

Public printing recommendation

Prusa3D Buddy3D  
Pearl Red PLA Red

MaterialID MAT0138



3DPiceland Labs  
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WORKFLOW-RELIABILITY - Bug Fixes and Workflow  
Reliability  
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**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  
53/100

Engineering axes  
6/5

Public rank  
47 / 234

MSRP USD/kg  
16.80

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 tensile load applications
- Avoid high impact components

Measured strengths

- Consistency: 80/100. Repeatability is one of the stronger signals in this material profile.
- Tensile: 35/100. Tensile behavior is competitive against the material-family context.
- Stiffness: 100/100. Stiffness is a relative advantage in this comparison group.

## Limitations

- Tensile: 35/100. Avoid using this as the primary choice for tensile-loaded parts.
- Impact: 18/100. Avoid high impact or shock-loaded components without additional validation.
- Layer adhesion: 34/100. 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.

## 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.
- Layer-adhesion evidence is weak; avoid critical Z-axis loading without additional validation.

# Decision guidance

- Use this material for moderate requirements after checking the weakest axis.
- 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.

## 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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