

# P165-ABS

P r o d u c t   D e m o n s t r a t i o n



## ■ Material Overview

ABS is a thermoplastic polymer material structure with high gloss and high rigidity and easy processing and molding. It has strong corrosion resistance to acidalkali and salt, and can also tolerate the dissolution of organic solvents to a certain extent. It has excellent mechanical properties and dimensional stability and can be used to manufacture sculptures.

The good discharging state is: bubble-free and glossy particle diameter: about 3mm  
Applicable model: FGF-800Pro, FGF-1200Pro, FGF-1800Pro, FGF-2420Pro, FGF-2435Pro

**Shenzhen Kings 3D Printing Technology Co., Ltd.**

Floor 14-15, Building 3-A, Yunzhi Science Park, Gongming Street,  
Guangming District, Shenzhen | China 518107

## Product Information

**Manufacturer:**

Guangdong Kings intelligent manufacturing co., ltd.

**Other certificates:**

REACH

**Material identification:**

>ABS<

**Color:**

ORIGINAL

**Material shape:**

granulate

**Processing method:**

3D printing

**Flame retardant rating:**

HB

**Up to specification:**

• UL

**Material characteristics:**

• High gloss • High rigidity • Medium impact • General grade

**Material use:**

• General • Sculpture

## Technical Datasheet

| Physical Property     | Testing Standards | Data | Unit              |
|-----------------------|-------------------|------|-------------------|
| Specific gravity 23°C | ASTM D792         | 1.12 | g/cm <sup>3</sup> |
| Specific gravity 23°C | ISO 1183          | 1.12 | g/cm <sup>3</sup> |
| Melt index 220°C 10kg | ASTM D1238        | 36.2 | g/10min           |
| Melt index 220°C 10kg | ISO 1133          | 36.2 | g/10min           |
| Melt index 200°C 5kg  | ASTM D1238        | 2.4  | g/10min           |
| Melt index 200°C 5kg  | ISO 1133          | 2.4  | g/10min           |

| Hardness                       | Testing Standards | Data | Unit |
|--------------------------------|-------------------|------|------|
| Rockwell hardness R scale 23°C | ASTM D785         | 110  | /    |
| Rockwell hardness R scale 23°C | ISO 2039          | 110  | /    |

| Mechanical Character                                 | Testing Standards | Data  | Unit               |
|------------------------------------------------------|-------------------|-------|--------------------|
| Tensile strength 23°C                                | ASTM D638         | 565   | kg/cm <sup>2</sup> |
| Tensile strength 23°C                                | ISO 527           | 58    | MPa                |
| Bending strength 23°C                                | ASTM D790         | 735   | kg/cm <sup>2</sup> |
| Bending strength 23°C                                | ISO 178           | 76    | MPa                |
| Bending modulus 23°C                                 | ASTM D790         | 24800 | kg/cm <sup>2</sup> |
| Bending modulus 23°C                                 | ISO 178           | 2330  | MPa                |
| The notch impact of cantilever beam is 23 °C 6.4 mm. | ASTM D256         | 24    | kg-cm/cm           |
| The notch impact of cantilever beam is 23 °C 6.4 mm. | ISO 180           | 210   | J/m                |

Web: [www.kings3dprinter.com](http://www.kings3dprinter.com)

Email: [market@kings3dprinter.com](mailto:market@kings3dprinter.com)

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| Hot Property                                                      | Testing Standards | Data | Unit |
|-------------------------------------------------------------------|-------------------|------|------|
| The thermal deformation temperature is 1.8 MPa and 120 °C/r 6.4mm | ASTM D648         | 65   | °C   |
| The thermal deformation temperature is 1.8 MPa and 120 °C/r 6.4mm | ISO 75            | 65   | °C   |
| Thermal deformation temperature annealing 1.8MPa 120°C/r 6.4mm    | ASTM D648         | 73   | °C   |
| Thermal deformation temperature annealing 1.8MPa 120°C/r 6.4 mm   | ISO 75            | 73   | °C   |
| Vicat softening temperature 50N.                                  | ASTM D1525        | 78   | °C   |
| Vicat softening temperature 50N.                                  | ISO 306           | 78   | °C   |

| Flame Retardation                        | Testing Standards | Data | Unit |
|------------------------------------------|-------------------|------|------|
| Fire protection grade panchromatic 1.0mm | UL94              | HB   | /    |
| Fire protection grade panchromatic 1.6mm | UL94              | HB   | /    |
| Fire protection grade panchromatic 3.0mm | UL94              | HB   | /    |

| UL                                       | Testing Standards | Data | Unit |
|------------------------------------------|-------------------|------|------|
| Fire rating color 1.0mm                  | UL94              | HB   | /    |
| Fire protection grade panchromatic 1.6mm | UL94              | HB   | /    |
| Fire rating panchromatic 3.0mm           | UL94              | HB   | /    |
| HWI panchromatic 1.0mm                   | UL 746A           | 4    | PLC  |
| HWI panchromatic 1.6mm                   | UL 746A           | 4    | PLC  |
| HWI panchromatic 3.0mm                   | UL 746A           | 2    | PLC  |
| HAI panchromatic 1.0mm                   | UL 746A           | 0    | PLC  |
| HAI panchromatic 1.6mm                   | UL 746A           | 0    | PLC  |
| HAI panchromatic 3.0mm                   | UL 746A           | 0    | PLC  |
| Rtilec panchromatic 1.0mm                | UL 746B           | 65   | /    |
| Rtilec panchromatic 1.6mm                | UL 746B           | 92   | /    |
| Rtilec panchromatic 3.0mm                | UL 746B           | 92   | /    |
| RTI Imp panchromatic 1.0mm               | UL 746B           | 58   | /    |
| RTI Imp panchromatic 1.6mm               | UL 746B           | 83   | /    |
| RTI Imp panchromatic 3.0mm               | UL 746B           | 83   | /    |
| RTI Str panchromatic 1.0mm               | UL 746B           | 65   | /    |
| RTI Str panchromatic 1.6mm               | UL 746B           | 92   | /    |
| RTI Str panchromatic 3.0mm               | UL 746B           | 92   | /    |
| CTI                                      | IEC 60112         | 0    | PLC  |
| HVTR                                     | UL 746A           | 0    | PLC  |
| Arc resistance                           | ASTM D495         | 6    | PLC  |

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