

## LUMAS ENGINEERED MATERIALS

Lumas Polymers 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 MF

ABS 1400 MF 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.



**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.

**Color:** White

**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.

**Color:** Gray

**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.

**Color:** Dark Gray

**PLA 3110P**

With renewably sourced biomaterials and lower sintering temperature, our PLA powder for PBF printing systems results in a more sustainable SLS substrate with less energy usage and a smaller carbon footprint than PA-12.

**Color:** White



## ADDITIVE PELLETS

### ABS 1400 MF

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

**Colors:** Natural, Black



### 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.

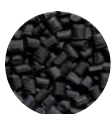
**Colors:** Black, White, Gray, Blue



### 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.

**Color:** Black



### PC 1500 FR

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

**Colors:** Natural, Black



### PETg

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

**Color:** Natural



### 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.

**Color:** Black



### PA 0600

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

**Color:** Gray



### 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.

**Color:** Natural, Black, Grey, Blue, Red, White, Yellow



**TPE SEBS 1300 95A**

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

**Colors:** Natural, Black

**TPU 90A**

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

**Colors:** Natural

**TPE SEBS 1300 85A**

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

**Colors:** Natural, Black



## 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 MF	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	
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
PLA 3110P	26		4100	3900			70	14	160

For additional information,  
visit [lumaspolymers.com](https://lumaspolymers.com)

## ABOUT LUMAS POLYMERS

Lumas Polymers is changing the way things are made by bringing production rigor and global scale to additive manufacturing. Reimagine products, rethink business and reinvent manufacturing, together. Lumas Polymers is a flexible, high-velocity partner that provides scalable solutions to complex materials problems with our broad polymer technologies. From ideation to industrialization, we enable our customers to elevate their material properties, accelerate time-to-market and create differentiated products through illuminating polymer technologies.