

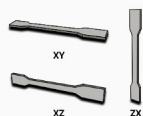
DESCRIPTION

ABS Plus (acrylonitrile butadiene styrene) is a filament with high butadiene content, specially designed for applications that require ultra-high impact toughness combined with good thermal resistance.

KEY BENEFITS

- Ultra-high impact
- Good thermal resistance
- High butadiene content
- Acetone-smoothable
- Durable

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	32.1	31.7	15.4	MPa
Yield strength	ISO 527-2	26.1	25.3	/	MPa
Tensile modulus	ISO 527-2	1700	1600	1400	MPa
Strain at yield	ISO 527-2	6.1	3.8	1.1	%
Flexural strength	ISO 178	50.7	53.7	31.6	MPa
Flexural modulus	ISO 178	1700	1800	1300	MPa
TEST SPECIMENS Specimens 3D-printed Infill 100% Shells 2 Layer height 0.2 mm					

PRINTING RECOMMENDATIONS

Printing temp.	250 °C
Bed temp.	85 °C
Chamber temp.	70 °C
Recommended speed	≤250 mm/s
Max printing speed	≤1110 mm/s
Retraction	0.8 mm
Cooling	30 %

PHYSICAL & THERMAL

Specific gravity	ISO 1133	1.04 g/cc
Melting temp.	ISO 294	220 –260 °C
Heat deflection temp.	ISO 75	94 °C

HANDLING, STORAGE & THERMAL

Max flow rate	82 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.
- **Use brims for large parts**
Extra bed contact helps resist corner lift.
- **Let parts cool gradually**
Keep the enclosure closed after printing until the part relaxes.
- **Recommended print speed**
Use ≤ 250 mm/s for normal prints; Max Printing Speed is the tested ceiling.

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