



# Materials in 3D printing and their production

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# Introduction

- polymer based – thermoplastics
- composition – polymer + additive + filler + pigment
- huge variety of properties





# Materials

- unfilled – PLA, PETG, ASA, PC
- filled – PCCF, PACF, rigid, easier to print, hardened nozzle
- flexible – TPU, variety of hardness
- special – ESD, antibacterial, shielding, flame retardant, etc.





# Where to find more information?

- technical and safety data sheets
- Prusa knowledge base
- [prusament.com](https://prusament.com)

**Hello, how can we help?**

[PrusaSlicer documentation](#) | [Filament Material Guide](#) | [Drivers & downloads](#)





# Production

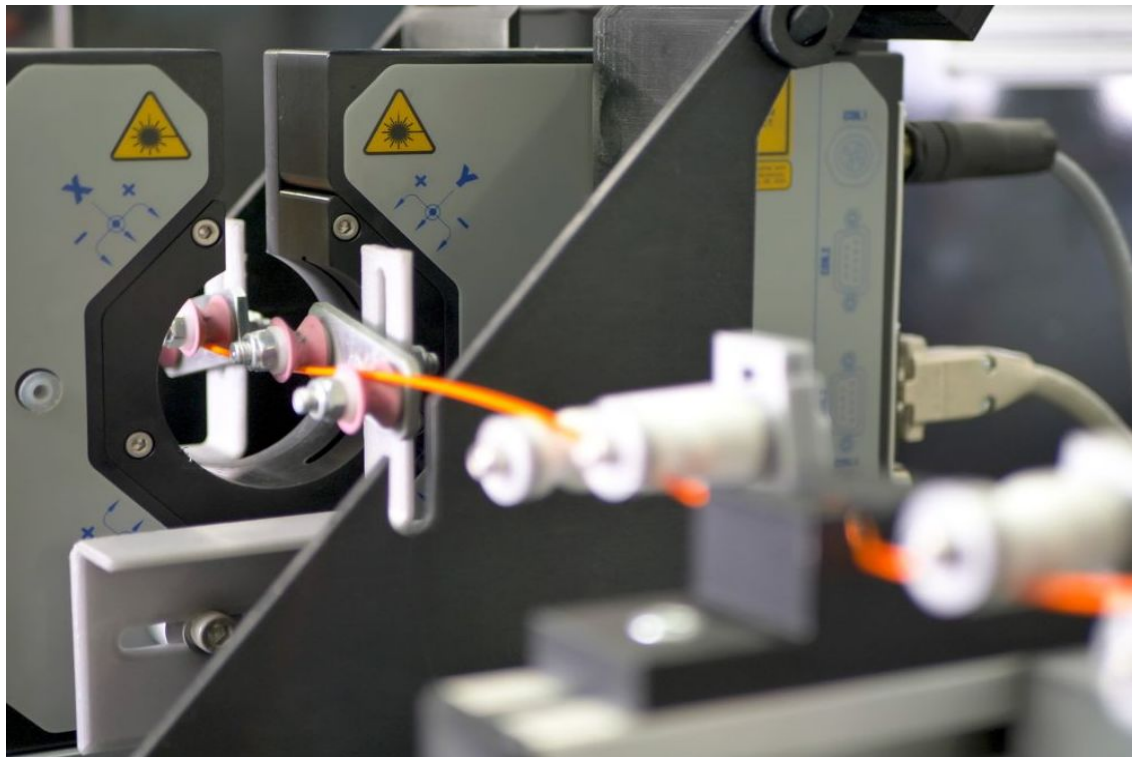
1. pellet drying
2. melt extrusion
3. cooling
4. quality control
5. winding

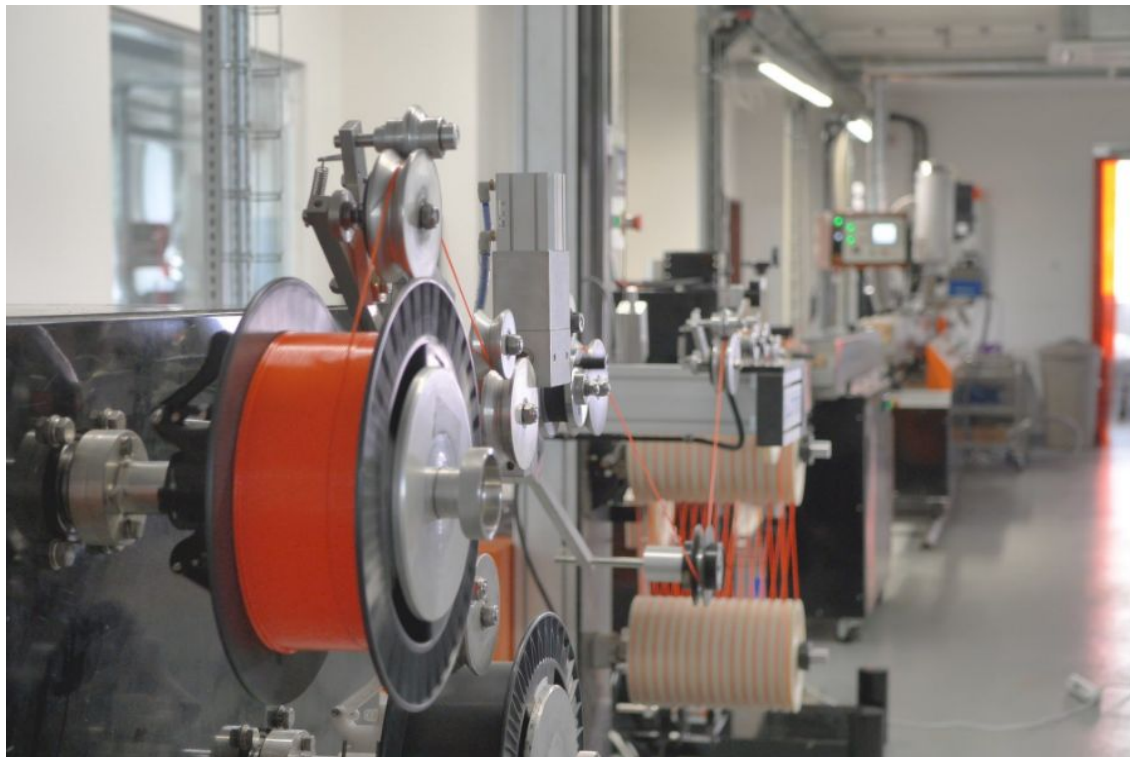








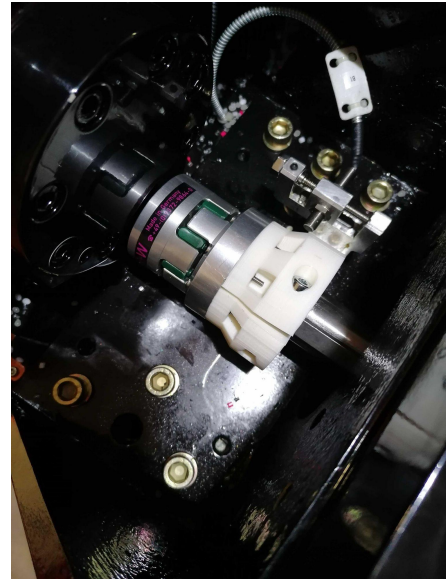






# What's next?

- unique composites targeting specific industries
- polymers for metal replacement
- extrusion modifications
- sustainability





# Conclusion

- know your application
- do your homework to save time
- be economic

