



# 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.

Special  
small-scene  
applications

Flexible  
Material

Elastomer

Skin-  
friendly

Anti-  
static

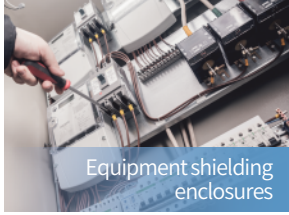
# 3D PRINTING MATERIAL

## Especial

## Special-purpose

It is a product series of JIANYU, which aims to provide "especial" solutions for 3D-printed small-scene applications. The product series includes various material solutions, such as anti-static and flexible purposes. For example, anti-static materials have excellent static resistance performance and are used to replace traditional processes of making anti-static class work or equipment parts; special elastomer materials are skin-friendly and suitable for use as a structural component or secondary wrapping in medical support scenarios.







### Applications



## COCOON PA-Especial(ESD) EP052509(1)

It is an antistatic modified nylon material with excellent static resistance performance, its volume resistance can reach  $10^8 \Omega$ . with high strength, high toughness, and long-term heat resistance. It also has good processing performance and is easy to print. When used in long-term high-temperature working environments, it maintains good mechanical properties and dimensional stability, and is suitable for industrial parts with anti-static protection requirements, such as shielding casings of electronic equipment and turnover boxes for precision electronic components.

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
<b>Physical Properties</b>				
Density	23°C	ISO 1183	g/cm <sup>3</sup>	1.32
Melt Flow Rate	235°C, 2.16kg	ISO 1133	g/10min	5
<b>Thermal Property</b>				
Heat Deflection Temperature	1.8MPa	ISO 75-1	°C	180
<b>Electrical Properties</b>				
Volume Resistance	25°C, 50%RH	IEC 62631-3-1:2016	$\Omega$	$10^8$
<b>Printed Specimen Performance</b>				
Tensile Strength(X-Y)	50mm/min	ISO 527-1	MPa	53
Tensile Strength(Z)	50mm/min	ISO 527-1	MPa	23
Flexural Strength	2mm/min	ISO 178	MPa	51
Impact Strength, Notched	2.75J	ISO 179-1	kJ/m <sup>2</sup>	35

					
<b>Diameter</b> 1.75/2.85mm	<b>Weight</b> 1/5kg	<b>Tolerance</b> $\pm 0.05\text{mm}$	<b>Printing Temp.</b> 260-290°C	<b>Board Temp.</b> 80-100°C	<b>Printing Speed</b> 40-70mm/s

## Product and application display



## Colors



## COCOON PA-Especial(ESD) EP051009

It is an anti-static modified nylon material based on PA12, with a volume resistivity of  $10^6-10^7\Omega$ , offering good anti-static performance that effectively prevents the generation and accumulation of static electricity. It is characterized by low density, high toughness, and high impact resistance, with a lower water absorption rate and better dimensional stability than other nylon materials. This material is specifically developed for industrial applications that require anti-static protection and is suitable for 3D printing electronic devices such as printed circuit boards, shielding enclosures, and precision electronic component storage boxes.

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
<b>Physical Properties</b>				
Density	23°C	ISO 1183	g/cm <sup>3</sup>	1.06
Melt Flow Rate	230°C, 2.16kg	ISO 1133	g/10min	5
<b>Electrical Properties</b>				
Volume Resistance	25°C, 50%RH	IEC 62631-3-1:2016	$\Omega$	$10^6-10^7$
<b>Injection-Molded Specimen Performance</b>				
Tensile Strength	5mm/min	ISO 527-1	MPa	30
Elongation@Break	5mm/min	ISO 527-1	%	300
Flexural Strength	5mm/min	ISO 178	MPa	35
Flexural Modulus	5mm/min	ISO 178	MPa	800
Impact Strength, Notched	2.75J	ISO 179-1	kJ/m <sup>2</sup>	N



**Diameter**  
1.75/2.85mm



**Weight**  
1/5kg



**Tolerance**  
 $\pm 0.05\text{mm}$



**Printing Temp.**  
250-290°C

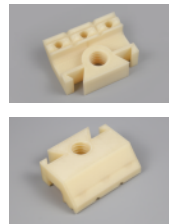
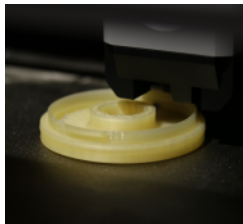
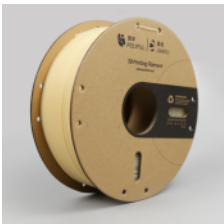


