



PLA, ABS & Nylon.... How Do I choose?

The application of a printed part should determine the material you choose. Understanding the 3 primary materials for fused deposition modeling (FDM) makes this an easy process.

Also consider - New materials are being developed every day so research others and feel free to ask us about ones that might fit your specific, less common needs.

PLA plastic

Characteristics:

- Bio-based material
- Biodegradable at end of life
- Environment-friendly
- Excellent part quality, surface finish and resolution
- Excellent dimensional stability
- High stiffness
- Good barrier properties
- Ease of printing

Applications:

- Prototypes and models
- Toys and consumer goods
- Durable goods
- Packaging applications

ABS plastic

Characteristics:

- Light weight engineering thermoplastic
- High impact resistance and toughness
- High impact resistance even at cold temperatures
- Excellent creep resistance (or resistance to deformation under mechanical stress)
- Easy secondary operations like finishing, welding and bonding

Applications:

- Durable and functional prototypes and models
- Protective gear
- Automotive parts
- Cases and housings for electronics
- Electronics accessories
- Protective carrying cases
- Toys and sporting goods

Nylon

Characteristics:

- Engineered production plastic material (or Eng. Thermoplastic)
- Exceptionally durable
- High stiffness, hardness and toughness
- High heat resistance
- High strength to weight ratio
- Excellent abrasion resistance
- Excellent wear resistance and corrosion resistance
- Superior chemical resistance and resistance to fuel oils
- Resistance to insects, fungi, molds and mildew
- Superior adhesion between print layers

Applications:

- Durable and functional prototypes and models
- Aerospace, automotive and motor sports parts
- Automotive under the hood parts
- Gears, fittings and bearings
- Housings and enclosures
- Impellers and connectors
- Consumer sporting goods
- Fluid reservoirs and gas tanks
- Brackets and intake manifolds
- Parts requiring secondary operations like painting, machining or adhesive bonding

Does Your Model Need Supports?

Try INFINITY RINSE-AWAY SUPPORT MATERIAL

Used for support material on complex geometry and dynamic prints. Rinses away in water!