

# Jabil Engineered Materials

Jabil Engineered Materials fills a void in the additive materials space by developing custom materials with unique properties that meet the specialized needs of our customers and applications.

## Filaments

### ABS 1400 LW

ABS 1400 LW contains balanced properties that cause the material to lay flat and result in minimal warping.



### PA 0600

PA 0600 filament is a polyamide/polyketone alloy with high stiffness, good wear resistance, low friction and self-lubricating characteristics.



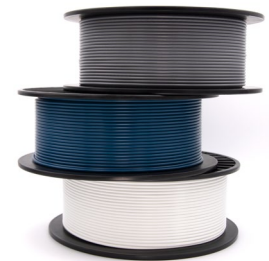
### PA 4035 CF

PA 4035 CF is ESD safe and provides greater stiffness, toughness, and strength over standard nylon and other similar materials in the market.



### PA 4500

PA 4500 is a low warp, nylon copolymer that has good lay flat/low warp properties, excellent appearance and strength in both XY and XZ directions.



### PA 4535 CF

PA 4535 CF is ESD safe and among the strongest PA co-polymer carbon fiber filaments available on the market, delivering increased strength and stiffness.



### PC 1500 FR

PC 1500 FR is a flame-retardant, easy printing polycarbonate manufactured for parts in the aerospace and automotive industries.



### PETg

PETg has a strength, stiffness, and broad operating temperature range that makes it a dependable material for a multitude of projects.



### PETg 0800 ESD

PETg 0800 ESD is an easy processing, Electrostatic Dissipative (ESD) material for printing parts that meet sensitive electronics and is good for jigs, fixtures, and tooling.



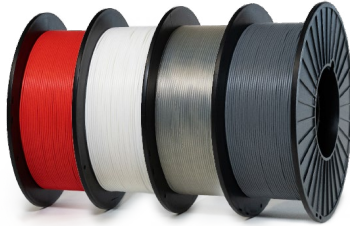
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### PLA 3100

PLA (Polylactic Acid) is a biodegradable, sustainable and food safe polymer made from organic sources, available in several colors and prints on open platforms.



### TPE SEBS 1300 85A

TPE SEBS 1300 85A has low moisture absorption and elasticity for applications that require high flexibility and durability.



### TPE SEBS 1300 95A

TPE SEBS 1300 95A has elasticity for applications that require a blend of flexibility and rigidity.



### TPU 90A

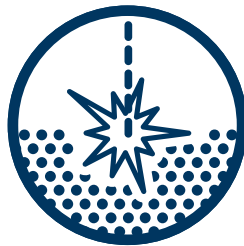
TPU 90A provides improved impact strength and is ideal when low scratch and mar or a soft touch feel is needed.



## Powders

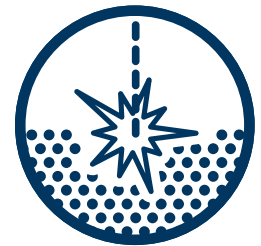
### PA 4000

A very durable nylon powder, PA 4000 has well-balanced material characteristics that are ideal for a wide variety of applications.



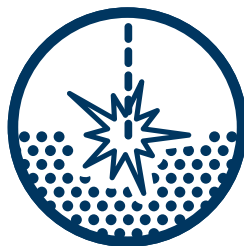
### PA 4050 GB

PA 4050 GB has well-balanced material characteristics that are ideal for applications that require durable, high-quality parts with higher stiffness than PA 4000.



### PK 5000

Our PolyKetone is an eco-friendly and non-toxic engineered polymer that provides the perfect balance of key mechanical properties resulting in a polymer that's strong, tough and ductile.



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## Comparison Charts

Filaments									
	UTS (MPa) Orientation		Tensile Modulus (MPa) Orientation		EaB (%) Orientation		Unnotched Impact Energy (J/m) Orientation	Notched Impact Energy (J/m) Orientation	Melt Temperature (°C)
Material	XY		XY		XY		XY	XY	
ABS 1400 LW	35.3		2730		3.3		235	39	N/A
PA 0600	29.7		1570		24.9		822	68.5	188
PA 4035 CF	66		6000		3.9		557	191	180
PA 4500	56		1930		> 100		830	61.5	190
PA 4535 CF	55.6		10600		2.9		525	125	190
PC 1500 FR	61		2210		6		850	50.7	N/A
PETg MPa	44.8		1654.7		24		N/A	N/A	N/A
PETG 0800 ESD	38.8		1895		7.9		415.9	48.5	N/A
PLA 3100	47		3240		6		207	31	155
TPE SEBS 1300 85A	6		19		900		N/A	N/A	163
TPE SEBS 1300 95A	11		93		780		N/A	N/A	165
TPU 90A MPa	19.3		13.1		450		N/A	N/A	220

Powders											
	UTS (MPa) Orientation		Tensile Modulus (MPa) Orientation		EaB (%) Orientation		Unnotched Impact Energy (J/m) Orientation		Notched Impact Energy (J/m) Orientation		Melt Temperature (°C)
Material	XY	Z	XY	Z	XY	Z	XY	XY	XY		
PA 4000 Powder	46	37	1790	1130	34	12	1010	48	182		
PA 4050 GB Powder	44	46	3390	3380	6	5	221	33	181		
PK 5000 Powder	53	51	1305	1349	41	21	1241	83	197		