Public engineering report

Prima Creator PrimaSelect PC CF Black

Material Engineering Report
MaterialID MAT0028

3DPIceland Engineering Platform
3DPIceland Labs
Generated with 3DPIceland Engineering Platform v60.0.6
WORKFLOW-RELIABILITY - Bug Fixes and Workflow Reliability
Generated 2026-08-25 19:02:26

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**	**$69.48 USD/kg**

Material identity

MaterialID	MAT0028
Material	Prima Creator PrimaSelect PC CF Black
Manufacturer	Prima Creator
Product line	PrimaSelect
Base material	PC
Category	Engineering
Variant / finish	—
Reinforcement	CF
Color	Black

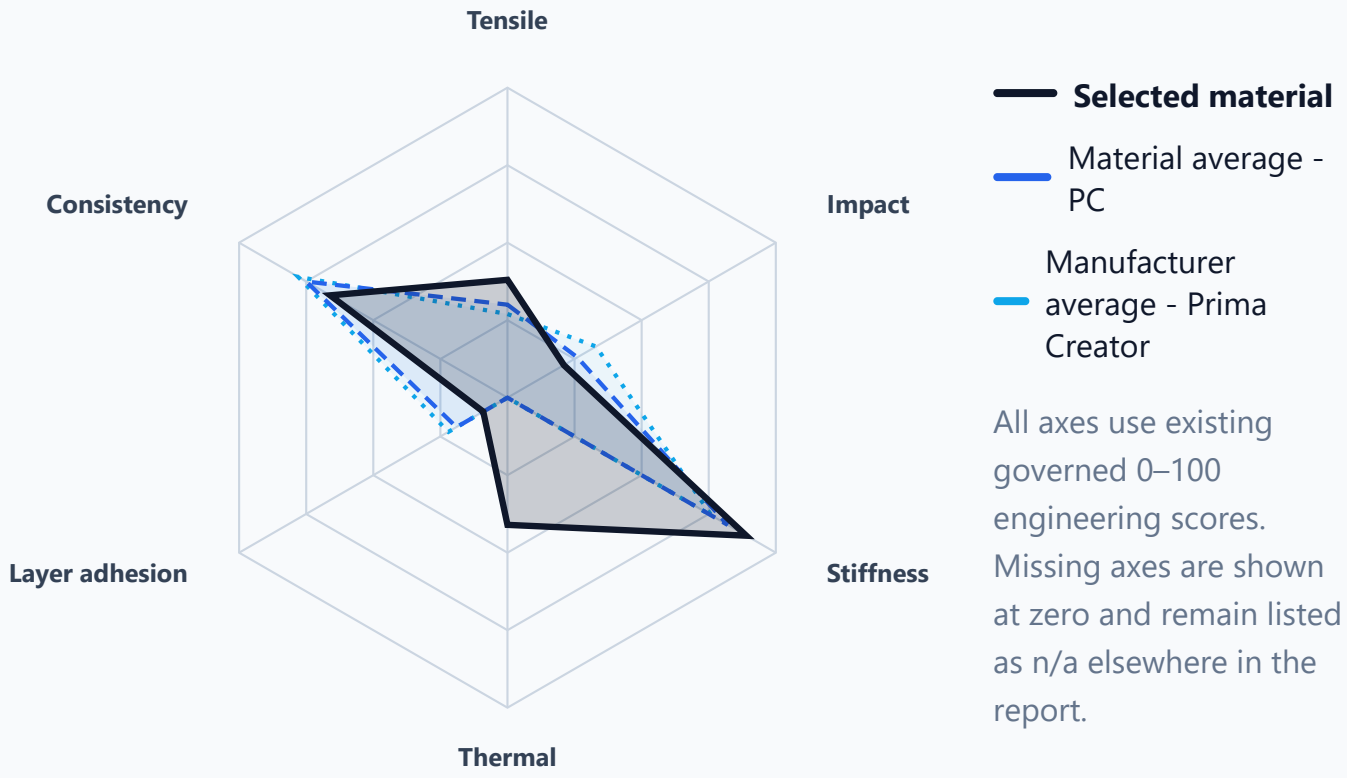
Governed engineering profile

Overall	45/100
Tensile	38/100

Impact	21/100
Stiffness	89/100
Consistency	66/100
Layer adhesion	9/100
Thermal	41/100
Best available axis	stiffness

Engineering score profile

Engineering radar



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	45/100	46/100	47/100
Tensile	38/100	30/100	27/100
Impact	21/100	26/100	33/100
Stiffness	89/100	82/100	76/100
Consistency	66/100	75/100	78/100
Layer adhesion	9/100	19/100	22/100
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	5.106 MPa	3.281 MPa	64.3%	10	10/10
Tensile flat	55.433 MPa	5.958 MPa	10.7%	10	10/10
Impact upright	88.994 kJ/m²	33.931 kJ/m²	38.1%	10	10/10
Impact flat	338.738 kJ/m²	75.23 kJ/m²	22.2%	10	10/10
Stiffness modulus	2674.09 MPa	—	—	—	—
Stiffness deflection	2.029 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 CF Black has a specialized or limited engineering profile. It is below its material-family average by 1,7 points and below its manufacturer average by 2,6 points. Its strongest measured axis is Stiffness, while the weakest axis is Layer Adhesion.

Data-driven review: Prima Creator PrimaSelect PC CF 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 38% 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 38%
145 / 234

Strengths

- Tensile: 38/100. Tensile behavior is competitive against the material-family context.
- Stiffness: 89/100. Stiffness is a relative advantage in this comparison group.

Limitations

- Tensile: 38/100. 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: 9/100. 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
- Cosmetic parts, concept models or low-load prototypes
- Avoid high impact components

Metric rankings and percentiles

Metric	Score	Rank	Percentile
Overall	45/100	145 / 234	Better than 38%
Tensile	38/100	23 / 226	Better than 90%
Impact	21/100	117 / 226	Better than 49%
Stiffness	89/100	77 / 223	Better than 66%
Consistency	66/100	218 / 231	Better than 6%
Layer adhesion	9/100	213 / 226	Better than 6%
Thermal	41/100	45 / 209	Better than 79%

Decision guidance

- Use this material mainly for low-load, visual or experimental parts.
- Review the listed alternatives if the application needs stronger overall performance.
- 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
MAT0032	Prima Creator PrimaSelect PC Black	Prima Creator	46/100	26/100	21/100
MAT0168	BambuLab Basic PC White	BambuLab	42/100	30/100	13/100

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
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