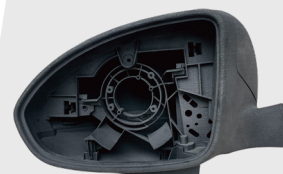
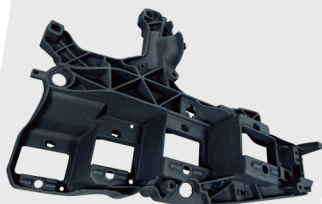


TECHNICAL DATA

# KSPA12BK

Product Demonstration



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*Kings*  
3D Printing

## Material Overview

KSPA12BK is a black nylon powder with a particle size D50 of about 50 microns and a narrow and uniform distribution. It can be sintered using fiber laser or carbon dioxide laser, and the powder has high sphericity and extremely high fluidity. The powder reusability rate can be close to 100%, and the 3D printed parts can maintain excellent mechanical properties and excellent surface finish.

## Advantages

- Can be sintered using fiber laser or carbon dioxide laser
- The particle size D50 of the powder material is about 50 microns, and the distribution is narrow and uniform. The powder has high sphericity and extremely high fluidity.
- Even when the powder reuse rate is close to 100%, it can still maintain excellent mechanical properties, and the printed parts still have a perfect surface finish.

## Ideal Application

- Functional structures
- Concept prototypes
- Automotive, aerospace, architecture, electronic applications

## Technical Datasheet

| Mechanical property            | Value | Unite             | 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 | Unite             | Test standard     |
|----------------------------------------|-------|-------------------|-------------------|
| Powder Melting temperature(10°C/min)   | 187   | °C                | ISO 11357         |
| Vicat softening temperature(50°C/h50N) | 100   | °C                | ISO 306           |
| Density (lasersintered)                | 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 |

The above data are based on our current knowledge and experience, the values of which may vary and depend on individual machine processing and post-curing practices. The safety data given in above is for information purposes only and does not constitute a legally binding MSDS. The relevant MSDS can be obtained upon request from your supplier or you may contact Kings 3D directly at "info@kings3dprinter.com"