

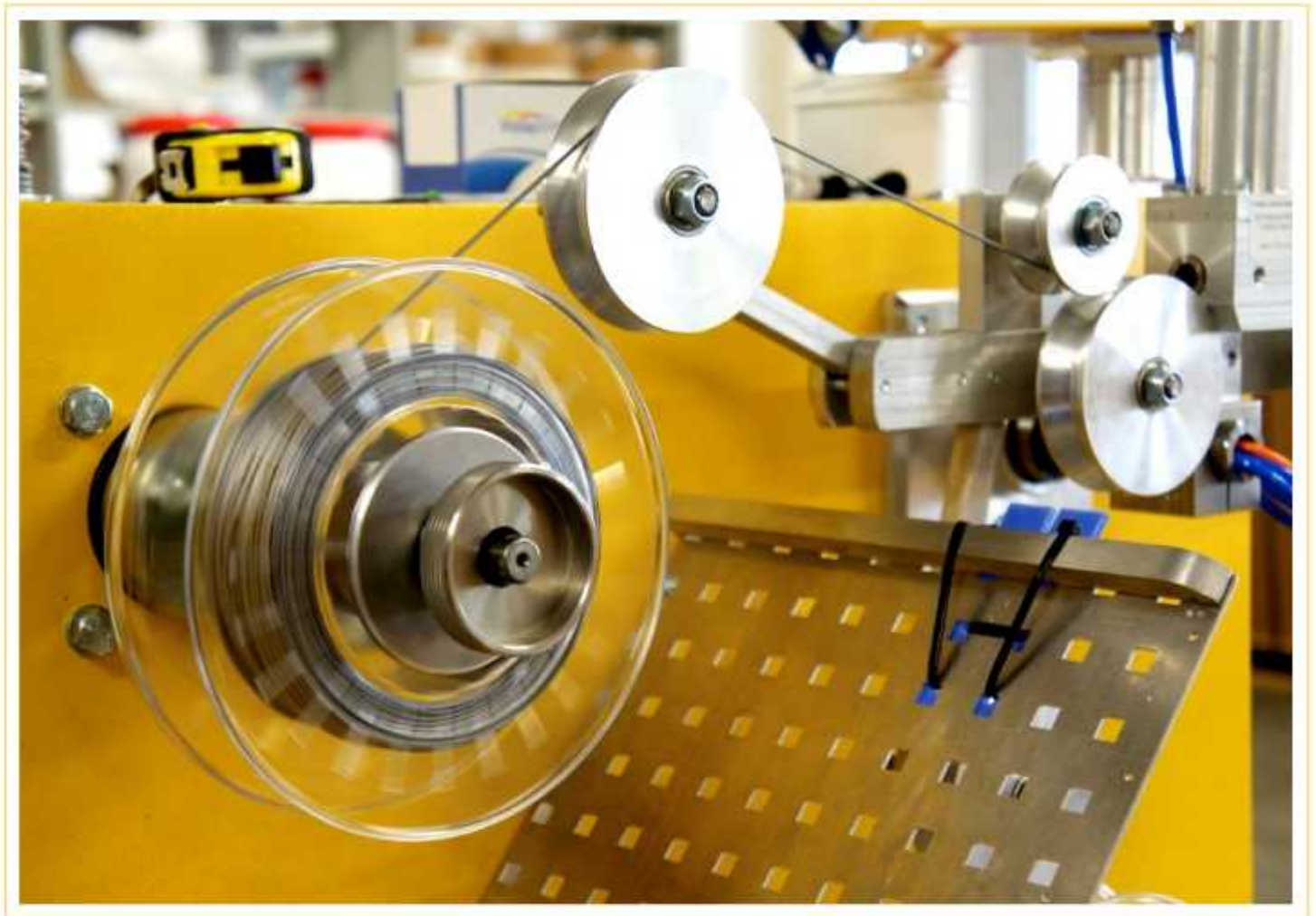


**High Quality
Filaments For
Industrial And
Home 3d Printers**



FILAMENT/CATALOGUE
Where Precision Is Key

About Us



Tråd3D Technologies, established in 2018, has its state of art manufacturing unit in Nashik, Maharashtra, 185 km from the commercial capital of India, Mumbai. Tråd3D manufacturer and supply of high-quality 3D Printer consumables for printers operating in FFF/FDM technology. A strong team is working continuously on the development of new materials and their applications to help the customers to achieve customer satisfaction and to use their 3D printers more efficiently and remain competitive. The motive of the company is to produce a high-quality 3D Printer Filament. To achieve this goal, Tråd3D uses premium quality virgin raw materials along with the perfect mix of specifically blend colours. Trad3d providing customers with a wide variety of colors and finish.

