

3D Printing Filament Comparison V1.0 Feb 2017

studios	Print	ernin Bed Ter	,nP	ength Flexi	dility Duri	diffety 65	iculty Shri	nkade Soli	ble	्रवेड्य वि	* (3)	Re Stick Typical Use's
ABS Acrylonitrile Butadiene Styrene	230 310 210-250 °C	50 100 150 50-100 °C	Str	ele.	On	Oit.	Shi Shi	Acetone	No		In Ci	Functional Parts
ASA Acrylonitrile Styrene Acrylate	150 230 310 240-260 °C	50 100 150 100-120 °C	••	•	•••	••		Acetone	No	6	Gut	Outdoor Use
Carbon Fiber Carbon Fiber and PLA blend	150 230 310 195-220 °C	50 100 150 N/A °C	••	•	•••	••		No	No		_	Functional Parts
Cleaning Cleaning Filament	150 230 310 150-260 °C	50 100 150 N/A °C	-	-	-	•	-	-	-	-	-	Nozzle Cleaning / Unclogging
Color Changing PLA or ABS with color changing properties	150 230 310 210-220 °C	50 100 150 N/A °C	••	••	••	•		No	No		Gluk	Educational, Modelling
Conductive Conductive PLA or ABS	230 310 215-230 °C	50 100 150 N/A °C	••	••	•	•		No	No		-	Electronics
Flexible, TPE, TPU Thermoplastic Urethane / Polyurethane	230 310 225-235 °C	50 100 150 N/A °C	•	•••	••	•••		No	No		GIUE	Elastic Parts, Wearables
FPE Flexible Polyester	230 310 205-250 °C	50 100 150 75 °C	•	•••	•••	••		No	Yes	-	GIUE	Flexible Parts
Glow-In-The-Dark Glow in the dark PLA or ABS	150 230 310 210-220 °C	50 100 150 N/A °C	••	••	••	•		No	No		-	Educational, Modelling
HIPS High Impact Polystyrene	230 310 210-250 °C	50 100 150 50-100 °C	•	••	•••	••		Solvent	No		Guuk	Support Structures
Lignin (bioFila) Lignin and PLA plus additives	150 230 310 190-225 °C	50 100 150 55 °C	••	•	•••	•••		No	Yes		GLUE	All Purpose
Magnetic PLA with powdered iron	150 230 310 195-220 °C	50 100 150 N/A °C	••	••	••	•••		No	No		-	Educational, Experimental
Metal PLA / ABS Metal Powder and PLA or ABS blend	150 230 310 195-220 °C	50 100 150 N/A °C	••	•	•••	•••		No	No		-	Jewelry
nGen Similar to PETG	150 230 310 210-240 °C	50 100 150 60 °C	••	•••	•••	••		No	Yes		-	All Purpose
Nylon Polyamide	230 310 220-260 °C	50 100 150 50-100 °C	•••	•••	•••	••		No	Yes	-	Guuk	All Purpose
PC Polycarbonate	150 230 310 270-310 °C	50 100 150 90-105 °C	•••	•••	•••	••		Acetone	No	-	Guuk	Functional Parts
PC/ABS Polycarbonate ABS	230 310 260-280 °C	50 100 150 120 °C	••	•	•••	•••		No	No	-	Guur	Functional Parts
PET (CPE) Polyethylene Terephthalate	230 310 220-250 °C	50 100 150 N/A °C	•••	•••	•••	••		No	Yes		-	All Purpose
PETG (XT, N-Vent) Poly-Ethylene Terephthalate Glycol	230 310 220-235 °C	50 100 150 N/A °C	••	•••	•••	••		No	Yes		-	All Purpose
PETT (T-Glase) PolyEthylene coTrimethylene Terephthalate	230 310 235-240 °C	50 100 150 N/A °C	•••	•••	•••	••		No	Yes		-	Functional Parts
PLA Polylactic Acid	150 230 310 180-230 °C	50 100 150 N/A °C	••	•	••	•		No	Yes		GIUE	Consumer Products
PMMA, Acrylic Polymethyl Methacrylate	230 310 235-250 °C	50 100 150 100-120 °C	••	•	•••	••		Acetone	No		Guue	Light diffusers, Modelling
POM, Acetal Polyoxymethylene	230 310 210-225 °C	50 100 150 130 °C	•••	•	••	•••		Chemical	No	-	ABS	Functional Parts
PORO-LAY Rubber-elastomeric polymer with PVA	230 310 220-235 °C	50 100 150 N/A °C	•••	•	••	•		Water	Yes		-	Experimental
PP Polypropylene	230 310 210-230 °C	50 100 150 120-150 °C	••	•••	••	•••		No	Yes		-	Flexible Components
PVA Polyvinyl Alcohol	150 230 310 180-230 °C	50 100 150 N/A °C	•••	•	••	•		Water	Yes		-	Support Structures
Sandstone (Laybrick) Co-polyester and chalk powder	150 230 310 165-210 °C	50 100 150 N/A °C	•	•	•	••		No	No		-	Architectural Modelling
TPC Thermoplastic Copolyester	230 310 210-210 °C	50 100 150 60-100 °C	•	•••	••	•••		No	No		-	Elastic Parts, Outdoor Use
Wax (MOLDLAY) Wax-like properties	150 230 310 170-180 °C	50 100 150 N/A °C	•	•	•	•		No	No		-	Lost Wax Casting
Wood (Laywood) Wood PLA Blend	150 230 310 195-220 °C	50 100 150 N/A °C	••	••	••	••		No	No		-	All Purpose (natural finish)