Public engineering report

Prima Creator PrimaSelect PC Black

Material Engineering Report
MaterialID MAT0032

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	ENGINEERING AXES	PUBLIC MSRP
Complete	**6/6**	**$30.35 USD/kg**

Material identity

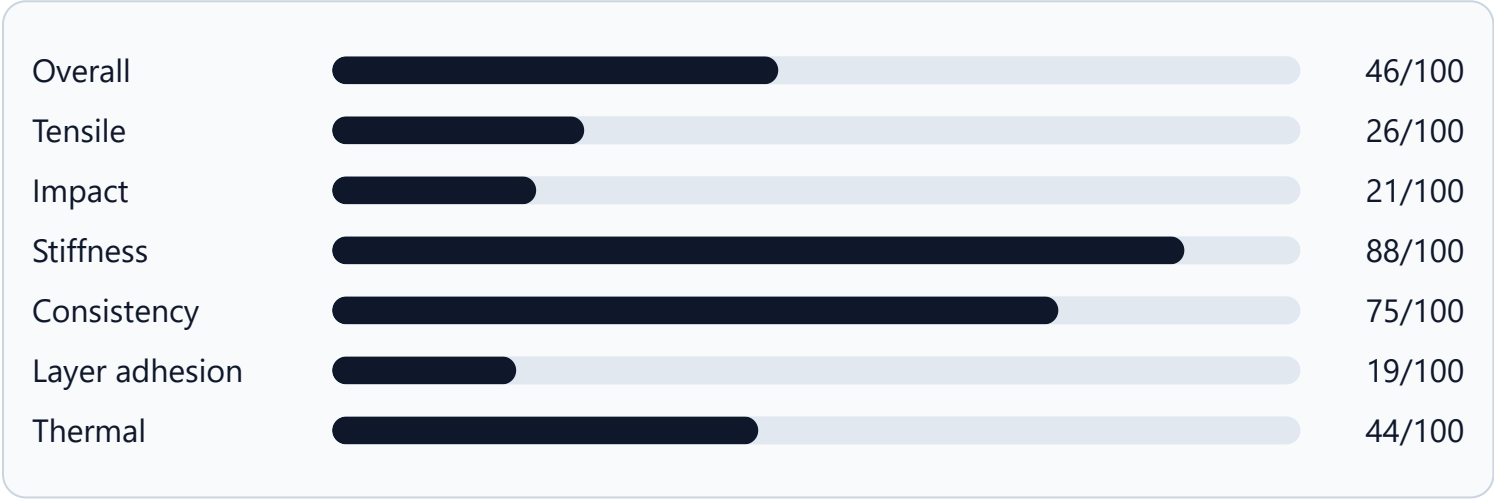
MaterialID	MAT0032
Material	Prima Creator PrimaSelect PC Black
Manufacturer	Prima Creator
Product line	PrimaSelect
Base material	PC
Category	Engineering
Variant / finish	—
Reinforcement	—
Color	Black

