Dicey Tech
www.3dicey.com

Quick Reference Guide

Type of Filament	Primary Benefit	Ideal for	Durability	Flexibility	Printing Difficulty
PLA Polylactic Acid	Good Strength, User Friendly, Durability, Some Impact Resistance	Consumer Products, Small Toys, Higher Print Speeds, Smoother Layers	Fair to Good Durability	Slight Flexibility, More Brittle	Easy: Fairly Low Maintenance Once Temperature, Bed Height & Speed are Set

Soluble?	Food Safe	General Print Temp Range	Shrinkage	Heated Bed	Cooling
No	Refer to Specific Manufacturer Guidelines	180 C - 230 C	Some, Less Sensitive to Cooling as Compared to ABS	Recommended, but Not Required 50 C - 60 C	75%-100%

Type of Filament	Primary Benefit	Ideal for	Durability	Flexibility	Printing Difficulty
ABS Acrylonitrile Butadiene Styrene	High Strength Durability Impact Resistance Toughness	Moving Parts, Automotive Parts, Electronic Houseing Toys	High Durability	Low Flexibility, Minor Bending before Snapping	Moderate: Requires Fine Tuning Bed & Nozzle Temperature

Soluble?	Food Safe	General Print Temp Range	Shrinkage	Heated Bed	Cooling
Yes, in Acetone	Not Considered Food Safe	210 C - 250 C	Yes, Enclosed Chanber Recommended to Control Cooling Speed	Yes, 80 C- 100 C	No

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Type of Filament	Primary Benefit	Ideal for	Durability	Flexibility	Printing Difficulty
PETG Polyethylene Terephthalate Glycol	Stiff, High Strength, Lightweight, Impact Resistant	Mechanical Parts, Impact Resistance, Flexibility, Durability	High Durability	Good Flexibility, More Flexible than PLA or ABS	Moderate: Requires Fine Tuning Bed & Nozzle Temperature

Soluble?	Food Safe	General Print Temp Range	Shrinkage	Heated Bed	Cooling
No, Non-Hydrophobic	Refer to Specific Manufacturer Guidelines	220 C - 250 C	Minimal Shrinkage	Yes 70 C - 80 C	20%-40%

Type of Filament	Primary Benefit	Ideal for	Durability	Flexibility	Printing Difficulty
PVA Polyvinyl Alcohol	Dual Extrusion Support Structure Paired with PLA	Easily Removable PLA Support Structure	Good Durability	Low Flexibility, Some Bending Before Snapping	Easy: Fairly Low Maintenance Once Temperature, Bed Height & Speed are Set

Soluble?	Food Safe	General Print Temp Range	Shrinkage	Heated Bed	Cooling
Yes, in warm Water	Refer to Specific Manufacturer Guidelines	180 C - 230 C	Some Shrinking Possible	Recommended, but Not Required 50 C - 60 C	Yes, 50-80%