Our Technological know-how and experience in Filament production allow us to obtain a high-quality final product. During the production, each one mm of Filament is being continuously measured in 2 axis with $\pm 0.8\mu\text{m}$ Accuracy. To be sure that the measurement result is reliable we use Certified Laser Meter devices.



Bioplastic

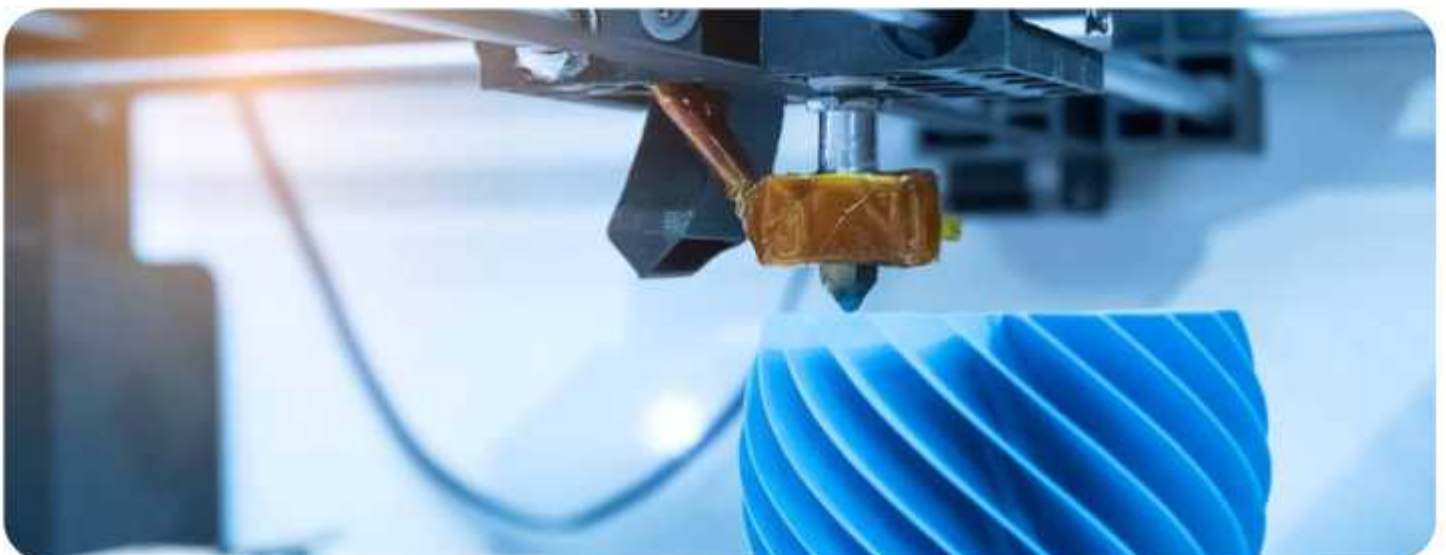
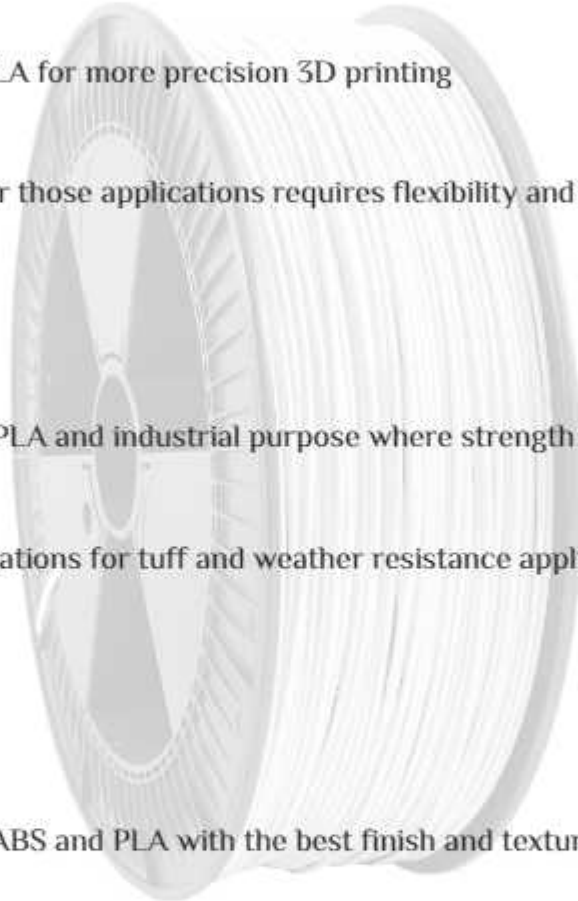
- ▼ **PLA**
Normal PLA for home users
- ▼ **PLA+**
Pro PLA with high tensile and temperature applications
- ▼ **PLA Smooth**
Smooth flow PLA for more precision 3D printing
- ▼ **PLA Flexi**
Flexible PLA for those applications requires flexibility and durability.

