

PC-ABS

Polycarbonate Acrylonitrile Butadiene Styrene

PC-ABS (polycarbonate + acrylonitrile butadiene styrene) is a premium high-heat 3D printing filament. PC-ABS polymer blend has the mechanical properties & high-heat resistance of PC with the printability of ABS, and allows for the printing of functional prototypes and production parts with very fine detail and excellent surface quality. PC-ABS doesn't change its properties over the course of time and withstands exposure to chemicals including salts, acids, and alkalis.

Mechanical Properties	Standard	Value	Unit
Ultimate Tensile Strength	ISO 527	39.9	MPa
Tensile Modulus	ISO 527	1835	MPa
Elongation at Break	ISO 527	4.2	%
Flexural Strength	ISO 178	66.3	MPa
Flexural Modulus	ISO 178	2081	MPa
Hardness Shore	Standard	Value	Unit
Hardness			

Thermal Properties	Standard	Value	Unit
HDT @ 0.45 MPa	ISO 75	111.7	°C
Glass Transition Temp	DSC	109	°C
Physical Properties	Standard	Value	Unit
Density	ISO 1183	1.1	g/cm ³
Certifications and Tests	Standard	Value	Unit
Flammability (UL 94)			
USP Class VI Certified			

Characteristics

- Superior durability and high tensile strength
- UV, impact and high temperature resistant
- Withstands exposure to chemicals including salts, acids, and alkalis
- Beautiful low-gloss surface finish helps hide layer lines and makes highly technical-looking printed parts

Applications

- Functional and high durability prototypes
- End use parts, consumer products
- Toolmaking and housings
- Construction elements
- Automotive components exposed to impacts and hazardous substances
- functional mechanical parts
- casings

Considerations

- Highly hygroscopic (absorbs moisture):
- Requires printing to be done at high extruder temperatures and high bed temperatures

Printing Skill & Experience: Beginner Intermediate Advanced Expert

- Easier to print than PC, yet tougher than ABS

Printer Compatibility

<input checked="" type="checkbox"/> 3ntr A2v4	<input checked="" type="checkbox"/> 3ntr A4v4	<input type="checkbox"/> EVO-T	<input type="checkbox"/> EVO22-T
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Available colors from [Plural](#): Black, White