





## **Material Overview**

KSPA12 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	Мра	ISO 527
Tensile Strength	46	Мра	ISO 527
Strain at break	20	%	ISO 527
Charpy impact strength	38	KJ/m²	ISO 179
Charpy notched impact strength	7.5	KJ/m²	ISO 179
Flexural modulus	1400	Мра	ISO 178
Flexural Strength	50	Мра	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 <sup>3</sup>	Own method
Density (Powder)	0.52	g/cm <sup>3</sup>	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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