

LUMAS 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 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



For additional information, visit lumaspolymers.com

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.

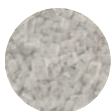
Colors: Natural, Black



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) | | TENSILE MODULUS (MPa) | | EaB (%) | | UNNOTCHED IMPACT ENERGY (J/m) | NOTCHED IMPACT ENERGY (J/m) | MELT TEMPERATURE (°C) |
|-------------------|-------------|--|-----------------------|--|-------------|--|-------------------------------|-----------------------------|-----------------------|
| | ORIENTATION | | ORIENTATION | | ORIENTATION | | ORIENTATION | ORIENTATION | |
| 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) | | TENSILE MODULUS (MPa) | | EaB (%) | | UNNOTCHED IMPACT ENERGY (J/m) | NOTCHED IMPACT ENERGY (J/m) | MELT TEMPERATURE (°C) |
|-------------------|-------------|----|-----------------------|------|-------------|----|-------------------------------|-----------------------------|-----------------------|
| | ORIENTATION | | ORIENTATION | | ORIENTATION | | ORIENTATION | ORIENTATION | |
| 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

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.