Facilan™ PCL100

Facilan™ PCL100 (polycaprolactone 100) is a polycaprolactone material used widely for research applications in biofabrication such as scaffolds, braces, implants, smart materials, hydrogels, tissue engineering and drug delivery. Polycaprolactone in is reported in research tough, strong, flexible, bioabsornanle, biocompatible and compostable. It is based on raw material complaint with European regulation EC No. 10/2011 concerning plastic materials and articles coming into contact with food. **Recommended restrictions.** Do not use in medical applicationsinvolving permanent implantation in the human body.

MATERIAL PROPERTIES	TYPICAL VALUE	TEST METHOD
Density	1.1 g/cm³	ISO 1183-1
Tensile Strength	45 MPa	ISO 527-1*
Elongation at yield	15 %	ISO 527-1*
Tensile Modulus	350 MPa	ISO 527-1*
Flexural Strength	18 MPa	ISO 178
Flexural Modulus	380 MPa	ISO 178
Izod impact strength (notched)	8 kJ/m²	ISO 180-1
Shore D Hardness	46	ISO 868
Heat Deflection Temperature	57°C	ISO 75 B**

*Tensile sample thickness 1.5 mm
** 120 K/h

PRINT RECOMMENDATIONS	
Nozzle Temperature	130 – 170 °C
Bed Temperature	30 – 45 °C
Print Speed	20 – 40 mm/s
Bed Adhesion	Smoothpaper / PEI Sheet

Disclaimer : 3D4Makers makes no warranties what so ever, either expressed or implied, including but not limited to, any implied fitness for any particular purpose. From the moment the product is shipped it is beyond our control. The information in this document is believed to be correct at the time of writing. However, handling, processing, settings, the type of 3D printer, slicing and other variables are completely up to the user. The method through which the product is used can be varied. It is up for the customer to determine how it is 3D printed and whether it is fit for purpose or suited to a particular application.

Tensile test

Impact test
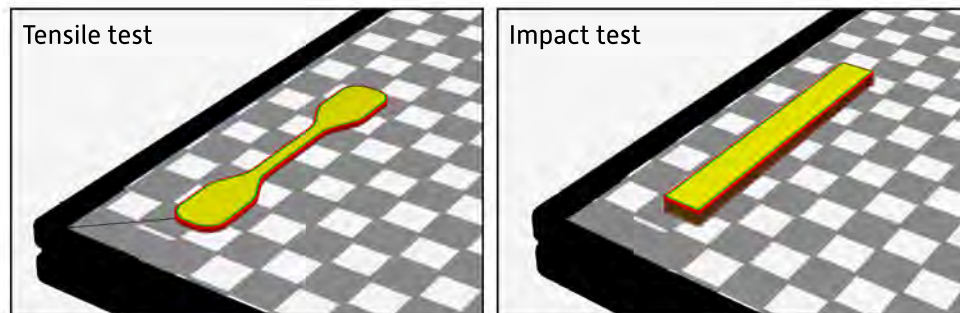
- Printer : Ultimaker 2
- Nozzle temp : 140°C
- Bed temp : 38°C
- Infill : 100%
- Layerheight : 0.1 mm
- Print speed : 30 mm/s
- Wall thickness : 0.7 mm
- Wall line count : 2

Additional info : For many 3D printers, Facilan™ PCL100 will print best at approximately 140°C with a bed temperature of 38°C and a speed of 30 mm/s. In designs with significant overhangs and bridges best results are obtained with fans at 100%. To get the best results while printing we advise you to keep the 3D printer in a room where there is hardly any draft and/or temperature fluctuations. Keep the 3D printer out of direct sunlight. When the 3D printer is not being used it is important to keep the 3D4Makers Facilan™ PCL 100 filament in a bag and stored in a cool, dry and dark place until it is used again.