

ProtoPasta HTPLA Blood of My Enemies PLA Red

Material Engineering Report
MaterialID MAT0069

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
Partial

ENGINEERING AXES
1/6

PUBLIC MSRP
\$91.74 USD/kg

Material identity

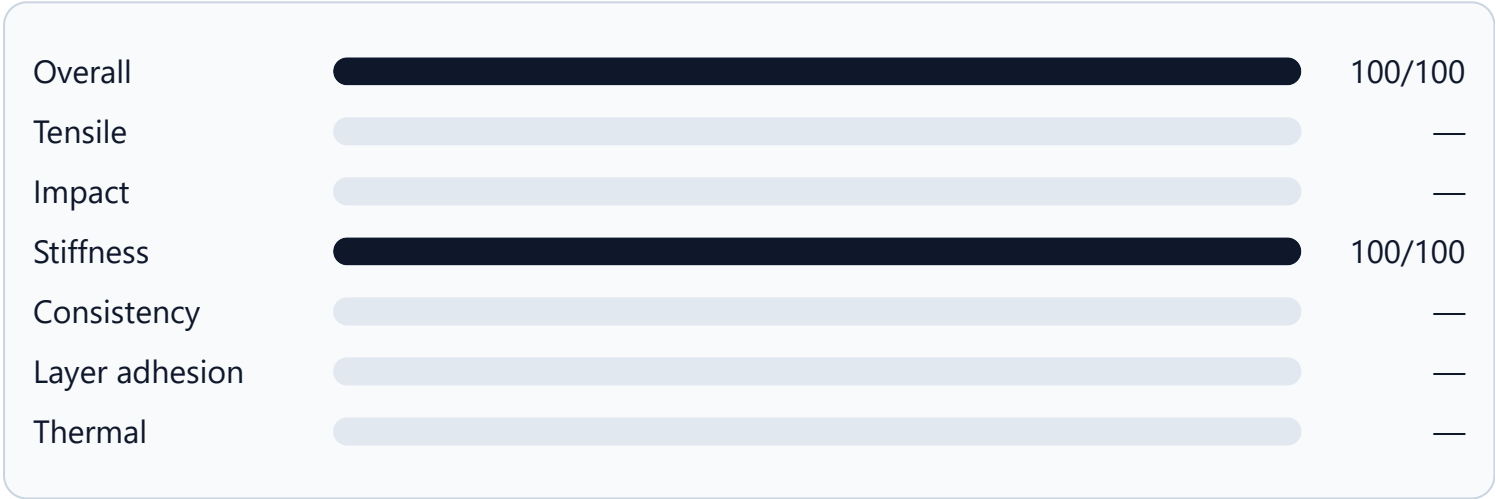
MaterialID	MAT0069
Material	ProtoPasta HTPLA Blood of My Enemies PLA Red
Manufacturer	ProtoPasta
Product line	HTPLA
Base material	PLA
Category	Standard
Variant / finish	—
Reinforcement	—
Color	Red

