Technical data sheet
PCL - Caprolactisse 100
Medical grade polymer filament

PCL or caprolactone is a white, flexible and semi-crystalline thermoplastic. It slowly degrades once implanted in more than 36 months. The polymer has a glass transition temperature below room temperature, which guarantees it flexibility and flexibility. Thus this material is generally widely used to make scaffolds for tissue engineering, osteosynthesis plates and screws and sutures.

Product identification

Product	PCL 100 - Caprolactone
Reference	PF-CPL
Production date	
Expiry date	
Technology	FDM - Filament Deposition
Diameters	1.75 mm – 2.85 mm
Colours	White
Conservation	After opening the package, store it in a dry, well-ventilated place. If possible, place the coils in a vacuum package and away from moisture. Finally, if the packaging is well airtight, the coils can be placed in the refrigerator at 4 ° C

Benefits

- Bioresorbable
- Biocompatible
- Implantable
- Long degradation time

Applications

- Scaffolds for tissue engineering
- Osteosynthesis plates and screws
- Sutures
- ...

Technical properties

TESTS	RESULTS
Melting range (DSC, 10°C/min)	50 – 70°C
Glass transition (DSC, 10°C/min)	< -50°C
Degradation temperature	>250°C
Molar mass (g/mol)	70,000 – 90,000g/mol

Print properties

Printing temperature	160 - 200°C
Tray temperature	40 - 45°C
Print speed	20 – 60 mm/s
Cooling fan speed	100 %

Indication for use

For optimal print quality, it is advisable to dry the product in an oven for 48 hours at 40°C.

PCL has great difficulty solidifying at room temperature, so it is recommended to print it slowly enough so that the first layers crystallize before printing an additional layer.
In addition, for related reasons, it is advisable to print parts with a small print volume.

Warning: Under no circumstances can this product be implanted in humans. Lattice Medical accepts no responsibility for the medical use of this product.

Disclaimer

The values presented in this document are for reference and comparison purposes only. This data may vary depending on printing conditions, materials, part design, environmental conditions, and should not be used for specification or quality control purposes.

Each user is responsible for compliance with the safety standards of the product and its employees, its use, respect for the environment, waste disposal and recycling rules. Lattice Services makes no warranty, unless separately stated, as to fitness for any use or application.

Lattice Services shall not be liable for any damage, injury or loss resulting from the use of these materials in any application.