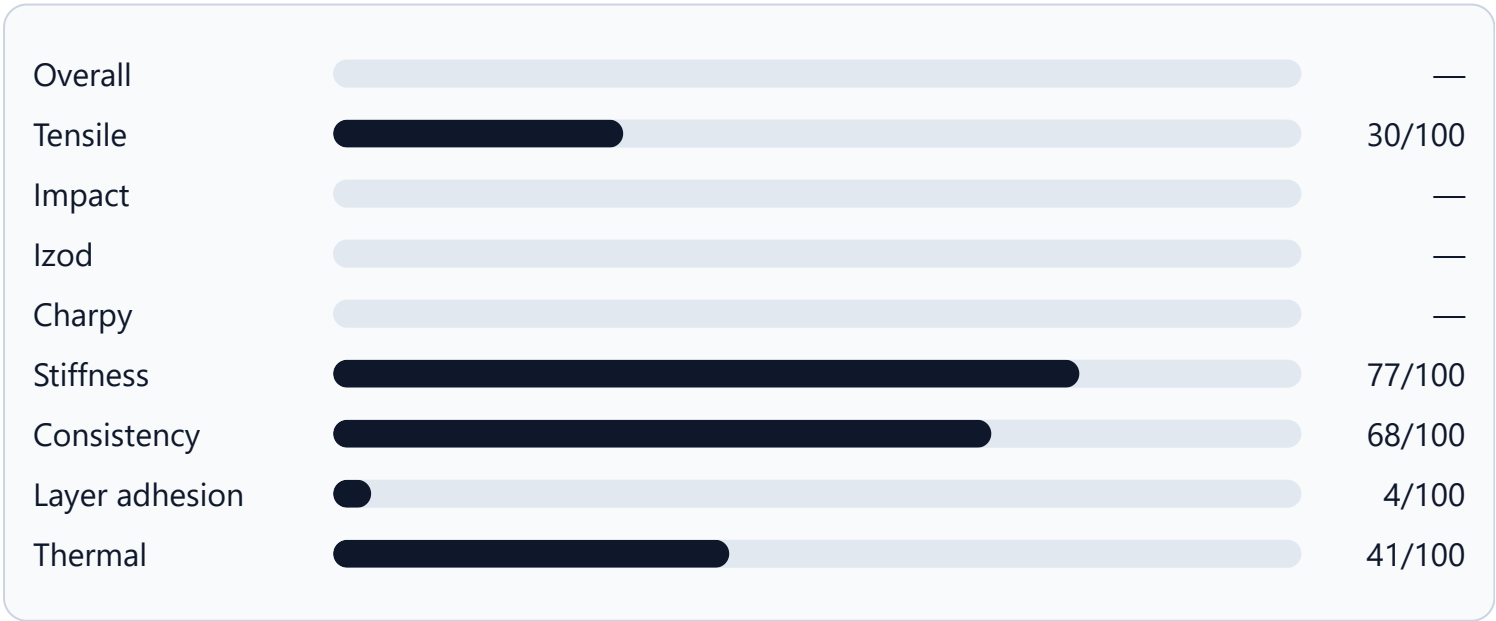
MaterialID	MAT0245
Material	Bedrock 3D Standard Black PC/ABS FR Black
Manufacturer	Bedrock 3D
Product line	Standard
Base material	PC/ABS
Category	Engineering

Variant / finish	FR
Reinforcement	—
Color	Black

Governed engineering profile

Overall	—
Tensile	30/100
Impact	—
Izod	—
Charpy	—
Stiffness	77/100
Consistency	68/100
Layer adhesion	4/100
Thermal	41/100
Best available axis	stiffness