Styrene

- ▼ **ABS**
Stronger than PLA and industrial purpose where strength is required
- ▼ **ASA**
External applications for tuff and weather resistance application

Polyester

- ▼ **PET-G**
Stronger than ABS and PLA with the best finish and texture
- ▼ **TPU**
Flexible and abrasion resistance application



PLA is a filament-based on polylactide which belongs to aliphatic polymer, these are materials that are made out of corn starch. Trad3d's PLA Filament is made from virgin PLA material which gives the best quality layer to layer adhesion. This medium in strength Filament is used for consumer products.

Key Features :

- Made of biodegradable raw materials
- User friendly
- High aesthetic surface quality
- Wide range of available colors
- No smoke Printing
- Child Safe

Applications :

- Household tools
- Educational projects
- Concept and demo prototyping
- Industrial design



Filament Specification

Diameter	1.75 ± 0.05 mm 2.85 ± 0.05 mm	Tensile Strength @ break (Mpa)	53
Specific gravity g/cc	1.24	Tensile Elongation %	6
Nozzle Temperature	195–210°C	Notched Izod Impact (J/m)	16
Bed Temperature	60–75°C	Flexural Strength (Mpa)	83
Printing Speed	40–100 mm/s	Flexural Modulus (Mpa)	3.8
Tensile Yield Strength (Mpa)	60	Heat Distortion Temperature °C (0.45 Mpa)	55

- Colours Available
- Natural
 - Black
 - Green
 - Yellow
 - Sky-blue
 - Brown
 - Ivory
 - Violet
 - White
 - Red
 - Blue
 - Orange
 - Lemon
 - Pink
 - Grey
 - Magenta

