PC

INDUSTRIAL GRADE MATERIALS FOR FDM 3D PRINTING

MATERIAL NAME
PC

COLOR
White

PROCESS
FDM

PRODUCT DESCRIPTION

PolyMaxTM PC is a high-performance polycarbonate filament with excellent strength, toughness, heat resistance, and printing quality. It's an ideal choice for engineering applications. For example, it is used in the automotive industry to print air ducts with FDM technology.

TYPICAL APPLICATIONS

- Automotive air duct
- Functional prototypes and end products
- Functional prototyping and testing
- Moving and assembled parts
- Form and fit testing

PRODUCT SAFETY

Engineering plastics are fine to touch under normal circumstances, but a very small number of people may have allergic reactions to the additives in them. When melted at high temperatures, irritating gases may be released.

PRODUCT DELIVERY & WAREHOUSING

- **GOOD RESISTANCE**
  Good resistance to many acids, bases, oils.

- **WEAKNESSES**
  May be attacked by some chlorinated hydrocarbons, ketones and esters. Strong bases may cause PC to hydrolyze.

PROPERTIES OF PRINTED MATERIAL

Properties	Test Method	Value
Hardness	/	/
Flexural modulus (Mpa)	ASTM D790 (ISO 178, GB/T 9341)	2044 ± 55 MPa
Flexural strength (Mpa)	ASTM D790 (ISO 178, GB/T 9341)	94.1 ± 0.9 MPa
Tensile modulus (Mpa)	ASTM D638 (ISO 527, GB/T 1040)	XY: 2048 ± 66 MPa
Tensile strength (Mpa)	ASTM D638 (ISO 527, GB/T 1040)	XY: 59.7 ± 1.8 MPa Z: 29.1 ± 4.1 MPa
Elongation at break	ASTM D638 (ISO 527, GB/T 1040)	12.2 ± 1.4%
Poisson's Ratio	/	/
Impact strength notched Izod (J/m)	ASTM D256 (ISO 179, GB/T 1043)	25.1 ± 1.9 KJ/m²
Heat deflection temperature (°C)	/	/
Glass transition,Tg (°C)	DSC, 10°C/min	113 °C
Coefficient of themal expension(/°C)	/	/
Density (g/cm³)	ASTM D792（ISO 1183，GB/T1033）	1.18~1.20 g/cm³ @21.5°C

Tips: Want to explore a wider range of materials? Check out *https://www.unionfab.com/materials*