

## Designing for Thermoplastics (Ultem, PPSF)

Posted by Marco CM - 2012/04/11 17:51

---

Ultem and PPSF are both high-grade thermoplastic for industrial use. They are formulated for high heat and chemical resistance. Applications are typically confined to Aerodynamics, mechanical engineering, robotics, and some medical uses.

Designing for Ultem or PPSF is similar to designing for ABS plastic. The 3d printing process is very much the same. A nozzle extrudes molten material and lays it down in thin layers. The layers are .01" thick and .02 wide. Below is a photo of a PPSF part. This is a good example of how both PPSF and Ultem appear once 3d printed.

<http://www.kraftwurx.com/images/fbfiles/images/mPPSF.jpg>

This means details below 0.1 will not convey well if at all. Keep these limitations in mind when designing for Ultem or PPSF. The parts that require this type of strength and heat resistance are typically large and have no fine details or grooves, channels etc. Currently both Ultem and PPSF are available with direct orders only. Contact [support@kraftwurx.com](mailto:support@kraftwurx.com) for assistance with ordering parts in these materials.

=====