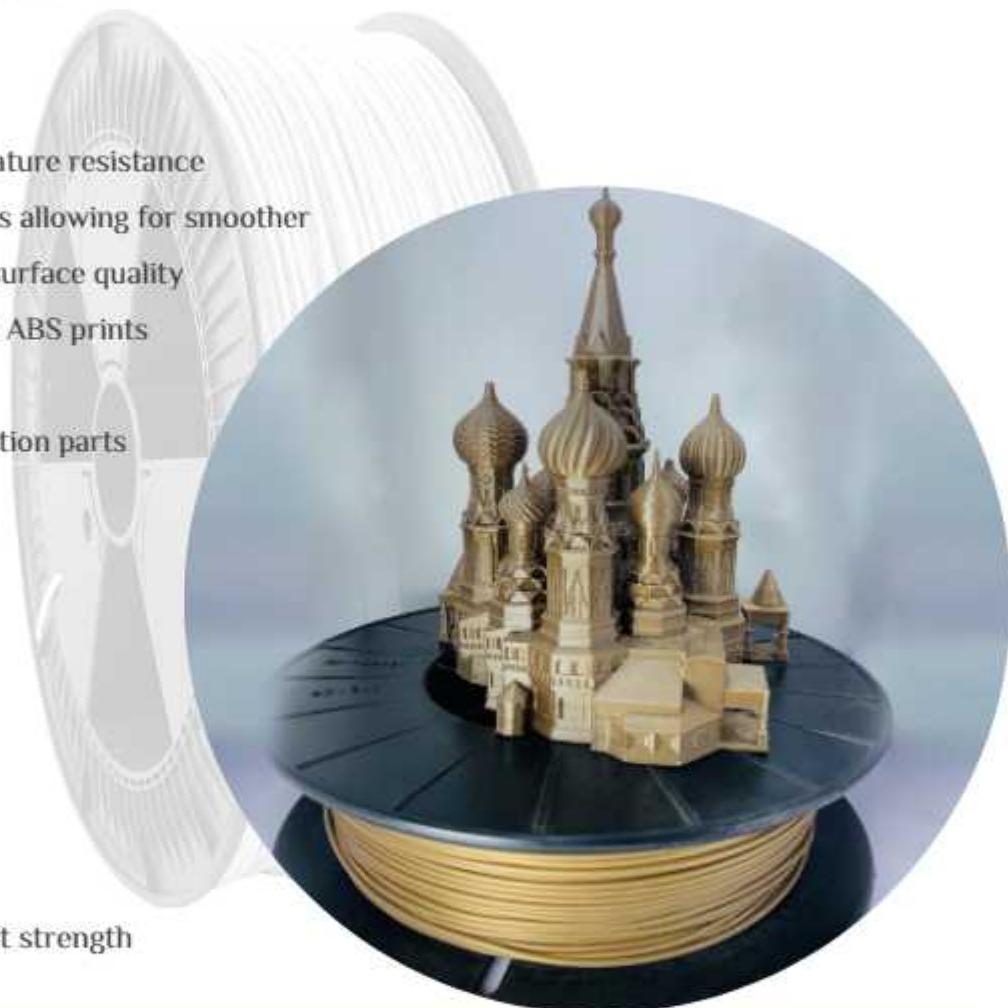
The high heat, high strength Filament is a perfect solution for printing functional components with mechanical properties close to those of ABS. The changed chemical composition of PLA has improved the flowability of the material, making the filament suitable for industrial application which requires good mechanical strength properties, high heat, and high printing efficiency. PLA + particularly useful for large-size 3D printers without a closed build chamber for printing large models. PLA+ yields excellent surface finish and detail, producing reliable results.

Key Features :

- High impact and high-temperature resistance
- Good adhesion between layers allowing for smoother side surfaces high aesthetic surface quality
- High durability comparable to ABS prints
- Low warping
- Good for creating high-resolution parts
- Biodegradable
- No smoke Printing
- Child Safe

Applications :

- Functional prototyping
- Industrial design
- Functional tools
- Parts that require high impact strength



Filament Specification

Diameter	1.75±0.05mm 2.85±0.05mm	Tensile Elongation %	3.31
Specific gravity g/cc	1.24	Notched Izod Impact (J/m)	118
Nozzle Temperature	195-210°C	Tensile Strength (Mpa)	50
Bed Temperature	60-75°C	Tensile Modulus (MPa)	2315
Printing Speed	40-100 mm/s	Heat Distortion Temperature °C (0.45 Mpa)	80-90
Tensile Yield Strength (Mpa)	51		

Colours Available

- Natural
- Black
- Green
- Yellow
- Silver
- Bronze
- Glow in dark green
- White
- Red
- Blue
- Copper
- Gold
- Marble
- Glow in dark blue

The specially developed PLA based 3D printer filaments look similar to real marble. This PLA+ Filament is created for those that work in Sculpture and architecture or construction.

Key Features :

- High impact and high-temperature resistance
- Good adhesion between layers allowing for smoother side surfaces high aesthetic surface quality
- High durability
- Low warping
- Biodegradable
- No smoke Printing

Applications :

- Decoration
- Handicraft
- Sculpture and architecture



Filament Specification

Diameter	1.75±0.05mm	Tensile Elongation %	3.31
Specific gravity g/cc	1.24	Notched Izod Impact (J/m)	118
Nozzle Temperature	195-210°C	Tensile Strength (Mpa)	50
Bed Temperature	60-75°C	Tensile Modulus (MPa)	2315
Printing Speed	40-100 mm/s	Heat Distortion Temperature °C (0.45 Mpa)	80-90
Tensile Yield Strength (Mpa)	51		

