

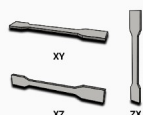
DESCRIPTION

AzureFilm HI-PLA Strongman (high-impact polylactide) is a high-performance filament for applications that demand impact toughness. It combines the easy processability of PLA —no warping, no irritating smell —with ABS-like toughness.

KEY BENEFITS

- High impact
- ABS-like toughness
- High elongation
- Easy to print
- No warping
- No odor

MECHANICAL PROPERTIES



TEST METHOD

Each property below lists its single measured value alongside the test condition used. Measured on 3D-printed specimens.

PROPERTY	TEST CONDITION	VALUE
Tensile modulus	1 mm/min	2.9 GPa
Tensile strength	50 mm/min	41.2 MPa
Strain at break (tensile)	50 mm/min	8.9 %
Strain at tensile strength	50 mm/min	3.3 %
Flexural modulus	2 mm/min	2.2 GPa
Flexural strength	2 mm/min	52.3 MPa
Flexural strain at strength	2 mm/min	3.6 %
Strain at break (flexural)	2 mm/min	No break
Impact strength (Charpy, unnotched)	23 °C	21.8 kJ/m ²
TEST SPECIMENS Printer AzureFilm Nozzle 0.4 mm Infill 20% Shells 2 Layer height 0.3 mm Nozzle temp. 210 °C Bed temp. 55 °C Print speed 50 mm/s		

PRINTING RECOMMENDATIONS

Printing temp.	220 °C	Bed temp.	50 °C
Chamber temp.	35 °C	Recommended speed	≤150 mm/s
Max printing speed	≤1000 mm/s	Retraction	0.8 mm

HANDLING, STORAGE & THERMAL

Max flow rate	74 mm ³ /s	Max-flow test printer	FLsun T1 Pro
Heat deflection temp.	55 °C	Vicat softening temp.	63 °C
Glass transition temp.	60 °C	Drying temp.	45 °C
Drying time	4 h	Enclosed printer	Not recommended
Multi-material compatibility	Compatible		

TIPS & TRICKS

- **Use more walls for strength**
Add wall count before relying on higher infill alone.
- **Do not overcool strength parts**
Stronger layer bonding usually needs less aggressive cooling than visual PLA parts.
- **Dry thoroughly before printing**
Dry at 45 °C for 4 h and store sealed.
- **Keep first layers practical**
Start first layers around 60 mm/s for reliable adhesion.
- **Avoid heated chambers**
Avoid extra chamber heat if heat creep appears.
- **Recommended print speed**
Use ≤ 150 mm/s for strength-focused prints; Max Printing Speed is the tested ceiling.

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