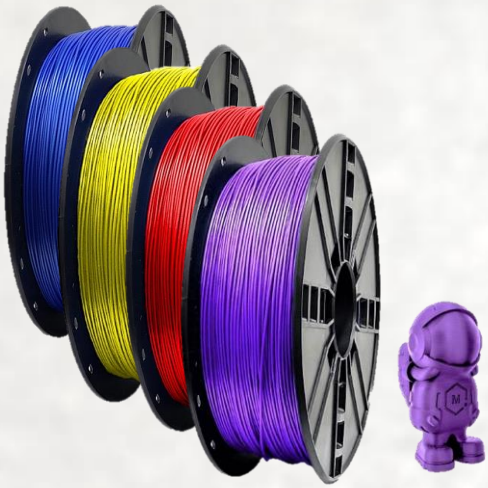
POLYTECH™ 3D PRINTER FILAMENTS

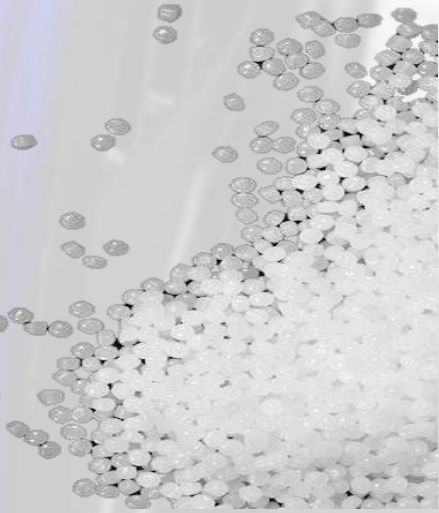
Polytech serves the additive manufacturing industry and .includes a fully integrated plant for the manufacturing of 3D filaments using automated PLC controlled production lines. We utilize the most advanced filament manufacturing technology out of prime high-quality virgin raw materials and offer premium quality filaments with very high precision following the international standards.



POLYTECH™ Filaments

Our filaments come in full variety of colors and are vacuum-packed in 0.5 KG and 1 Kg spools. To attain precision output, ***Polytech*** uses high-quality raw materials, maintains a stable diameter tolerance of ± 0.03mm, and produce filaments of consistent color to enhance the print resolution and reduce printing issues such as nozzle clogging, running material and mid-print breakage of filament. Whether your project requires custom filaments for large-scale industrial projects or needs to meet strict engineering requirements, we are here to help.

Materials



Through our partnerships with different chemical manufacturers, we are able to offer our customers the highest quality materials with different mechanical and physical characteristics available in the market. Currently, ***Polytech*** produces filaments of 3 different materials; Polylactic Acid (PLA), Acrylonitrile Butadiene Styrene (ABS), and Polyethylene Terephthalate Glycol-Modified (PETG). These are the materials that are most in demand and ***Polytech*** is constantly developing new materials for the additive manufacturing industry to offer the latest solutions to produce polymer parts.

Eco-Friendly

Polytech's objective since the beginning has always been the same; to develop and provide the highest quality and eco-friendly 3D printing filament solutions to end users and meet all their 3D printing needs. We have taken great care to create several types of recycled, and recyclable 3D filaments to meet any level of demand by our clients (big or small) allowing no compromises with the quality We intend to stay on the leading edge of this industry with our eco-friendly 3D filaments and will continue to stay earth-conscious while developing newer, cleaner, and more sustainable solutions for all of our clients' 3D printing needs.

Quality Assurance

Polytech's manufacturing facility operates under the ISO 9001:2015 Quality System Standard using skilled workforce consisting of engineers who develop variety of filaments perform their testing and analysis to maximize performance, user safety, environmental safeguards and market desirability.

POLYTECH™ PLA Filaments

Polylactic Acid or Polylactide (PLA) is one of the most commonly used 3D printing filaments and is the recommended material for numerous 3D printers due to its easy-to-use properties. ***Polytech*** PLA Filaments are a fully biodegradable corn-based product made from high purity and high temperature PLA pellets. Our PLA filaments are very strong but flexible, acetone resistant and can attain faster print speeds and lower layer heights when used correctly. Moreover, they releases a mild, non-offensive sweet smell when heated, do not necessarily require a heated print bed and is the ideal choice for use in homes, schools, universities.

Options	
Size	1.75mm ± 0.03mm
	3.00mm ± 0.03mm
Color	Full Range
	Special Colors by Order
Packaging	0.5 Kg Spools
	1.0 Kg Spools

Specifications	
Specific Gravity	1.25 gr/cm3
Extruder Temperature	185 – 225°C
Bed Temperature	40 – 60°C *(Only for Big Prints)*
Working Temperature	< 60°C *(Starts losing mechanical strength)*

POLYTECH™ ABS Filaments

Polytech Acrylonitrile Butadiene Styrene (ABS) 3D printing filaments are made of high quality ABS material. These filaments resist higher temperatures and offer great machinability, flexibility and strength making it the favored choice of engineers and professionals. ABS filaments are also more ductile and less brittle in comparison to PLA filaments and can also be post-processed with acetone to provide a glossy finish. When printing with ABS filaments, a heated bed is recommended due to the contraction property of ABS upon cooling leading to warping of the printed parts.

Options	
Size	1.75mm ± 0.03mm
	3.00mm ± 0.03mm
Color	Full Range
	Special Colors by Order
Packaging	0.5 Kg Spools
	1.0 Kg Spools

Specifications	
Specific Gravity	1.05 gr/cm3
Extruder Temperature	220 – 250°C
Bed Temperature	80 - 100°C
Working Temperature	< 80°C *(Withstands up to 80°C)*

POLYTECH™ PETG Filaments

PETG (Polyethylene terephthalate Glycol-Modified) is a high strength transparent thermoplastic with great moisture and thermal resistance. It is a great material for printing mechanical parts and other large objects as it has almost no warping effects. ***Polytech*** PETG filaments do not necessarily require a heated print bed and are easy to use because of low shrinkage. These filaments combine the easy-to-use property of PLA and the strength and durability of ABS filaments making them an excellent industrial strength filament being widely used in mechanical parts and robotics.

Options	
Size	1.75mm ± 0.03mm
	3.00mm ± 0.03mm
Color	Full Range
	Special Colors by Order
Packaging	0.5 Kg Spools
	1.0 Kg Spools

Specifications	
Specific Gravity	1.27 gr/cm3
Extruder Temperature	215 – 240°C *(May Vary Between Printers)*
Bed Temperature	50 – 90°C *(Only for Big Prints)*
Working Temperature	< 80°C *(Withstands up to 80°C)*