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PLA Silk+

Basic info

KINGROON PLA Silk+ — Strength Meets Stunning Gloss

KINGROON PLA Silk+ combines exceptional strength with an elegant silk-gloss finish, giving your prints both durability and eye-catching visual appeal.

With an expanded selection of vibrant, richly saturated colors, this filament empowers you to turn bold ideas into reality—without sacrificing toughness or shine.

Whether you're creating display pieces, decorative models, or high-impact visual prototypes, KINGROON PLA Silk+ delivers the perfect balance of strength, style, and reliable performance.

Specifications

Subjects	Data
Diameter	1.75mm
Net Filaments Weight	1kg
Spool Material	ABS (Temperature resistance 70 °C)
Spool Size	Diameter: 200 mm; Height: 67 mm

Recommended Printing Settings

Subjects	Data
Drying Settings before Printing	Blast Drying Oven: 50 °C, 8 h
Printing and Storage Humidity	< 20% RH (Sealed with desiccant)
Nozzle Size	0.2, 0.4, 0.6, 0.8 mm
Nozzle Temperature	210 - 240 °C
Bed Type	Cool Plate, High Temperature Plate or Textured PEI Plate
Bed Surface Preparation	0
Bed Temperature	35 - 45 °C
Cooling Fan	Turn on
Printing Speed	< 250 mm/s
Retraction Length	0.6 - 1.0 mm
Retraction Speed	20 - 40 mm/s
Chamber Temperature	25 - 45 °C
Max Overhang Angle	55°
Max Bridging Length	30 mm
Support Material	Support for PLA

Properties



KINGROON PLA Silk+ Material Performance Testing

KINGROON has thoroughly tested the performance of PLA Silk+ across multiple dimensions, including its physical, mechanical, and chemical properties.

Physical Properties		
Subjects	Testing Methods	Data
Density	ISO 1183	1.27 g/cm ³
Melt Index	210 °C, 2.16 kg	14.5 ± 1.2 g/10 min
Melting Temperature	DSC, 10 °C/min	158 °C
Glass Transition Temperature	DSC, 10 °C/min	57 °C
Crystallization Temperature	DSC, 10 °C/min	N/A
Vicar Softening Temperature	ISO 306, GB/T 1633	66 °C
Heat Deflection Temperature	ISO 75 1.8 Mpa	56 °C
Heat Deflection Temperature	ISO 75 0.45 Mpa	60 °C
Saturated Water Absorption Rate	25 °C, 55% RH	0.004

Mechanical Properties		
Subjects	Testing Methods	Data
Young's Modulus(X-Y)	ISO 527, GB/T 1040	2130 ± 210 MPa
Young's Modulus (Z)	ISO 527, GB/T 1040	1850 ± 140 MPa
Tensile Strength (X-Y)	ISO 527, GB/T 1040	33 ± 4 MPa
Tensile Strength (Z)	ISO 527, GB/T 1040	25 ± 4 MPa
Breaking Elongation Rate (X-Y)	ISO 527, GB/T 1040	2.8 ± 0.6 %
Breaking Elongation Rate (Z)	ISO 527, GB/T 1040	1.5 ± 0.2 %
Bending Modulus (X-Y)	ISO 178, GB/T 9341	2460 ± 150 MPa
Bending Modulus (Z)	ISO 178, GB/T 9341	2150 ± 160 MPa
Bending Strength (X-Y)	ISO 178, GB/T 9341	75 ± 4 MPa
Bending Strength (Z)	ISO 178, GB/T 9341	30 ± 5 MPa
Impact Strength (X-Y)	ISO 179, GB/T 1043	18.5 ± 1.6 kJ/m ² ; 10.3 ± 0.5 kJ/m ² (notched)
Impact Strength (Z)	ISO 179, GB/T 1043	8.5 ± 1.1 kJ/m ²

Other Physical and Chemical Properties

Subjects	Data
Odor	Odorless
Composition	Polylactic acid
Skin Hazards	No hazard
Chemical Stability	Stable under normal storage and handling conditions
Solubility	Insoluble in water



Resistance to Acid	Not resistant
Resistance to Alkali	Not resistant
Resistance to Organic Solvent	Not resistant to some organic solvents
Resistance to Oil and Grease	Resistant to most kinds of oil and grease
Flammability	Flammable
Combustion Products	Water, carbon oxides
Odor of Combustion Products	Odorless

Specimen Test

Specimen Printing Conditions	
Subjects	Data
Nozzle Temperature	220 °C
Bed Temperature	35 °C
Printing Speed	200 mm/s
Infill Density	100%

The performance values are tested by standard samples at KINGROON, and the values are for design reference and comparison only. Actual 3D printing model performance is related to many other factors, including printers, printing conditions, printing models, printing parameters, etc. In the process of using KINGROON 3D printing filaments, users are responsible for the legality, safety, and performance indicators of printing. KINGROON is not responsible for the use of materials and scenarios and is not responsible for any damage that occurs in the process of using our filaments.