



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

JIAN YU 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, JIAN YU 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 Resistance

Balanced Performance

Low Shrinking Percentage

Low Warpage

Compostable

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 | ISO 1183 | g/cm ³ | 1.24 |
| Melt Flow Rate | 190°C, 2.16kg | ISO 1133 | g/10min | 6 |
| Printed Specimen Performance | | | | |
| Tensile Strength(X-Y) | 50mm/min | ISO 527-1 | MPa | 42 |
| Tensile Strength(Z) | 50mm/min | ISO 527-1 | MPa | 25 |
| Flexural Strength | 2mm/min | ISO 178 | MPa | 81 |
| Impact Strength, Notched | 2.75J | ISO 179-1 | 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



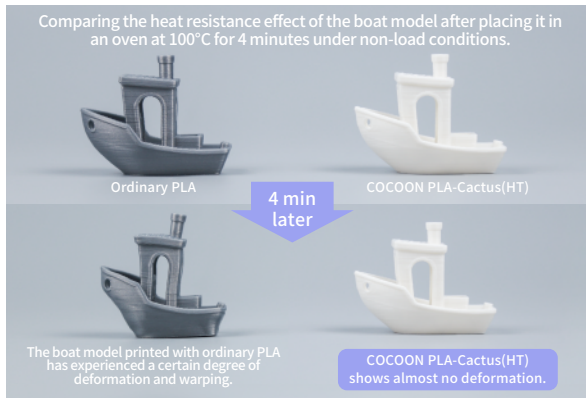
COCOON PLA-Cactus(HT) DP024402

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 | ISO 1183 | g/cm ³ | 1.4 |
| Melt Flow Rate | 190°C,2.16kg | ISO 1133 | g/10min | 12 |
| Printed Specimen Performance | | | | |
| Tensile Strength(X-Y) | 50mm/min | ISO 527-1 | MPa | 45 |
| Tensile Strength(Z) | 50mm/min | ISO 527-1 | MPa | 23 |
| Flexural Strength | 2mm/min | ISO 178 | MPa | 71 |
| Impact Strength, Notched | 2.75J | ISO 179-1 | 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 | ISO 1183 | g/cm ³ | 1.37 |
| Melt Flow Rate | 250°C, 5kg | ISO 1133 | g/10min | 18 |
| Thermal Property | | | | |
| Heat Deflection Temperature | 0.45MPa | ISO 75-1 | °C | 200 |
| Printed Specimen Performance | | | | |
| Tensile Strength(X-Y) | 50mm/min | ISO 527-1 | MPa | 98 |
| Tensile Modulus(X-Y) | 50mm/min | ISO 527-1 | MPa | 6000 |
| Tensile Strength(Z) | 50mm/min | ISO 527-1 | MPa | 32 |
| Tensile Modulus(Z) | 50mm/min | ISO 527-1 | MPa | 1800 |
| Flexural Strength | 2mm/min | ISO 178 | MPa | 138 |
| Flexural Modulus | 2mm/min | ISO 178 | MPa | 6200 |
| Impact Strength, Notched | 2.75J | ISO 179-1 | 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