PLA – Smooth Flow

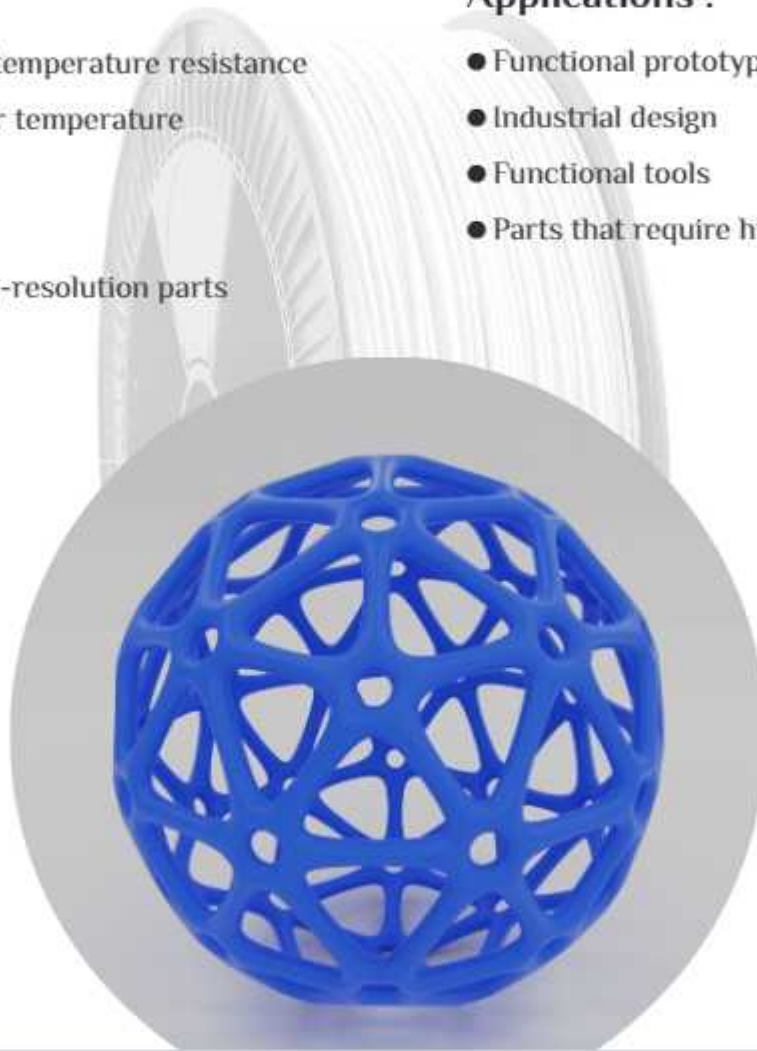
PLA- Smooth flow is engineered PLA to archive smooth flow of Filament at a lower temperature. This is a perfect material for those who wanted to print high accuracy engineering components using PLA. The changed chemical composition has improved the flowability of the material, making the filament suitable for industrial application which requires good mechanical strength properties and high printing efficiency.

Key Features :

- High impact and high-temperature resistance
- Smooth flow at a lower temperature
- High durability
- Low warping
- Good for creating high-resolution parts

Applications :

- Functional prototyping
- Industrial design
- Functional tools
- Parts that require high impact strength



Filament Specification

Diameter	1.75±0.05mm 2.85±0.05mm	Tensile Elongation %	3.31
Specific gravity g/cc	1.24	Notched Izod Impact (J/m)	118
Nozzle Temperature	185–200°C	Tensile Strength (Mpa)	50
Bed Temperature	60–75°C	Tensile Modulus (MPa)	2315
Printing Speed	40–100 mm/s	Heat Distortion Temperature °C	80–90
Tensile Yield Strength (Mpa)	51	(0.45 Mpa)	

Colours Available

Natural Black Green White Red Blue

Flexi PLA is a flexible filament with rubber-like properties. Flexi PLA is suitable for that application which requires flexibility and durability. Flexible filaments like TPU cannot be printed with the Bowden type extrusion system. Flexi PLA can be printed using Bowden type extruder but at a slower speed than the standard. Like standard PLA, Flexi PLA is made using bioplastic made from renewable resources like corn.

Key Features :

- Flexible
- Durable
- Ergonomics

Applications :

- Toys
- Wear & Tear parts of domestic appliances
- Vibration damping



Filament Specification

Diameter	1.75 ± 0.05 mm	Printing Speed	20–50 mm/s
Specific gravity g/cc	1.24	Tensile Yield Strength (Mpa)	49
Nozzle Temperature	210–230°C	Tensile modulus %	600
Bed Temperature	60–75°C	Hardness	92–95

Colours Available

- Natural
- Black
- Green
- White
- Red
- Blue

A filament that is ideal for more experienced users of 3D printing and for educational establishments, small business prototyping, Design Engineers. ABS is stronger than PLA and allows for applications where durability and strength are required. A heated print bed is recommended while printing with ABS to prevent warping. Tråd3D ABS has lower shrinkage and reduced emission of irritant volatiles. ABS filament is made using the purest raw materials & all of the filament including pigment is produced using premium grade polymers without fillers. Cross sectional roundness is consistent throughout the whole spool to ensure that a reliable printing experience is achieved over repeated prints.

