茧语
JIANYU

JIANYU

3D Printing Filaments

Hangzhou Polyful Advanced Material Co., Ltd.

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Hangzhou Polyful Advanced Material Co., Ltd.

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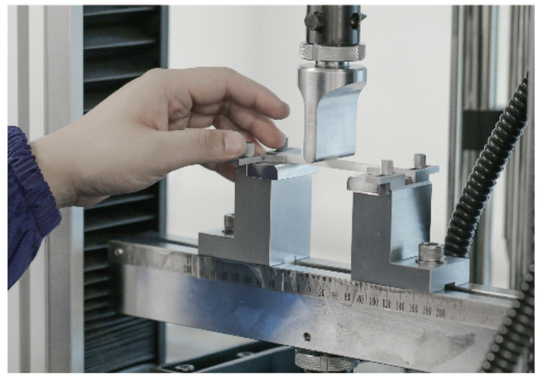
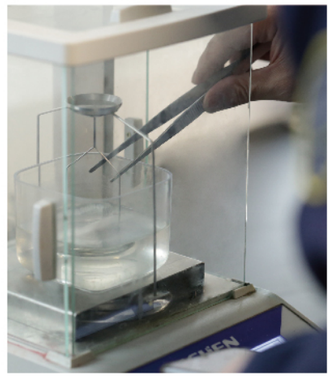
COMPANY INTRODUCTION

Hangzhou Polyful Advanced Material Co., Ltd. is a high-tech enterprise specializing in R&D, production, and sales of high-end polymer products.

Polyful was founded in 2018, with technology innovation as the core. The company focuses on R&D investment and team building, possessing domestically advanced polymer pilot test equipment and detection devices. Guided by market demand and targeting high-end polymer materials, the company collaborates intensely with the State Key Laboratory of Chemical Engineering (Zhejiang University), introducing laboratory achievements from well-known universities and research institutions, and fully utilizing the company's characteristic pilot test platform to develop a series of core technologies for preparing high-end polymer materials that integrate process, control, and specialized equipment, and organize industrialized production





Currently, the company has successfully developed and mass-produced products for sale, including compostable plastics, thermoplastic silicone elastomers, modified engineering plastics, polyolefin-modified materials, specialty nylons, ultra-low dielectric PPO for 5G apllications, 3D printing pellets and filaments, etc. Product quality has reached a nationwide leading level, and is widely used in fields such as automobile, energy, construction, home appliances, electronic appliances, etc.

杭州聚丰新材料有限公司
Hangzhou Polyful Advanced Material Co., Ltd.

聚丰 POLYFUL 茧语 JIANYU

3D PRINTING BRAND INTRODUCTION

【茧语JIANYU】is the exclusive brand of POLYFUL in the 3D printing materials area, JIANYU has the full knowledge and experience inheriting POLYFUL's polymer technology; it has more efficient and flexible advantages in R&D to provide customers with high-performance and modified 3D printing polymer solutions.

Technology-driven, advanced polymer research, production and sales company.

Committed to leading in the area of advanced polymer technologies.

Keep developing safe, pro-environment, sustainable solutions in the area of advanced polymer technologies.

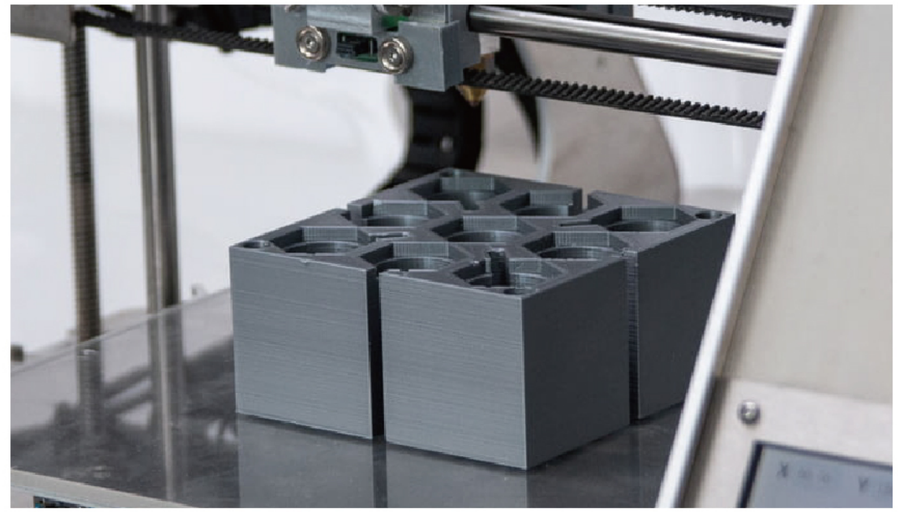
Achieve the goals of low-carbon environmental protection, and promote the sustainable development of society.

