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Additive Material

# NYLON POWDER KSPA12





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## 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

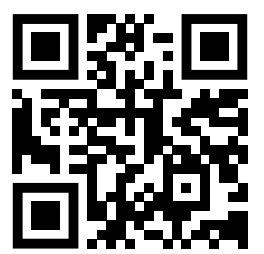
- Exceptional color stability with repeated use.
- Powder particle size (D50) is around 50 microns, with a narrow and uniform distribution, displaying high sphericity and remarkable fluidity.
- Maintains excellent mechanical properties and achieves a flawless surface finish even at close to 100% powder reuse rate.

### ADVANTAGE

- Functional structures
- Concept prototypes
- Automotive, aerospace, architectural, and electronic applications

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/m <sup>2</sup>	ISO 179
Charpy notched impact strength	7.5	KJ/m <sup>2</sup>	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 <sup>3</sup>	Own method
Density (Powder)	0.52	g/cm <sup>3</sup>	Own method
Particle Size (D50)	50	µm	Laser Diffraction



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