

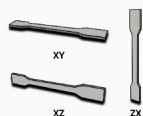
DESCRIPTION

PC-ABS is an incredibly strong, automotive-grade material, perfect for mechanical parts and other technical applications. Adding polycarbonate (PC) to ABS creates a material that prints smoothly with near-perfect interlayer adhesion and a glossy surface finish.

KEY BENEFITS

- Automotive grade
- Incredibly strong
- 120 °C HDT
- Glossy finish
- Excellent layer adhesion
- Impact resistant

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	41.4	42.7	18.3	MPa
Yield strength	ISO 527-2	33.3	32.8	/	MPa
Tensile modulus	ISO 527-2	2000	2000	1800	MPa
Strain at yield	ISO 527-2	5.3	4.0	1.2	%
Flexural strength	ISO 178	65.7	67.0	26.8	MPa
Flexural modulus	ISO 178	2100	2200	1900	MPa
Impact strength	ISO 179	25	/	/	kJ/m ²
TEST SPECIMENS	Specimens 3D-printed	Infill 100%	Shells 2	Layer height 0.2 mm	

PRINTING RECOMMENDATIONS

Printing temp.	270 °C
Bed temp.	115 °C
Chamber temp.	95 °C
Recommended speed	≤250 mm/s
Max printing speed	≤810 mm/s
Retraction	0.8 mm
Cooling	30 %

PHYSICAL & THERMAL

Specific gravity	ISO 1133	1.04 g/cc
Melt flow rate	ISO 1133	5 cm ³ /10 min
Melting temp.	ISO 294	250 ± 10 °C
Heat deflection temp.	ISO 75	120 °C

HANDLING, STORAGE & THERMAL

Max flow rate	60 mm ³ /s	Max-flow test printer	FLsun T1 Pro
Vicat softening temp.	135 °C	Glass transition temp.	115 °C
Drying temp.	80 °C	Drying time	4–6 h
Enclosed printer	Recommended	Multi-material compatibility	Compatible

TIPS & TRICKS

- **Use a warm enclosed printer**
A 60-70 °C chamber helps reduce warping in PC ABS.
- **Ventilate the print area**
Engineering materials need good room ventilation or extraction.
- **Dry thoroughly before printing**
Dry at 80 °C for 4-6 h and print soon after drying.
- **Use an adhesion/release layer**
High bed temperatures can bond too strongly to some surfaces.
- **Let parts cool gradually**
Slow cooling reduces stress and cracking.
- **Recommended print speed**
Use ≤ 250 mm/s for normal prints; Max Printing Speed is the tested ceiling.

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