BIRCH SERIES/ Reinforced

3D Printing Filaments

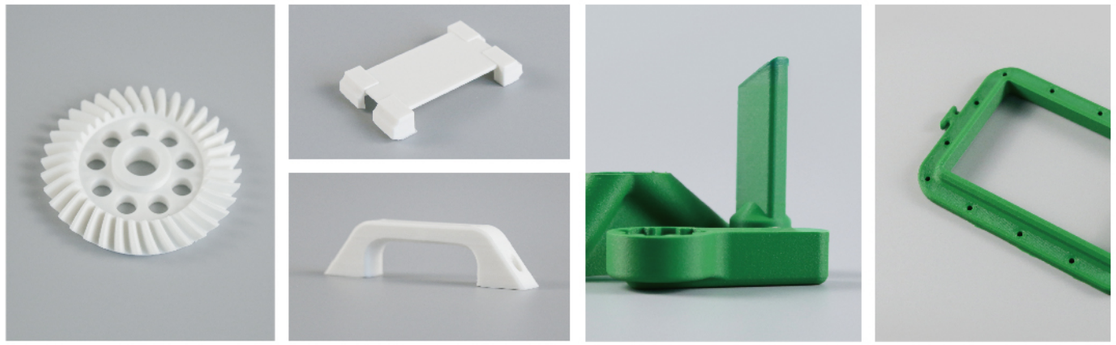
High Rigidity | High Strength | Low Shrinkage | Easy to Form | Good Dimensional Stability | Stable Quality

- Functional Prototypes
- Auto Spare Parts
- Precision Components
- Sports Products
- Industrial Parts



【茧语JIANYU】is the exclusive brand of POLYFUL in the 3D printing materials area, JIANYU provides customers with high-performance and modified 3D printing filaments.

Birch is a product series of JIANYU, which provides a "high-strength" solution for 3D printing filaments. It has excellent mechanical properties and print quality, and exhibits great tensile strength and durability, making it suitable for long-term stress scenarios.



COCOON PA-Birch EP052506(1)

It is an enhanced PA6 material, with relatively improved tensile strength, suitable for 3D printing of industrial parts that require high strength and good wear resistance. Components printed with this material have good heat resistance and impact resistance.

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	GB/T 1033	g/cm³	1.31
Melt Flow Rate	235°C,2.16kg	GB/T 3682	g/10min	4
Printed Specimen Performance				
Tensile Strength(X-Y)	50mm/min	GB/T 1040.2	MPa	76
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	12
Flexural Strength	2mm/min	GB/T 9341	MPa	141
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m²	45

Diameter 1.75/2.85mm | Weight 1/5kg | Tolerance ±0.05mm | Printing Temp. 280-300°C | Board Temp. 60°C | Printing Speed 40-70mm/s

COCOON PA-Birch EP052506(2)

It is an enhanced PA6 material, with relatively increased rigidity, suitable for 3D printing of industrial parts that require high strength and good wear resistance. Components printed with this material have good heat resistance and impact resistance.

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	GB/T 1033	g/cm³	1.31
Melt Flow Rate	235°C,2.16kg	GB/T 3682	g/10min	4
Printed Specimen Performance				
Tensile Strength(X-Y)	50mm/min	GB/T 1040.2	MPa	65
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	11
Flexural Strength	2mm/min	GB/T 9341	MPa	121
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m²	20

Diameter 1.75/2.85mm | Weight 1/5kg | Tolerance ±0.05mm | Printing Temp. 280-300°C | Board Temp. 60°C | Printing Speed 40-70mm/s

COCOON PP-Birch EP012406

It is an enhanced PP material, solving problems of warping, layer adhesion and bed adhesion. It has the features of low warping, and good surface. An easy-to-print PP maintains the typical PP benefits (high chemical resistance, recyclability possibilities, fracture resistance and semi-toughness). Also, it offers customizable color options. This material is ideal for 3D printing functional prototypes and mechanical parts for industry, automotive, mould components.

