

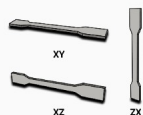
DESCRIPTION

ABS Prime is a high-end, zero-warp engineering filament based on regular ABS with exceptional strength, increased impact resistance and excellent interlayer adhesion.

KEY BENEFITS

- Zero warp
- High impact
- Exceptional strength
- Excellent layer adhesion
- Engineering grade
- Acetone-smoothable

MECHANICAL PROPERTIES



BUILD ORIENTATION KEY

Each tensile bar was printed flat (XY), on its side (XZ) or upright (ZX). The columns below report each build orientation's measured values —ZX (across layers) is the weakest axis.

PROPERTY	STANDARD	XY	XZ	ZX	UNIT
Tensile strength	ISO 527-2	30.9	33.5	11.5	MPa
Yield strength	ISO 527-2	25.2	26.6	/	MPa
Tensile modulus	ISO 527-2	1600	1600	1400	MPa
Strain at yield	ISO 527-2	3.2	3.2	0.9	%
Flexural strength	ISO 178	47.3	55.5	24.3	MPa
Flexural modulus	ISO 178	1600	1700	1500	MPa
Impact strength	ISO 179	55.5	/	/	kJ/m ²
TEST SPECIMENS	Specimens 3D-printed Infill 100% Shells 2 Layer height 0.2 mm				

PRINTING RECOMMENDATIONS

Printing temp.	250 °C
Bed temp.	90 °C
Chamber temp.	70 °C
Recommended speed	≤250 mm/s
Max printing speed	≤1040 mm/s
Retraction	0.8 mm
Cooling	30 %

PHYSICAL & THERMAL

Specific gravity	ISO 1133	1.13 g/cc
Melt flow rate	ISO 1133	39 cm ³ /10 min
Melting temp.	ISO 294	235 ± 10 °C
Heat deflection temp.	ISO 75	97 °C

HANDLING, STORAGE & THERMAL

Max flow rate	77 mm ³ /s	Max-flow test printer	FLsun T1 Pro
Vicat softening temp.	105 °C	Glass transition temp.	105 °C
Drying temp.	75 °C	Drying time	4–6 h
Enclosed printer	Recommended	Multi-material compatibility	Compatible

TIPS & TRICKS

- **Use an enclosed printer**
A stable 50-55 °C chamber helps reduce warping and layer splits.
- **Ventilate the print area**
ABS fumes require good room ventilation or extraction.
- **Dry thoroughly before printing**
Dry at 75 °C for 4-6 h and store sealed.
- **Avoid drafts**
Cold airflow can crack corners and tall parts.
- **Acetone smoothing is possible**
Test on scrap first because smoothing changes dimensions and surface detail.
- **Recommended print speed**
Use ≤ 250 mm/s for normal prints; Max Printing Speed is the tested ceiling.

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