purefil
of Switzerland

Polycarbonat (**PC**)

General

Polycarbonate is a very advanced, mechanical and thermally stable filament that was specially developed for 3D printing. In addition to the high print quality, the high mechanical strength and the heat resistance, the PC offers excellent impact strength and fracture toughness and is therefore the ideal choice for technical applications.
Caution is required with regard to stress cracks, the effects of hot water and acids / alkalis such as acetone. The component can then become very brittle and break or shatter without warning. For processing, make sure that the filament is dry and that your printer can reach sufficiently high temperatures.

advantage

- High strength, hardness and toughness
- Temperature resistance from -150 to + 144 ° C
- Good electrical insulation skills
- PC can be sterilized at 120 ° C

disadvantage

- PC is prone to stress cracking
- PC is notch sensitive
- PC burns
- PC is not resistant to strong acids and alkalis, aromatic and chlorinated hydrocarbons and long-term exposure to hot water

Processing data

Printing temperature
290-320 °C
Heated bed temperature
120-150 °C
Drying temperature
120 °C
Drying time
3-5 h

Technical specifications

Shrinkage (ISO 1183/A)	0.5-0.7	**%**
MFR (ISO 1133)	10	g/10min
Yield stress (ISO 527-2/50)	60	MPa
Elongation at yield (ISO 527-2/50)	6	%
Elongation at break (ISO 527-2/50)	150	%
Tensile modulus (ISO 527-2/50)	2300	MPa
Heat deflection temperature 1.8 MPa (ISO 75-2/A)	141	°C
Vicat softening temperature A B/50 (ISO 306)	149	°C
Thermal conductivity 23°C	-	W/(K*m)
Flammability (UL 94)	HB	
Density (ISO 1183)	1.20	g/cm^3

purefil filaments are Made in Switzerland, by

Fabru GmbH
3d printing solutions