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	GB/T 1033	g/cm³	1.04
Melt Flow Rate	230°C,2.16kg	GB/T 3682	g/10min	13
Thermal Property				
HDT	0.45MPa	GB/T 1634	°C	145
Printed Specimen Performance				
Tensile Strength(X-Y)	5mm/min	GB/T 1040.2	MPa	65
Tensile Strength(Z)	5mm/min	GB/T 1040.2	MPa	11
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m²	11

Diameter 1.75/2.85mm | Weight 1/5kg | Tolerance ±0.05mm | Printing Temp. 235-260°C | Board Temp. n.a. | Printing Speed 40-100mm/s | Specialized Build Plate from JIANYU

COCOON PP-Birch EP015606

It is an enhanced PP material, solving problems of warping, layer adhesion and bed adhesion. It has the features of low warping, and strong layer adhesion. An easy-to-print PP maintains the typical PP benefits (high chemical resistance, recyclability possibilities, fracture resistance and semi-toughness). Also, it offers customizable color options. This material is ideal for 3D printing functional prototypes and mechanical parts for industry, automotive, mould components.

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	GB/T 1033	g/cm³	1.13
Melt Flow Rate	235°C,2.16kg	GB/T 3682	g/10min	15
Thermal Property				
HDT	0.45MPa	GB/T 1634	°C	135
Printed Specimen Performance				
Tensile Strength(X-Y)	50mm/min	GB/T 1040.2	MPa	27
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	11
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m²	5

Diameter 1.75/2.85mm | Weight 1/5kg | Tolerance ±0.05mm | Printing Temp. 235-260°C | Board Temp. n.a. | Printing Speed 40-100mm/s | Specialized Build Plate from JIANYU

FIR SERIES/ Flame-retardant

3D Printing Filaments

Meet V0 flame retardant rating in UL94 standard | High Flame - retardant | High Rigidity High Toughness | High Impact Resistance | Easy to Form | Stable Quality

- Building Materials
- Auto Spare Parts
- Industrial Manufacturing
- Outdoor Fitness Equipment
- Electronics and Electrical

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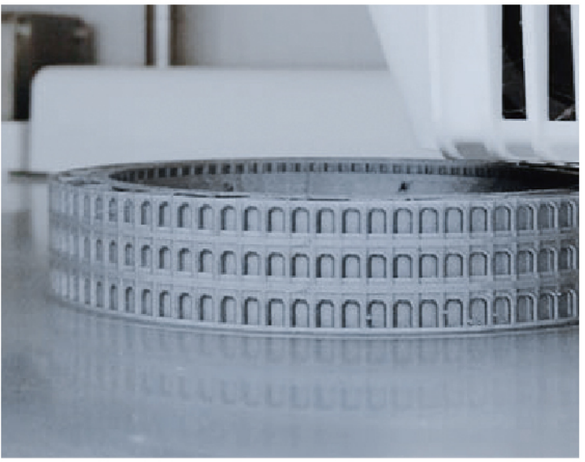
Fir is a product series of JIANYU, which provides a "Flame-retardant" solution for 3D printing filaments. It is impermeable and has a water absorption rate of less than 1% at room temperature. The material fulfills flame retardancy according to UL 94 V-0 (@1.6mm), and is suitable for applications and components that require flame retardancy.

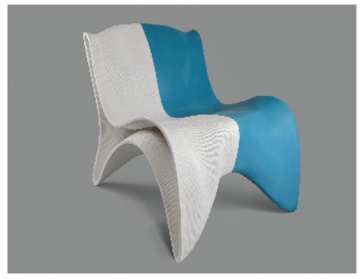
COCOON ABS-Fir EP066305

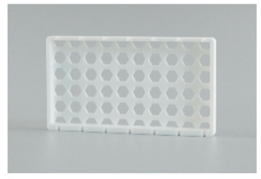
It is a thermoplastic engineering material with flame-retardance. The high impact strength and strong interlayer adhesion make it an ideal material in printing plastic components of industrial machinery. The material fulfills flame retardancy according to UL 94 V-0 (@1.6mm), and it also has good mechanical and thermal properties.

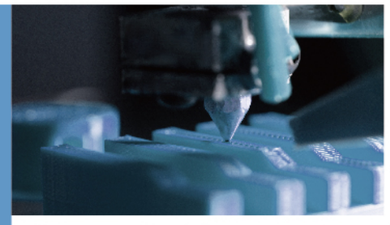
Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	GB/T 1033	g/cm³	1.1
Melt Flow Rate	230°C,2.16kg	GB/T 3682	g/10min	27
Flame-retardant Property				
Flame Class Rating	1.6mm	UL94	/	V0
Printed Specimen Performance				
Tensile Strength(X-Y)	50mm/min	GB/T 1040.2	MPa	41
Tensile Strength(Z)	5mm/min	GB/T 1040.2	MPa	23
Flexural Strength	2mm/min	GB/T 9341	MPa	71
Flexural Modulus	2mm/min	GB/T 9341	MPa	2266
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m²	16