Governed engineering profile

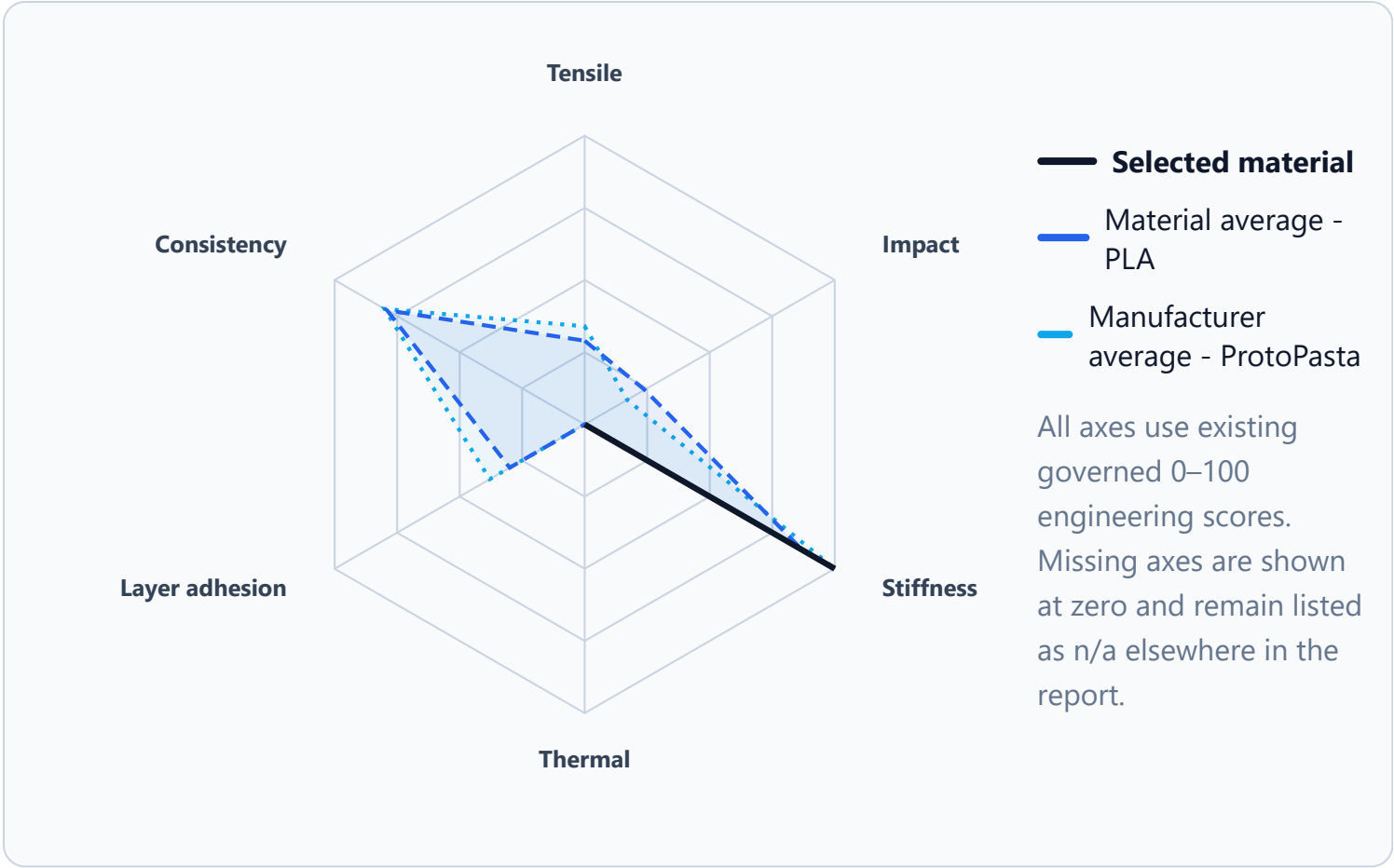
Overall	100/100
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Tensile	—
Impact	—
Stiffness	100/100
Consistency	—
Layer adhesion	—
Thermal	—
Best available axis	stiffness

Engineering score profile



Engineering radar



Fixture thermal result

— · score — · method —
—

Material and manufacturer context

Metric	Selected material	Material average	Manufacturer average
Overall	100/100	50/100	63/100
Tensile	—	29/100	34/100
Impact	—	24/100	17/100
Stiffness	100/100	87/100	100/100
Consistency	—	79/100	80/100
Layer adhesion	—	30/100	38/100
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	—	—	—	—	—
Stiffness modulus	3075.204 MPa	—	—	—	—
Stiffness deflection	1.765 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: ProtoPasta HTPLA Blood of My Enemies PLA Red has a strong engineering profile. It is above its material-family average by 49,9 points and above its manufacturer average by 37,1 points. Its strongest measured axis is Overall, while the weakest axis is Overall.

Data-driven review: ProtoPasta HTPLA Blood of My Enemies PLA Red is best understood as a strong candidate for engineering-oriented prints. Compared with the current verified dataset, it ranks better than 100% overall, is above the material-family average by 49,9 points, and is above the manufacturer average by 37,1 points. Its strongest engineering signal is Overall, while Overall is the main limitation to consider before using it for demanding applications.

BEST FEATURE

Overall

MAIN LIMITATION

Overall

DATASET POSITION

Better than 100%

1 / 234

Strengths

- Stiffness: 100/100. Stiffness is a relative advantage in this comparison group.

Limitations

- Main watch item: Overall at 100/100.

Engineering trade-offs

- Stiffness is useful for shape stability, but impact tolerance is a separate limitation.

Recommended applications

- Rigid brackets, fixtures and shape-stable prototypes
- 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	100/100	1 / 234	Better than 100%
Tensile	—	—	—
Impact	—	—	—
Stiffness	100/100	1 / 223	Better than 100%
Consistency	—	—	—
Layer adhesion	—	—	—
Thermal	—	—	—

Decision guidance

- Use this material when its best feature aligns with the part requirement.
- 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
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
MAT0079	Polymaker PolyLight PLA Pro Black	Polymaker	65/100	35/100	52/100
MAT0109	Polymaker PolyMax PLA Black	Polymaker	64/100	32/100	62/100
MAT0080	Polymaker PolySonic PLA Pro Blue	Polymaker	64/100	30/100	58/100
MAT0076	BambuLab Tough+ PLA Tough+ Black	BambuLab	63/100	26/100	59/100
MAT0108	Polymaker PolyLight PLA Black	Polymaker	61/100	33/100	14/100
MAT0074	Winkle Matte PLA Matte Red	Winkle	60/100	34/100	—
MAT0122	Add:North Enhanced PLA Clear	Add:North	59/100	40/100	10/100
MAT0096	Prima Creator PrimaValue Light Gray PLA Plus Gray	Prima Creator	58/100	33/100	58/100

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](#)