100% utilization

KSPA12ST

Kings team

Additive Material

Material Overview

KSPA12ST is a white nylon powder characterized by a D50 particle size of approximately 50 microns and a precise, uniform distribution. With high sphericity and exceptional fluidity, this powder incorporates the self-developed synthesis technology by the Kings team, effectively minimizing costs while preserving excellent surface quality and mechanical properties. Notably, it boasts a high reusability rate, approaching near 100% utilization.

Advantage

※ **Exceptional color stability with repeated use.**

※ **Powder particle size (D50) is around 50 microns, with a narrow and uniform distribution, displaying high sphericity and remarkable fluidity.**

※ **Maintains excellent mechanical properties and achieves a flawless surface finish even at close to 100% powder reuse rate.**

Ideal Application

※ **Functional structures**

※ **Concept prototypes**

※ **Automotive, aerospace, architectural, and electronic applications**

Technical Datasheet

Mechanical Properties	Value	Unit	Test Standard
Tensile Modulus	1600	Mpa	ISO 527
Tensile Strength	46	Mpa	ISO 527
Strain at break	20	%	ISO 527
Charpy impact strength	38	KJ/㎡	ISO 179
Charpy notched impact strength	7.5	KJ/㎡	ISO 179
Flexural modulus	1400	Mpa	ISO 178
Flexural Strength	50	Mpa	ISO 178

Other properties	Value	Unit	Test Standard
Powder Melting temperature (10°C/min)	187	°C	ISO 11357
Vicat softening temperature (50°C/h50N)	100	°C	ISO 306
Density (Laser Sintered)	0.94	g/cm^3	Own method
Density (Powder)	0.52	g/cm^3	Own method
Particle Size (D50)	50	μm	Laser Diffraction

These values may vary and depend on individual machine processing and post-curing practices.

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