

# Filament 3D Printing Material Types

Obviously this is a work in progress and will change...

[Link to Most Current Spreadsheet on Google Docs](#)

Below table is only a piece of the spreadsheet, link above to entire sheet. (Comments enabled for spreadsheet within Google)

Caption

Name	Nozzle Temp "Tn"	Bed Temp "Tb"	Chamber Temp "Tc"	Melt Temp "Tm"	Glass Transition Temp "Tg"	WHY?
<b>???</b> (Tulomer)	270-320c	120c	60c	280c	180c	
<b>ABS</b> (Acrylonitrile ButadieneSty rene)	220-260c	100-110c	70c			Heat & Impact resistant and Acetone vapor smoothing
<b>ASA</b> (Acrylonitrile StyreneAcryl ate)	220-250c	90-110c	70c		103c	UV resistant version of ABS
<b>CoPE</b> (CoPolyEster) [ColorFabb HT]	250-280c	100-120c			100c	USFDA certified for food contact
<b>CoPE</b> (CoPolyEster) [Polymaker Panchroma CoPe]	190-230c	35-60c	Cool		55c	Cheaper than PLA with similar detail
<b>HIPS</b> (HighImpactP olyStyrene)	220-260c	90-110c	70c	165c	80c	Disolvable support for ABS/ASA prints (Limonene)

<b>PA11</b> (PolyAmide)						
<b>PA12</b> (PolyAmide)						Somewhat moisture resistant nylon
<b>PA6</b> (PolyAmide)	260-280c	60-75c	20-40c	240c		Higher temp nylon with better stiffness
<b>PAEK</b> (PolyArylEtherKetone)	380-420c	140-160c	120-155c	303c	151c	
<b>PBT</b> (PolyButylene Terephthalate)	205-240c	60c		223c		
<b>PC</b> (Polycarbonate)	280-310c	90-120c			147c	
<b>PCTG</b> (PolyEthylene Terephthalate Glycol modified Copolyester)	250-270c	70-80c		202c	76c	
<b>PE</b> (PolyEthylene) [HDPE]	210-230c	100-120c				
<b>PEEK</b> (PolyEtherEtherKetone)	375-410c	130-145c	70-140c	343c	150c	
<b>PEI-1010</b> (PolyEtherImide)	370-390c	120-160c	220c		217c	
<b>PEI-9085</b> (PolyEtherImide)	350-380c	140-160c			186c	
<b>PEKK-A</b> (PolyEtherKetoneKetone)	345-375c	120-140c	70-140c	335c	162c	
<b>PEKK-C</b> (PolyEtherKetoneKetone)	345-375c	120-140c	70-150c	335c	162c	

<b>PESU</b> (PolyEtherSulfone)	340-390c	140-160c			228c	
<b>PETG</b> (PolyEthylene Terephthalate Glycol)	230-250c	60-80c	Cool			Easy printing and "high enough" temp resistance
<b>PHA</b> (PolyHydroxy Alkanates) [ColorFabb AllPHA]	190-200c	Cool	Cool	170c		Easily biodegradable & bio-based
<b>PLA</b> (PolyLacticAcid)	190-230c	50-60	Cool		55c	Fine details and easy printing
<b>PP</b> (PolyPropylene)	220-250c	23-60c				Chemical resistance and lightweight
<b>PPA</b> (PolyPhthalamide)	285-315c	110-120c	80-120c	260c	125c	Stiffest Nylon
<b>PPS</b> (PolyPhenyleneSulfide)	315-345c	120-160c	60-90c	285c	85c	
<b>PPSU</b> (PolyPhenylSulfone)	390-410c	130-160c			230c	
<b>PSU</b> (PolySulfone)	350-380c	140-160c			187c	
<b>PVB</b> (PolyVinylButyral)	190-220c	25-70c	Cool		70c	Isopropanol vapor smoothing
<b>PVDF</b> (PolyVinylideneFluoride)	245-265c	90-110c	80-100c			Chemical, UV, & water resistant
<b>SiPC</b> (Siloxane & Polycarbonate) [PushPlastics SiPC]	240-260c	90-120c				Extreme cold weather impact strength

<b>TPU/TPE</b> (Thermoplasti cPolyUrethan e/ThermoPoly merElastome r)	210-240c	30-50c	Cool			Flexible and wear resistant
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