Update Date: 2025/12/1

PLA Silk

Basic info

KINGROON PLA Silk Dual-Color — Smooth Gradient, Stunning Silk Finish

KINGROON PLA Silk Dual-Color filament is crafted by seamlessly blending two individual silk colors into a single strand.
It retains the signature silky texture and high-gloss finish, while transitioning naturally between the two colors to create smooth, eye-catching gradients.

By simply rotating the filament, you can easily adjust which color is visible, offering versatile effects for your prints.
This filament is ideal for producing aesthetic parts, decorative objects, and visually striking models.

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: 65 °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	Glue
Bed Temperature	35- 45°C
Cooling Fan	Turn on
Printing Speed	< 250mm/s
Retraction Length	0.6- 1.0 mm
Retraction Speed	20- 40mm/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 aspects, including its physical, mechanical, and chemical properties.

Physical Properties		
Subjects	**Testing Methods**	**Data**
Density	ISO 1183	1.32g/cm³
Melt Index	210 °C, 2.16 kg	20.5±1.2g/10min
Melting Temperature	DSC, 10 °C/min	152°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	56°C
Heat Deflection Temperature	ISO 75 1.8 Mpa	50°C
Heat Deflection Temperature	ISO 75 0.45 Mpa	53°C
Saturated Water Absorption Rate	25 °C, 55% RH	0.0052

Mechanical Properties		
Subjects	**Testing Methods**	**Data**
Young's Modulus(X-Y)	ISO 527, GB/T 1040	1830±210MPa
Young's Modulus (Z)	ISO 527, GB/T 1040	1250±140MPa
Tensile Strength (X-Y)	ISO 527, GB/T 1040	27±4MPa
Tensile Strength (Z)	ISO 527, GB/T 1040	18±4MPa
Breaking Elongation Rate (X-Y)	ISO 527, GB/T 1040	3.5±0.6%
Breaking Elongation Rate (Z)	ISO 527, GB/T 1040	1.7±0.2%
Bending Modulus (X-Y)	ISO 178, GB/T 9341	2370±150MPa
Bending Modulus (Z)	ISO 178, GB/T 9341	1840±160MPa
Bending Strength (X-Y)	ISO 178, GB/T 9341	66±4MPa
Bending Strength (Z)	ISO 178, GB/T 9341	21±5MPa
Impact Strength (X-Y)	ISO 179, GB/T 1043	24.5±1.7kJ/m²; 8.2±0.5kJ/m² (notched)
Impact Strength (Z)	ISO 179, GB/T 1043	4.6±1.1kJ/m²

Other Physical and Chemical Properties

Subjects	Data
Odor	Odorless
Composition	Polylacticacid
Skin Hazards	No hazard
Chemical Stability	Stable under normalstorage 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	230°C
Bed Temperature	35°C
Printing Speed	200mm/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.