Diameter 1.75/2.85mm | Weight 1/5kg | Tolerance ±0.05mm | Printing Temp 230-260°C | Board Temp 80-100°C | Printing Speed 40-100mm/s









CACTUS SERIES / Heat-resistant

3D Printing Filaments

Heat Resistance | Balanced Perfor -mance | Low Shrinkage | Low Warpage | Compostable | Easy To Print

- Channel Letters
- Model Making
- Automotive Industry
- Household Appliances
- Electronics and Electrical

COCOON ASA-Fir EP076405

It is a thermoplastic engineering material with flame-retardance. The material fulfills flame retardancy according to UL 94 V-0 (@1.6mm) It has high strength, low shrinkage, strong interlayer adhesion, and good toughness. The great performance in both UV resistance, water resistance and thermal stability make it an ideal material in printing complex, ready-to-use components, including final parts, fixtures, functional prototypes with demanding geometries, as well as large-scale leisure architecture and sculpture parts.

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	GB/T 1033	g/cm³	1.28
Melt Flow Rate	220°C,2.16kg	GB/T 3682	g/10min	12
Flame-retardant Property				
Flame Class Rating	1.6mm	UL94	/	V0
Printed Specimen Performance				
Tensile Strength(X-Y)	50mm/min	GB/T 1040.2	MPa	40
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	12
Flexural Strength	2mm/min	GB/T 9341	MPa	7
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m²	66

Diameter 1.75/2.85mm | Weight 1/5kg | Tolerance ±0.05mm | Printing Temp. 230-260°C | Board Temp. 80-100°C | Printing Speed 40-70mm/s

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Cactus is a product series of JIANYU, which provides a "Heat-resistant" solution for 3D printing filaments. With the characteristics of high heat deformation temperature, extremely low warpage and shrinkage, it is an ideal choice for models, household appliances, and electrical enclosures.

COCOON PLA-Cactus DP024202

It is a bio-based environmentally friendly material with high temperature resistance, extremely low warpage and shrinkage, and non-toxicity. It has no odor or dust is produced during the printing process. It is also characterized by ease of printing and molding, good heat resistance, dimensional stability, and a matte texture. It is suitable for industrial components, jigs and fixtures, and channel letters materials that require higher printing accuracy.

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	GB/T 1033	g/cm³	1.24
Melt Flow Rate	190°C,2.16kg	GB/T 3682	g/10min	6
Printed Specimen Performance				
Tensile Strength(X-Y)	50mm/min	GB/T 1040.2	MPa	42
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	25
Flexural Strength	2mm/min	GB/T 9341	MPa	81
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m²	5

Diameter 1.75/2.85mm | Weight 1/5kg | Tolerance ±0.05mm | Printing Temp. 200-220°C | Board Temp. 0-65°C | Printing Speed 40-100mm/s

PALM SERIES/Food-contact

3D Printing Filaments

Food -contact | Comply with FDA Standards | Safe and Non-Toxic | High -toughness | Sturdy and Durable

- Food Storage
- Food Production and Processing
- Food Packaging
- Jigs and Fixtures
- Food Transportation
- Intelligent Manufacturing






VINE SERIES/ Toughened

3D Printing Filaments

High Rigidity High Toughness | High Impact Resistance | Eco-Friendly | Low Shrinkage | Strong Layer Adhesion | Easy to Form

- Mechanical Parts
- Collectible Figures
- Rehabilitation Equipment
- Daily Decorative Accessories
- Electronics and Electrical Parts

【茧语JIANYU】is the exclusive brand of POLYFUL in the 3D printing materials area, JIANYU provides customers with high-performance and modified 3D printing polymer resins and filaments. Palm is a product series of JIANYU, which provides "Food-contact" solution for 3D printing filaments. This product line is safe and non-toxic, complies with FDA food-contact material testing regulations. It is ideal for printing durable, high-toughness parts with food-contact requirements.

COCOON PLA-Palm DP021008

It is a bio-based degradable material that complies with FDA standards for food-contact materials. It is characterized by wide applicability, high rigidity, high toughness, extremely low warpage and shrinkage, and easy printability. It is suitable for printing equipment components and fixtures with food-contact requirements.

