



Technical Data Sheet

# OSSFILA™ Bonlecule

OSF-FLB-HS

## 3D Printer Filament

**Ossfila™ Bonlecule** is a medical grade 3D Printing material suitable for creating patient specific orthopaedic implants or surgical tools.

The production of Ossfila™ Bonlecule follows ISO 13485 and ISO 14644. The raw materials meet the requirements of USP Class VI and/or ISO 10993.

### PRODUCT FEATURES

- ISO 10993-23:2021, ISO 10993-5:2019 and REACH (EC1907/2006) certified
- Excellent biocompatibility and bioactivity
- Osteoconductive
- Excellent mechanical strength
- Non-toxic
- Stable to gamma radiation, E-beam, and Ethylene oxide

### APPLICATIONS

Ossfila™ Bonlecule is recommended for creating patient specific orthopaedic implants or surgical tools, such as artificial parietal bone, spinal cage, bone of rib cage, radius ulna, carpal bones, metacarpal bones and phalanges, etc.

### IMPORTANT NOTICE

- Sample Pack/Non-sterile version is **non-sterilized** and **should not be used in medical, life-saving or life-sustaining applications.**
- Sterile version can be used in medical, life-saving or life-sustaining applications.
- Store the Filament in a dry cool place and away from heat. Absorption of moisture could affect filament quality.



## PRODUCT SPECIFICATIONS

Key Materials	PMMA, nano-hydroxyapatite-coated PMMA-HEMA copolymer
Filament Diameter	1.75 mm $\pm$ 0.05 mm
Net Weight	100 g / 200 g
Colour	Natural
Storage Condition	Sealed, cool and dry place
Drying Condition	50 °C for 24 hours
Flexural (depends on printing parameters)	Flexural strength: 60 – 100 MPa Flexural modulus: 1.6 – 3.0 GPa
Features	Biocompatible, bioactive, osteoconductive, non-toxic

### Note:

1. The 3D printer should have a heating build plate that could reach around 100 °C with a close heating chamber.
2. Use a raft instead of a brim for build plate adhesion.
3. Dry the Filament by 80 °C for 4 hours before printing for best performance.

## DISCLAIMER

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## SUPPORT

For the latest specifications, additional product information and sales and distribution locations, please contact us at phone: (852) 3188 9234 or email: [info@ossfila.com](mailto:info@ossfila.com)

## RECOMMENDED PRINTER SETTINGS

Extrusion/ Nozzle Temperature	220 – 240 °C
Build Plate Temperature	80 – 90 °C
Chamber Temperature	Not Required
Adhesion Type	Glue or Kapton® film
Nozzle Diameter	> 0.4 mm