Governed engineering profile

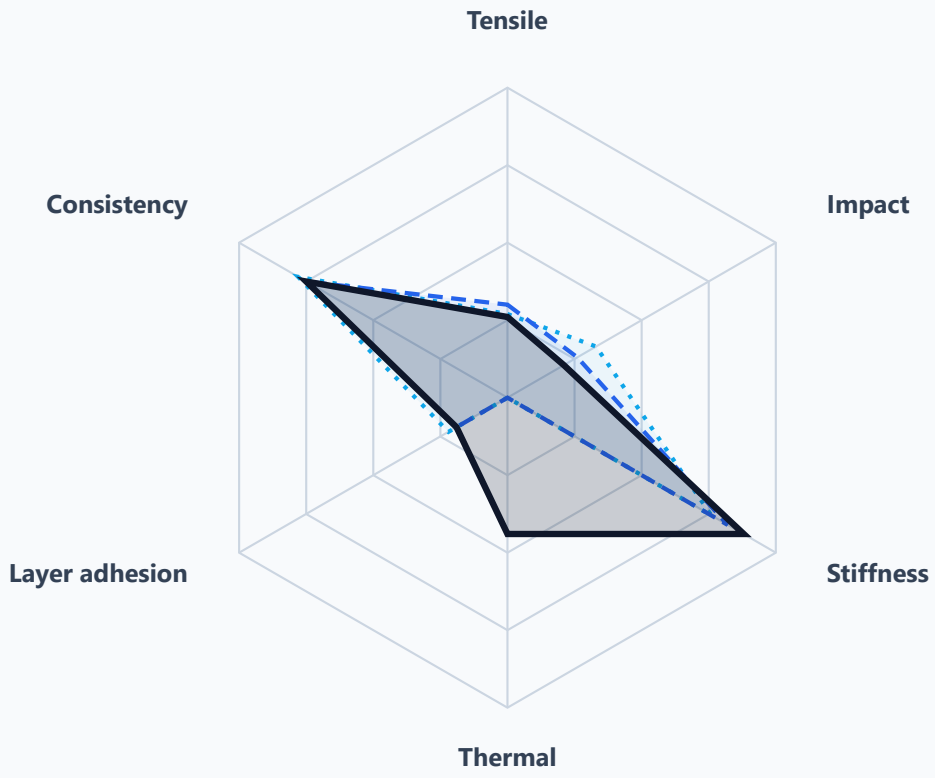
Overall	46/100
Tensile	26/100

Impact	21/100
Stiffness	88/100
Consistency	75/100
Layer adhesion	19/100
Thermal	44/100
Best available axis	stiffness

Engineering score profile



Engineering radar



All axes use existing governed 0–100 engineering scores. Missing axes are shown at zero and remain listed as n/a elsewhere in the report.

Fixture thermal result

88 °C · score 44/100 · 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	46/100	47/100
Tensile	26/100	30/100	27/100
Impact	21/100	26/100	33/100
Stiffness	88/100	82/100	76/100
Consistency	75/100	75/100	78/100
Layer adhesion	19/100	19/100	22/100
Thermal	44/100	—	—

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	6.521 MPa	2.36 MPa	36.2%	10	10/10
Tensile flat	35.007 MPa	12.401 MPa	35.4%	10	10/10
Impact upright	159.64 kJ/m²	26.576 kJ/m²	16.6%	10	10/10
Impact flat	251.463 kJ/m²	28.418 kJ/m²	11.3%	10	10/10
Stiffness modulus	2654.852 MPa	—	—	—	—
Stiffness deflection	2.044 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: Prima Creator PrimaSelect PC Black has a specialized or limited engineering profile. It is below its material-family average by 0,7 points and below its manufacturer average by 1,6 points. Its strongest measured axis is Stiffness, while the weakest axis is Layer Adhesion.

Data-driven review: Prima Creator PrimaSelect PC Black 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 45% overall, is roughly aligned with the material-family average, and is roughly aligned with the manufacturer average. Its strongest engineering signal is Stiffness, while Layer Adhesion is the main limitation to consider before using it for demanding applications.

BEST FEATURE
Stiffness

MAIN LIMITATION
Layer Adhesion

DATASET POSITION
Better than 45%
130 / 234

Strengths

- Consistency: 75/100. Repeatability is one of the stronger signals in this material profile.
- Stiffness: 88/100. Stiffness is a relative advantage in this comparison group.

Limitations

- Tensile: 26/100. Avoid using this as the primary choice for tensile-loaded parts.
- Impact: 21/100. Avoid high impact or shock-loaded components without additional validation.
- Layer adhesion: 19/100. Z-axis performance should be treated with caution.

Engineering trade-offs

- Good repeatability does not compensate for low tensile capability in load-bearing designs.
- Stiffness is useful for shape stability, but impact tolerance is a separate limitation.
- The report should be read as a suitability warning rather than a general-purpose recommendation.

Recommended applications

- Rigid brackets, fixtures and shape-stable prototypes
- Repeatable print jobs and production-style batches
- Cosmetic parts, concept models or low-load prototypes
- Avoid high tensile load applications
- Avoid high impact components

Metric rankings and percentiles

Metric	Score	Rank	Percentile
Overall	46/100	130 / 234	Better than 45%
Tensile	26/100	140 / 226	Better than 38%
Impact	21/100	128 / 226	Better than 44%
Stiffness	88/100	82 / 223	Better than 64%
Consistency	75/100	160 / 231	Better than 31%
Layer adhesion	19/100	141 / 226	Better than 38%
Thermal	44/100	30 / 209	Better than 86%

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.
- Avoid selecting it for impact-focused testing or shock-loaded designs.

Better alternatives

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0033	Prusa3D Prusament PC Blend PC Black	Prusa3D	56/100	39/100	46/100
MAT0029	Prusa3D Prusament PC Blend PC CF Black	Prusa3D	55/100	35/100	32/100

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
MAT0033	Prusa3D Prusament PC Blend PC Black	Prusa3D	56/100	39/100	46/100
MAT0029	Prusa3D Prusament PC Blend PC CF Black	Prusa3D	55/100	35/100	32/100
MAT0028	Prima Creator PrimaSelect PC CF Black	Prima Creator	45/100	38/100	21/100

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0168	BambuLab Basic PC White	BambuLab	42/100	30/100	13/100
MAT0034	Yasin Standard Black PC Plus Black	Yasin	35/100	12/100	21/100

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