Key Features :

- High impact resistance and rigidity while retaining a relatively high dimensional accuracy
- Better adhesion between layers allowing for smoother side surfaces high aesthetic surface quality
- Good interlayer adhesion
- Low warping and shrinkage

Applications :

- Manufacturing of all kinds of enclosures, guards, protectors and other similar items subject to impacts
- End-use parts
- Industrial design
- Tooling
- Custom components



Filament Specification

Diameter	1.75 ± 0.05 mm	Tensile Elongation %	30
Density g/cm ³	1.04	Notched Izod Impact (J/m)	39
Nozzle Temperature	225–235°C	Flexural Strength (Mpa)	61
Bed Temperature	100–110°C	Flexural Modulus (MPa)	2
Printing Speed	40–100 mm/s	Heat Distortion Temperature °C	98
Tensile Strength (Mpa)	42	(1.8 Mpa)	

Colours Available

- Natural
- Black
- Green
- White
- Red
- Blue
- Orange

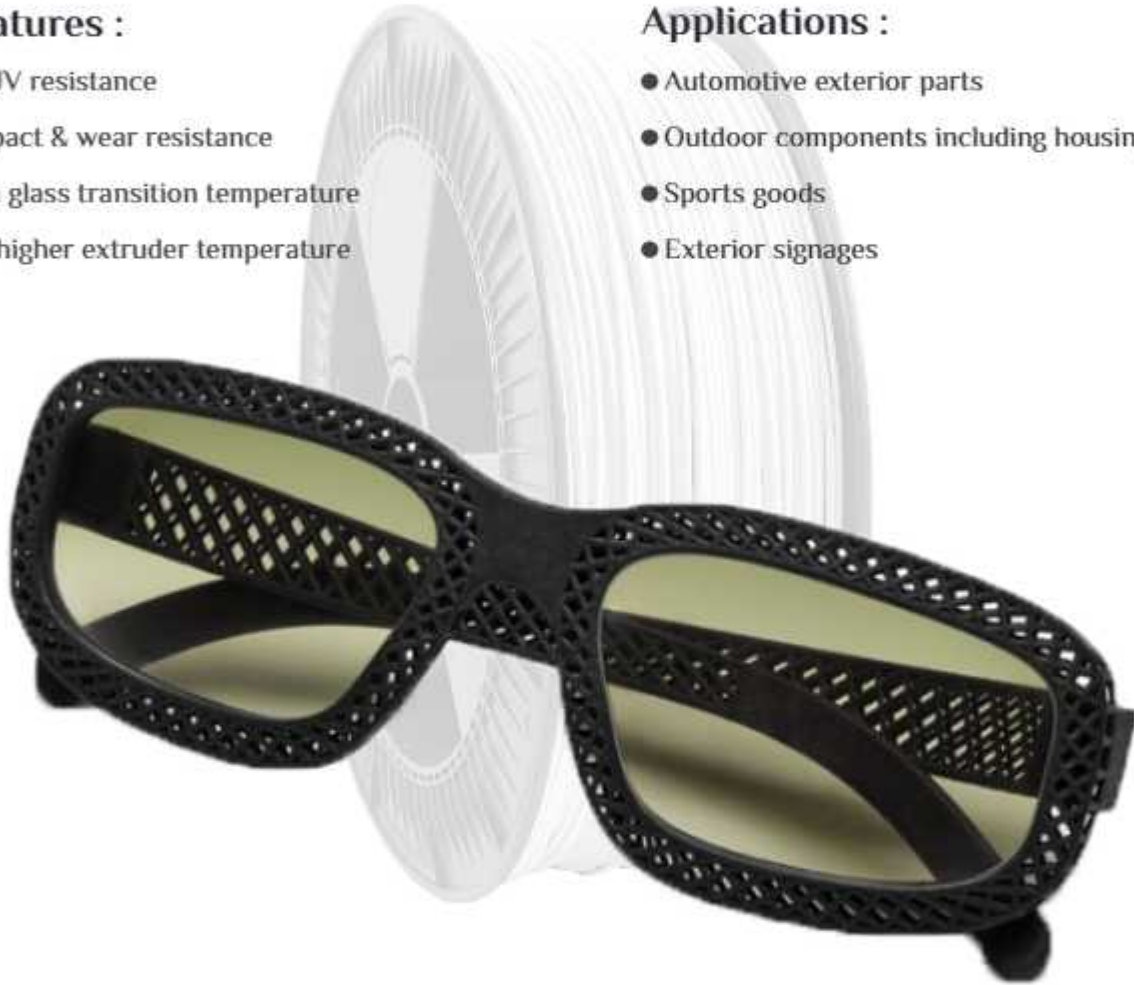
ASA or acrylonitrile styrene acrylate is a thermoplastic that combines mechanical strength, UV resistance, and water resistance. It also has high dimensional stability and good chemical resistance, making it ideal for prototyping, outdoor applications, and the automotive industry. ASA is known as "Engineer's Best Friend" is commonly used for the outdoor application instead of ABS due to its superior resistance to UV and harsh weather conditions. Tråd3D ASA 3D printer filaments are ideal for more experienced users of 3D printing.

