



JIANYU 3D Printing Filaments



Hangzhou Polyful Advanced Material Co., Ltd.

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Company Introduction

Hangzhou Polyful Advanced Material Co., Ltd., established in 2018, is a professional high-tech enterprise engaged in the research, development, production, and sales of high-end polymer products. POLYFUL specializes in developing, producing, and selling high-end polymer products, including compostable resins and products, 3D printing pellets and filaments, modified PPO, thermoplastic silicone elastomers, and modified engineering resins.



3D Printing Brand Introduction

JIANYU is a dedicated brand of 3D printing materials under POLYFUL. Leveraging the technological advantages and expertise accumulation in polymer materials held by POLYFUL, as well as possessing independent core intellectual property rights and R&D production capabilities, JIANYU aims to serve the domestic and international additive manufacturing market by offering high-performance 3D printing filaments.

A technology-driven company specializing in advanced polymer research, production, and sales.

Committed to being a leader in the field 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.

Heat
Resista-
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Balanced
Perform-
ance

Low Shri-
nking Perc-
entage

Low
Warpage

Compo-
stable

Easy to
Print

3D PRINTING MATERIAL

Cactus Heat-resistant

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

Applications



COCOON PLA-Cactus(HT) 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/cm ³	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/m ²	5

Diameter 1.75/2.85mm	Weight 1/5kg	Tolerance ±0.05mm	Printing Temp. 200-230°C	Board Temp. 65°C	Printing Speed 60-200mm/s

Product and application display



Comparing the heat resistance effect of the box test model after placing it in an oven at 70°C for 4 minutes under a 10g load condition.



Ordinary PLA

COCOON PLA-Cactus(HT)DP024202



Colors



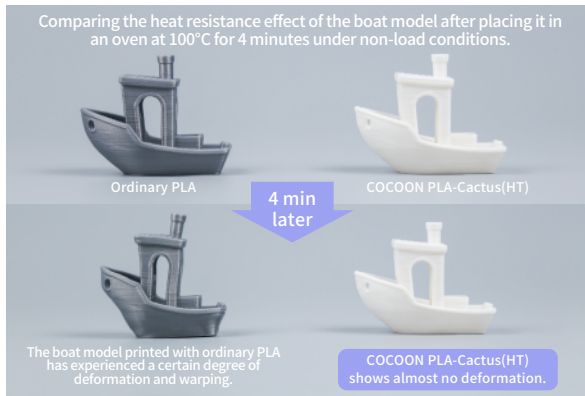
COCOON PLA-Cactus(HT) DP024402

This product is an eco-friendly PLA material with high heat resistance. It significantly surpasses standard PLA in temperature endurance, long-term heat-resistant temperature of the printed parts can reach 70°C without needing annealing. This material boasts low warpage and shrinkage, ensuring high dimensional stability and superior bending properties. It is biodegradable under suitable conditions. The stable printing performance makes it easy to shape, and its distinctive matte texture makes it an excellent substitute for regular PLA. It is ideal for models, luminous signs/ characters, and other projects that demand environmental heat resilience.

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	GB/T 1033	g/cm ³	1.4
Melt Flow Rate	190°C,2.16kg	GB/T 3682	g/10min	12
Printed Specimen Performance				
Tensile Strength(X-Y)	50mm/min	GB/T 1040.2	MPa	45
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	23
Flexural Strength	2mm/min	GB/T 9341	MPa	71
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. 220-260°C	Board Temp. 65°C	Printing Speed 60-200mm/s

Product and application display



The boat model is printed at a 15% infill.

Colors



COCOON PET-Cactus(HTCF) EP099306

It is a carbon fiber reinforced, heat-resistant consumable, offering an "enhanced, heat-resistant" solution for 3D printed PET materials. It boasts a heat deflection temperature of up to 190°C without the need for annealing or waiting. This consumable also features high heat resistance, high strength, high stiffness, and high creep resistance, along with good fluidity and stable extrusion performance. The printed products have a matte and sand-like smooth surface, with high heat resistance and mechanical strength. They are waterproof, have excellent chemical resistance, and combine outstanding mechanical properties with good dimensional stability, making them widely applicable in functional components, load-bearing structures, and auxiliary tooling fixtures for 3D printing scenarios involving long-term loads.

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	GB/T 1033	g/cm ³	1.37
Melt Flow Rate	250°C,5kg	GB/T 3682	g/10min	18
Thermal Property				
HDT	0.45MPa	GB/T 1634	°C	200
Printed Specimen Performance				
Tensile Strength(X-Y)	50mm/min	GB/T 1040.2	MPa	98
Tensile Modulus(X-Y)	50mm/min	GB/T 1040.2	MPa	6000
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	32
Tensile Modulus(Z)	50mm/min	GB/T 1040.2	MPa	1800
Flexural Strength	2mm/min	GB/T 9341	MPa	138
Flexural Modulus	2mm/min	GB/T 9341	MPa	6200
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m ²	9.2



Diameter
1.75/2.85mm



Weight
1/5kg



Tolerance
±0.05mm



Printing Temp.
280-300°C

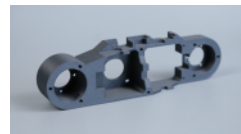


Board Temp.
80-100°C



Printing Speed
60-100mm/s

Product and application display



Colors

