

Prusa3D Prusament Natural PP GF White

Material Engineering Report
MaterialID MAT0037

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

Complete

ENGINEERING AXES

6/6

PUBLIC MSRP

\$82.82 USD/kg

Material identity

MaterialID	MAT0037
Material	Prusa3D Prusament Natural PP GF White
Manufacturer	Prusa3D
Product line	Prusament
Base material	PP
Category	Engineering
Variant / finish	—
Reinforcement	GF
Color	White

Governed engineering profile

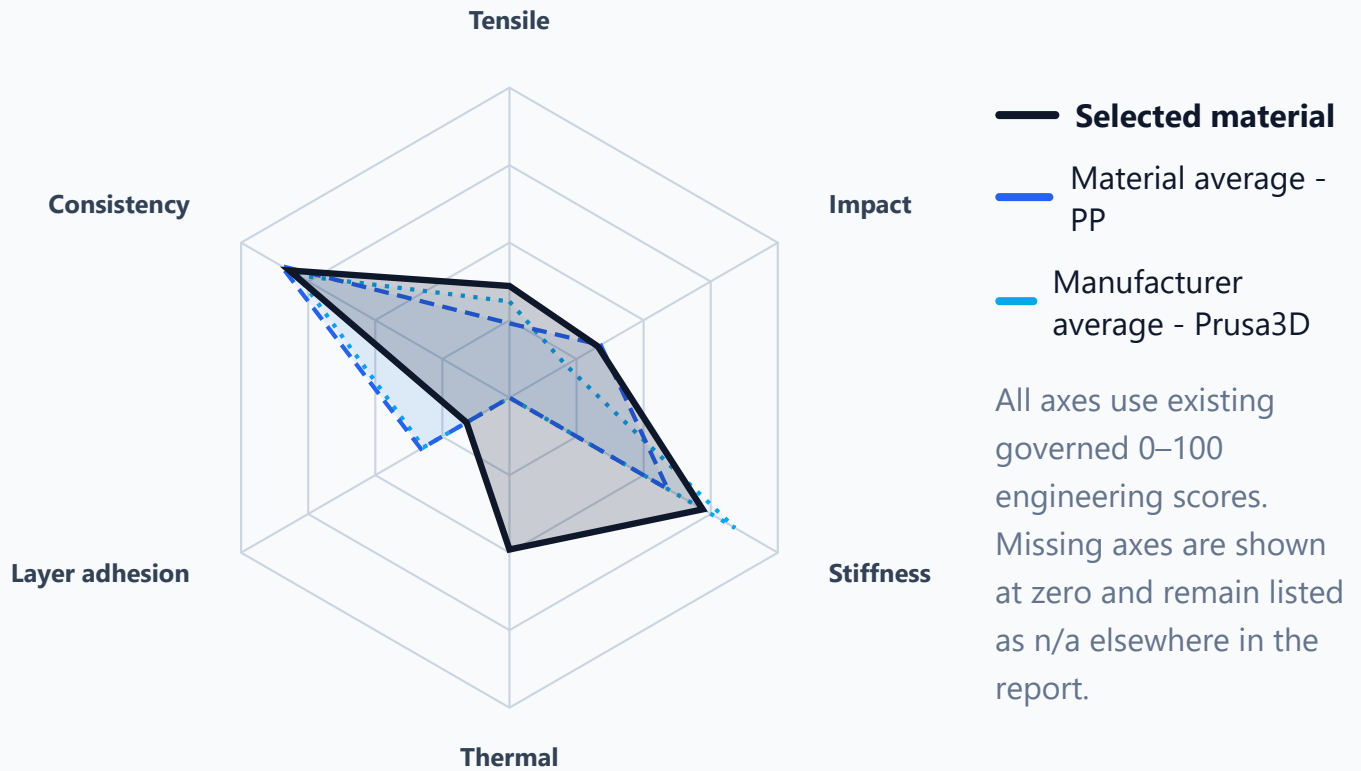
Overall	48/100
Tensile	36/100

Impact	33/100
Stiffness	72/100
Consistency	82/100
Layer adhesion	16/100
Thermal	49/100
Best available axis	consistency

Engineering score profile



Engineering radar



Fixture thermal result

98 °C · score 49/100 · 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	48/100	46/100	49/100
Tensile	36/100	24/100	31/100
Impact	33/100	34/100	21/100
Stiffness	72/100	59/100	84/100
Consistency	82/100	85/100	79/100
Layer adhesion	16/100	33/100	32/100
Thermal	49/100	—	—

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	7.69 MPa	2.935 MPa	38.2%	9	9/10
Tensile flat	49.157 MPa	5.206 MPa	10.6%	10	10/10
Impact upright	82.977 kJ/m ²	8.416 kJ/m ²	10.1%	10	10/10
Impact flat	571.971 kJ/m ²	73.551 kJ/m ²	12.9%	10	10/10
Stiffness modulus	2170.732 MPa	—	—	—	—
Stiffness deflection	2.5 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: Prusa3D Prusament Natural PP GF White has a specialized or limited engineering profile. It is above its material-family average by 1,2 points and below its manufacturer average by 1,8 points. Its strongest measured axis is Consistency, while the weakest axis is Layer Adhesion.

Data-driven review: Prusa3D Prusament Natural PP GF White 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 54% overall, is roughly aligned with the material-family average, and is roughly aligned with the manufacturer average. Its strongest engineering signal is Consistency, while Layer Adhesion is the main limitation to consider before using it for demanding applications.

BEST FEATURE

Consistency

MAIN LIMITATION

Layer Adhesion

DATASET POSITION

Better than 54%
109 / 234

Strengths

- Consistency: 82/100. Repeatability is one of the stronger signals in this material profile.
- Tensile: 36/100. Tensile behavior is competitive against the material-family context.
- Stiffness: 72/100. Stiffness is a relative advantage in this comparison group.

Limitations

- Tensile: 36/100. Avoid using this as the primary choice for tensile-loaded parts.
- Impact: 33/100. Avoid high impact or shock-loaded components without additional validation.
- Layer adhesion: 16/100. 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 impact components

Metric rankings and percentiles

Metric	Score	Rank	Percentile
Overall	48/100	109 / 234	Better than 54%
Tensile	36/100	40 / 226	Better than 83%
Impact	33/100	54 / 226	Better than 77%
Stiffness	72/100	133 / 223	Better than 41%
Consistency	82/100	59 / 231	Better than 75%
Layer adhesion	16/100	164 / 226	Better than 28%
Thermal	49/100	18 / 209	Better than 92%

Decision guidance

- Use this material mainly for low-load, visual or experimental parts.
- Avoid selecting it for impact-focused testing or shock-loaded designs.

Better alternatives

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
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
MAT0194	Eryone Standard White PP White	Eryone	49/100	15/100	41/100
MAT0036	Prusa3D Prusament PP CF Black	Prusa3D	42/100	22/100	29/100

Public links

[Manufacturer website](#) [Video review](#) [Download PDF](#)

Methodology and limitations

Results are comparative 3DPlceland 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](#)