**Board Temp.**  
80-100°C



**Printing Speed**  
40-70mm/s

## Product and application display



## Colors



## COCOON PP-Especial EP011001 (1)

It is a flexible 3D printing filament based on polypropylene (PP) with Shore A 85. It has excellent processing performance. Compared to other flexible printing materials of the same hardness, it is easier to extrude and print. The printed parts are dimensionally stable, have low warping and shrinkage, and exhibit high interlayer adhesion. The printed parts are light-weight, low-density, high-toughness, high-elastic, and fatigue-resistant. They are also soft and skin-friendly, providing a comfortable touch. Additionally, it has excellent resistance to chemicals, weathering, high and low temperatures. It is suitable for 3D printing applications that require both toughness and strength, as well as texture and durability, such as medical fixation braces, industrial cushioning pads, and everyday protective covers.

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
<b>Physical Properties</b>				
Density	23°C	ISO 1183	g/cm <sup>3</sup>	0.9
Melt Flow Rate	235°C, 2.16kg	ISO 1133	g/10min	15
Shore A	23°C	-	-	85
<b>Injection-Molded Specimen Performance</b>				
Tensile Strength	500mm/min	ISO 37	MPa	10
Elongation@Break	500mm/min	ISO 37	%	450
Stress at 100 % Elongation	500mm/min	ISO 37	MPa	5.5
Stress at 300 % Elongation	500mm/min	ISO 37	MPa	8
Tear Strength	500mm/min	ISO 34-1	kN/m	60

**Diameter**  
1.75/2.85mm

**Weight**  
1/5kg

**Tolerance**  
±0.05mm

**Printing Temp.**  
235-260°C  
(250°C is recommended)

**Board Temp.**  
Not heated

**Printing Speed**  
60-100mm/s

**Specialized Build Plate**  
From JIANYU

## Product and application display



## Colors



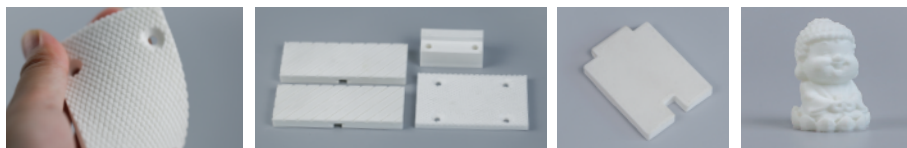
## COCOON TPU-Especial EP101001

It is a flexible 3D printing material with Shore A 75, combining the characteristics of TPU and rubber. This material boasts exceptional flowability. The printed parts exhibit a high resilience, low compression rate, and excellent fatigue resistance. Additionally, they are resistant to aging, UV rays, and corrosion, demonstrating flexibility and wear resistance. Given its high rebound requirement, TP-3375 is ideal for printing flexible industrial parts meant for impact absorption, such as liners, seals, and shock absorbers. Moreover, the printed objects possess a matte, sandblasted texture with a delicate and smooth touch, offering a skin-friendly experience. They also achieve strong adhesion with engineering materials like PC and ABS, making it suitable for wearable electronics, medical supports, footwear, and automotive interiors.

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
<b>Physical Properties</b>				
Density	23°C	ISO 1183	g/cm <sup>3</sup>	1.11
Melt Flow Rate	235°C, 2.16kg	ISO 1133	g/10min	25
<b>Thermal Property</b>				
Shore A	23°C	-	-	75
<b>Injection-Molded Specimen Performance</b>				
Tensile Strength	500mm/min	ISO 37	MPa	16
Elongation@Break	500mm/min	ISO 37	%	640
Stress at 100% Elongation	500mm/min	ISO 37	MPa	5
Stress at 300% Elongation	500mm/min	ISO 37	MPa	7
Tear Strength	500mm/min	ISO 34-1	kN/m	60
Compression Set	23°C, 22h	ISO 815	%	25

<b>Diameter</b> 1.75/2.85mm	<b>Weight</b> 1/5kg	<b>Tolerance</b> ±0.05mm	<b>Printing Temp.</b> 230°C	<b>Board Temp.</b> 40-50°C	<b>Printing Speed</b> 20-30mm/s

### Product and application display



### Colors