Engineering score profile



Engineering radar

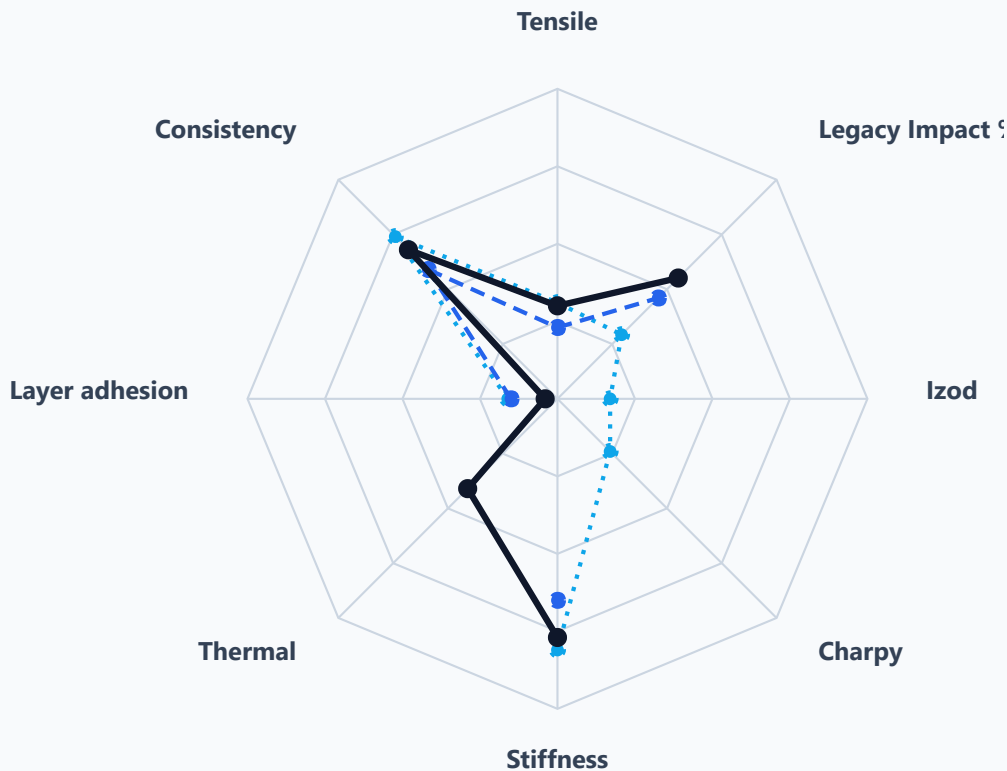
— Selected material

— Material average -
PC/ABS

Manufacturer
— average - Bedrock
3D

Legacy Impact radar:
55.111 % of legacy rig
capacity. 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

82 °C · score 41/100 · 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	—	—	—
Tensile	30/100	23/100	31/100
Impact	—	—	—
Izod	—	—	17/100
Charpy	—	—	24/100
Stiffness	77/100	65/100	81/100
Consistency	68/100	59/100	74/100
Layer adhesion	4/100	15/100	16/100
Thermal	41/100	—	—

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	1.897 MPa	0.931 MPa	49.1%	6	6/10
Tensile flat	45.481 MPa	4.271 MPa	9.4%	10	10/10
Impact upright	6.083 kJ/m ²	0.796 kJ/m ²	13.1%	10	10/10
Impact flat	56.714 kJ/m ²	0.335 kJ/m ²	0.6%	10	10/10
Izod	—	—	—	—	—
Charpy	—	—	—	—	—
Stiffness modulus	2306.403 MPa	—	—	—	—
Stiffness deflection	2.353 mm	—	—	—	—

Measurement provenance

Canonical per-module measured dates from SQLite, shown in unambiguous ISO format. Missing dates are not inferred.

Module	Measured date
Tensile	2026-09-05
Impact	2026-09-11
Izod	Not recorded
Charpy	Not recorded
Stiffness	2026-09-05
Thermal	2026-09-07

Engineering interpretation

Summary: Bedrock 3D Standard Black PC/ABS FR Black 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 Stiffness, while the weakest axis is Layer Adhesion.

Data-driven review: Bedrock 3D Standard Black PC/ABS FR Black 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

Stiffness

MAIN LIMITATION

Layer Adhesion

DATASET POSITION

—

—

Strengths

- Consistency: 68/100. Repeatability is one of the stronger signals in this material profile.
- Tensile: 30/100. Tensile behavior is competitive against the material-family context.
- Stiffness: 77/100. Stiffness is a relative advantage in this comparison group.

Limitations

- Tensile: 30/100. Avoid using this as the primary choice for tensile-loaded parts.
- Layer adhesion: 4/100. Z-axis performance should be treated with caution.

Engineering trade-offs

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

Recommended applications

- Rigid brackets, fixtures and shape-stable prototypes
- Cosmetic parts, concept models or low-load prototypes
- Avoid high tensile load applications

Metric rankings and percentiles

Metric	Score	Rank	Percentile
Overall	—	—	—
Tensile	30/100	116 / 243	Better than 53%
Impact	—	—	—
Izod	—	—	—
Charpy	—	—	—
Stiffness	77/100	131 / 240	Better than 46%
Consistency	68/100	192 / 243	Better than 21%
Layer adhesion	4/100	240 / 243	Better than 2%
Thermal	41/100	48 / 226	Better than 79%

Decision guidance

- Overall suitability is unavailable until the required measurements and method references are complete.
- Do not choose it as a tensile-strength benchmark material.

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
MAT0217	Eryone Standard White PC/ABS White	Eryone	—	16/100	—	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](#)