

Choosing filament

Reference sheet · function, material and trial

Start with what the part must do. These options help prepare a trial; they do not guarantee the behaviour of every formulation or geometry.

Need	Starting point	What to check
Indoor detail	PLA	Heat and sustained loading.
Accessible functional part	PETG	Moisture, creep and profile.
Prolonged sunlight	ASA	Grade, temperature and process.
Recoverable deformation	TPU / copolyester	Hardness, geometry and feeding.
Stiffness or engineering use	PA / PP / composites	Specific benefit and requirements.
Special function	Support / FR / conductive	Documentation and scope of use.

Before making the complete part

1. Define function, loads, environment and acceptable deformation.
2. Check the specific grade and your printer's requirements.
3. Print a representative feature in the intended orientation.
4. Check dimensions, assembly and relevant service behaviour.
5. Record material, drying and profile so you can repeat it.

Remember: stiffness, impact, hardness and elasticity are not synonyms. A short trial does not validate ageing, sustained loading or regulatory suitability.