## **Technical Data Sheet**

## **3D Printing Filament**

PEEK is a very difficult material to 3D print. Your 3D printer should have the capability to extrude at 420 C, with a bed temperature of around 120 C. Print temperatures and optimal chamber temperatures differ depending on the printer but can be found around 360 to 420 for the nozzle temperature and around 100C for the chamber temperature. Your printer should have adequate thermal control in the build chamber throughout the printing process. Lack of thermal control and incorrect settings could lead to inadequate crystallization of the polymer in your printer. Lack of process control can also lead to speccing on the part with black specs forming during printing on your part. Lack of process control and inadequate temperatures can also lead to brown discoloration in the part, which is an indication that the parts has not been properly crystalized. Do not let the PEEK material remain in your printer's nozzle for extended periods of time when not extruding. This will lead to speccing and nozzle blockages. You could post 3D printing anneal your PEEK part in an oven. You should pre-dry your PEEK filament in an oven as well. The best build surface for PEEK is PEI sheets.

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