

# P185-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 strength, good toughness 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 and use molds.

The good discharging state is: bubble-free and glossy partidle diameter: about 3mm  
Applicable model: FGF-800, FGF-1800, FGF-AM-2400, FGF-HM-2435

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

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

**Jiangxi Kings 3D AM Tech Co., Ltd**

Xiabu Town, Xiangdong District, Pingxiang City, Jiangxi Province | China 337022

## Product Information

**Manufacturer:**

Shenzhen Kings 3D Printing Technology Co.,Ltd.

**Other certificates:**

REACH

**Material identification:**

>ABS<

**Color:**

natural color

**Material shape:**

granular

**Processing method:**

3D printing

**Flame retardant grade:**

HB

**Compliance with regulations:**

•UL

**Material Properties:**

•High Gloss •High Rigidity •Medium Impact •General Purpose

**Material Application:**

•General purpose •Sculpture

## Technical Datasheet

| Physical Properties   | Test Standard  | Data | Unit              |
|-----------------------|----------------|------|-------------------|
| Specific gravity      | 23°C ASTM D792 | 1.04 | g/cm <sup>3</sup> |
| Specific gravity      | 23°C ISO 1183  | 1.04 | g/cm <sup>3</sup> |
| Melt index 220°C 10kg | ASTM D1238     | 23   | g/10min           |
| Melt index 220°C 10kg | ISO 1133       | 23   | g/10min           |
| Melt index 200°C 5kg  | ASTM D1238     | 23   | g/10min           |
| Melt index 200°C 5kg  | ISO 1133       | 23   | g/10min           |

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

| Mechanical Properties          | Test Standard | Data  | Unit               |
|--------------------------------|---------------|-------|--------------------|
| Tensile Strength 23°C          | ASTM D638     | 545   | kg/cm <sup>2</sup> |
| Tensile Strength 23°C          | ISO 527       | 55    | MPa                |
| Bending Strength 23°C          | ASTM D790     | 750   | kg/cm <sup>2</sup> |
| Bending Strength 23°C          | ISO 178       | 66    | MPa                |
| Flexural modulus 23°C          | ASTM D790     | 25000 | kg/cm <sup>2</sup> |
| Flexural modulus 23°C          | ISO 178       | 2350  | MPa                |
| Notched Izod Impact 23°C 6.4mm | ASTM D256     | 25    | kg-cm/cm           |
| Notched Izod Impact 23°C 6.4mm | ISO 180       | 220   | J/m                |

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

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

Follow us on    @kings3dprinter

| Thermal Properties                                                 | Test Standard | Data | Unit |
|--------------------------------------------------------------------|---------------|------|------|
| Heat deflection temperature without annealing 1.8MPa 120°C/r 6.4mm | ASTM D648     | 87   | °C   |
| Heat distortion temperature without annealing 1.8MPa 120°C/r 6.4mm | ISO 75        | 87   | °C   |
| Heat distortion temperature Annealing 1.8MPa 120°C/r 6.4mm         | ASTM D648     | 95   | °C   |
| Heat distortion temperature Annealing 1.8MPa 120°C/r 6.4mm         | ISO 75        | 95   | °C   |
| Vicat softening temperature 50N                                    | ASTM D1525    | 92   | °C   |
| Vicat softening temperature 50N                                    | ISO 306       | 92   | °C   |

| Flame Retardancy             | Test Standard | Data | Unit |
|------------------------------|---------------|------|------|
| Fire rating full color 1.0mm | UL94          | HB   | /    |
| Fire rating full color 1.6mm | UL94          | HB   | /    |
| Fire rating full color 3.0mm | UL94          | HB   | /    |

| UL                           | Test Standard | Data | Unit |
|------------------------------|---------------|------|------|
| Fire rating color 1.0mm      | UL94          | HB   | /    |
| Fire rating full color 1.6mm | UL94          | HB   | /    |
| Fire rating full color 3.0mm | UL94          | HB   | /    |
| HWI all colors 1.0mm         | UL 746A       | 4    | PLCs |
| HWI all colors 1.6mm         | UL 746A       | 4    | PLCs |
| HWI all colors 3.0mm         | UL 746A       | 2    | PLCs |
| HAI all colors 1.0mm         | UL 746A       | 0    | PLC  |
| HAI all colors 1.6mm         | UL 746A       | 0    | PLC  |
| HAI all colors 3.0mm         | UL 746A       | 0    | PLC  |
| RTI Elec All Colors 1.0mm    | UL 746B       | 60   | /    |
| RTI Elec all colors 1.6mm    | UL 746B       | 96   | /    |
| RTI Elec All Colors 3.0mm    | UL 746B       | 96   | /    |
| RTI Imp All Colors 1.0mm     | UL 746B       | 60   | /    |
| RTI Imp All Colors 1.6mm     | UL 746B       | 85   | /    |
| RTI Imp All Colors 3.0mm     | UL 746B       | 85   | /    |
| RTI Str All Colors 1.0mm     | UL 746B       | 60   | /    |
| RTI Str All Colors 1.6mm     | UL 746B       | 96   | /    |
| RTI Str All Colors 3.0mm     | UL 746B       | 96   | /    |
| CTI                          | IEC 60112     | 0    | PLC  |
| HVTR                         | UL 746A       | 0    | PLC  |
| Arc Resistance               | ASTM D495     | 6    | PLC  |

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

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

 Follow us on    @kings3dprinter