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	GB/T 1033	g/cm^3	1.24
Melt Flow Rate	190°C,2.16kg	GB/T 3682	g/10min	6
Printed Specimen Performance				
Tensile Strength(X-Y)	5mm/min	GB/T 1040.2	MPa	50
Tensile Strength(Z)	5mm/min	GB/T 1040.2	MPa	25
Flexural Strength	2mm/min	GB/T 9341	MPa	85
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m^2	5

Diameter 1.75/2.85mm | Weight 1/5kg | Tolerance ±0.05mm | Printing Temp. 190-220°C | Board Temp. 50°C | Printing Speed 40-100mm/s

【茧语JIANYU】is the exclusive brand of POLYFUL in the 3D printing materials area, JIANYU provides customers with high-performance and modified 3D printing filaments.
Vine is a product series of JIANYU, which provides a "Toughed" solution for 3D printing filaments. Its strength, durability, impact-resistance, and high bending-resistance provide wider design space, making it suitable for printing prototypes of mechanical components with toughness and precision requirements.

COCOON PLA-Vine DP021001

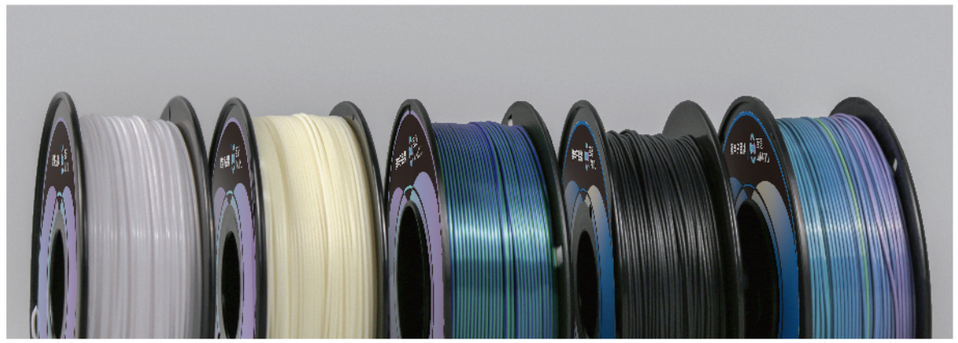
It is a bio-based environmentally friendly material with excellent toughness, non-toxic, possessing good mechanical properties and surface effects. It's easy to print with low warping and has a wide range of adaptability, durable for long-term use. It is the first choice in printing mechanical components and aesthetic detail models that require toughness and high accuracy.

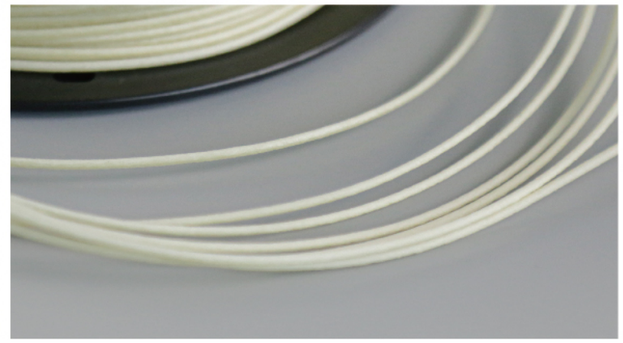
Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	GB/T 1033	g/cm^3	1.24
Melt Flow Rate	190°C,2.16kg	GB/T 3682	g/10min	6
Printed Specimen Performance				
Tensile Strength(X-Y)	5mm/min	GB/T 1040.2	MPa	50
Tensile Strength(Z)	5mm/min	GB/T 1040.2	MPa	25
Flexural Strength	2mm/min	GB/T 9341	MPa	85
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m^2	5

Diameter 1.75/2.85mm | Weight 1/5kg | Tolerance ±0.05mm | Printing Temp. 190-220°C | Board Temp. 50°C | Printing Speed 40-100mm/s

Customized Exclusive Solutions

3D Printing Filaments





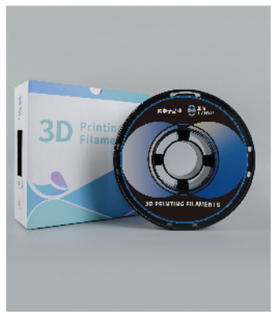
Compatible with FDM Printers

"JIANYU" 3D printing filaments have excellent physical and mechanical performance and can be easily processed into shape. They are compatible with current mainstream FDM 3D printers and can be used with the equipment's built-in build plate or the specialized build plate from JIANYU. There are no special requirements, and it has wide applicability.

Colors

Featuring a wide variety of colors, special colors and surface effects are available for customization.

Packaging Styles



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