Bonlecule

Medical Grade Bioactive Filament For 3D Printer

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Ossfila Technology Limited is a member company of Novus Life Sciences Limited.

2022 v2

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Product Features

Bonlecule is a bioactive 3D printing filament with superior mechanical and biological properties suitable for use in various clinical applications.

- Bonlecule is a PMMA-HEMA composite enhanced by hydroxyapatite ceramic nano-particles.
- ISO 10993-23:2021, ISO 10993-5:2019 and REACH (EC1907/2006) certified.
- Printed bending samples reach flexural strength of 60-100MPa and modulus of 1.5-3.0GPa.
- Over 100% increase in cell proliferation in osteoblast precursor cell line (MC3T3-E1).
- Excellent mineralization can be observed in vitro in 28 days of culture.

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Applications

Powered by excellent bioactivity and printability, Bonlecule can be used in producing permanent and temporary surgical implants for various applications.

- **Orthopedic surgery**
- **Neurosurgery**
- **Maxillofacial surgery**
- **Reconstructive surgery**
- Cardiac surgery/interventional cardiology
- Gastroenterology endoscopy of esophageal
- Surgical oncology
- Transplant surgery

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Specifications

Dimension	1.75mm
Weight	100g, 200g
Key Materials	PMMA, Nano-Hydroxyapatite-Coated PMMA-HEMA Copolymer
Color & Appearance	Translucent White
Printing Temperature	220 to 240°C
Build Plate Temperature	80 to 90°C
Drying Setting	50°C for 24 hours (in oven)
Radiopacity	200 to 400 HU
Flexural Strength	60 to 100 MPa
Flexural Modulus	1.5 to 3.0 GPa

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Contact

If you are interested in getting to know more about Ossfila's 3D printing solutions for medical device, implants and more, you are welcomed to contact us.

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