

## HT PCL 120k MG

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Polycaprolactone (PCL) is one of the most versatile thermoplastic materials for Tissue Engineering Applications. With little thermal degradation, it is an excellent material for large, time-consuming parts. The mechanical stability of PCL objects can easily be controlled by the porosity of the parts. With solid objects exhibiting increased mechanical stability compared to porous structures, PCL is an outstanding candidate for both bone and cartilage regeneration. Additionally, the surface erosion of the material allows for controlled release of additives during the degradation period of the fabricated parts.

Material Properties <sup>2</sup>	
Description	Value
Material Type	Thermoplastic
Curing System	Phase Transition / Solvent Evaporation
Appearance (Color)	White
Appearance (Form)	Pellets/Granules
Infrared Spectrum	Conforms to Reference
Molecular Weight	95.000 - 140.000 Da
Solubility	Dichloromethane, Chloroform
Processing Temperature	130°C - 150°C as melt / RT in solvent
Printing Surface	Polyimide Film as melt, Glass in solvent
Processing Parameters Available For	0.4mm needle tips
Printing Speed (at 9 Bar Pressure)	1 - 3 mm/sec
Grade	Medical Grade
Degradation Period in Biological Systems	1 - 3 Years

**Typical Applications**  
 Drug Delivery, Cartilage Regeneration, Bone Regeneration

**Recommended 3D Printer Family**  
 3D-Bioplotter

<sup>1</sup> Learn more at [EnvisionTEC.com/printmypart](http://EnvisionTEC.com/printmypart)

<sup>2</sup> All data provided is preliminary and must be verified by the individual user