

Public printing recommendation

Thorwell Standard PLA Plus PLA Plus White

MaterialID MAT0154



3DP Iceland Labs
Generated with 3DP Iceland Engineering Platform v60.0.6
WORKFLOW-RELIABILITY - Bug Fixes and Workflow
Reliability
2026-08-25 19:05:46

Guidance boundary: values below are shared base-material guidance resolved only through the canonical BaseMaterialId link. They are not manufacturer-, spool- or printer-specific validated settings. Missing fields remain Not recorded.

Overall 56/100	Engineering axes 6/5	Public rank 27 / 234	MSRP USD/kg 32.00
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Engineering profile



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

Measured strengths

- Layer adhesion: 44/100. Z-axis bonding is better than the material-family context.
- Consistency: 80/100. Repeatability is one of the stronger signals in this material profile.
- Impact: 32/100. Impact behavior is competitive against the material-family context.
- Tensile: 36/100. Tensile behavior is competitive against the material-family context.

Limitations

- Tensile: 36/100. Avoid using this as the primary choice for tensile-loaded parts.
- Impact: 32/100. Avoid high impact or shock-loaded components without additional validation.

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.

Base-material printing guidance

Guidance	Minimum	Recommended	Maximum	Unit
Nozzle temperature	195	230	230	°C
Bed temperature	60	60	70	°C
Print speed	55	165	165	mm/s
Cooling	20	80	85	%
Guidance	Value			Unit
Cooling guidance	High			
Drying temperature	50			°C
Drying time	5			hours
Enclosure	Not required			
Printer / G-code reference	PrusaCoreOneL			
Slicer profile reference	Prusament PLA			

Print workflow checks

- Confirm nozzle temperature, bed temperature, speed, cooling and drying requirements from the manufacturer profile or spool label.
- Print a small validation part before committing to a long, costly or safety-relevant print.
- Orient the part so the governing load does not rely on an unverified or weak engineering axis.

Decision guidance

- Use this material for moderate requirements after checking the weakest axis.
- Review the listed alternatives if the application needs stronger overall performance.
- Avoid selecting it for impact-focused testing or shock-loaded designs.

Stronger same-family alternatives

MaterialID	Material	Manufacturer	Overall	Tensile	Impact
MAT0069	ProtoPasta HTPLA Blood of My Enemies PLA Red	ProtoPasta	100/100	—	—
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

Confirm exact settings against the manufacturer profile, spool label and actual printer/material combination. Results do not replace application-specific validation.

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