Key Features :

- Strong UV resistance
- High Impact & wear resistance
- The high glass transition temperature
- Require higher extruder temperature

Applications :

- Automotive exterior parts
- Outdoor components including housing components
- Sports goods
- Exterior signages



Filament Specification

Diameter	1.75±0.05 mm	Tensile Elongation %	100
Density g/cm ³	1.07	Notched Izod Impact (Kg-Cm/Cm)	25
Nozzle Temperature	235-250°C	6.4 mm @ 23°C	
Bed Temperature	100-110°C	Flexural Strength (Kg/Cm ³)	660
Printing Speed	40-100 mm/s	Flexural Modulus (Kg/Cm ³)	2.1x10 ⁴
Tensile Strength Yield (Kg/Cm ³)	450	Heat Distortion Temperature °C (Annealed)	95

Colours Available

- Natural
- White
- Black

PET-G is very strong and durable and virtually unbreakable. Translucent in appearance, when printed using optimal settings, produces a near "clear" print. A heated print bed is recommended when printing with PET-G to prevent warping although this material prints naturally with low warp characteristics.

Key Features :

- High transparency
- Very good mechanical properties as regards rigidity, hardness, and impact resistance
- Chemical resistant
- High dimensional accuracy
- Odor-free printing

Applications :

- Manufacturing of Semi-Transparent enclosures and backlit sections of various boards and signs
- Concept models
- Manufacturing aids
- Production of items with major Ornamental and Artistic effects
- Manufacturing of various souvenirs, luminous pictures, glowing gadgets, and figurines



Filament Specification

Diameter	1.75±0.05mm	Elongation at break % (@ 2mm thickness)	120
Specific gravity g/cm ³	1.27	Notched Izod Impact (J/m)	85
Nozzle Temperature	225-235°C	Flexural Strength (MPa)	71
Bed Temperature	100-110°C	Flexural Modulus (Kgf/Cm ²)	2150
Printing Speed	40-100 mm/s	Heat Distortion Temperature 0C (0.45 MPa)	70
Tensile Strength (MPa) @ break	26.20		

Colours Available



Thermoplastic Polyurethane (TPU) filaments durable and flexible with a low friction coefficient. This material is more durable and with greater abrasion resistance. Trad3D TPU filament is slightly rigid, making it easy to extrude and print and able to withstand much higher compressive and tensile forces than PLA and ABS. Direct drive extruders are recommended for printing TPU filaments.

Key Features :

- High Durability
- High flexibility
- High Abrasion resistance
- Excellent layer adhesion
- Resistance to oil, grease, and solvents

Applications :

- Caster Wheels
- Sporting goods
- Medical devices
- Footwear
- Drive belts



Filament Specification

Diameter	1.75 ± 0.05 mm	Tensile Strength (N/mm ²)	53.20
Specific gravity g/cm ³	1.19	Elongation at break %	620
Nozzle Temperature	225–250°C	Tensile Modulus 100 % (N/mm ²)	5.6
Bed Temperature	60–70°C	Tear Strength (N/mm)	82
Printing Speed	20–30 mm/s	Compression Set 70h/23°C %	20
		Hardness Shore A	92–95

Colours Available

Translucent

Black

White



CONTACT US

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