



Technical Data Sheet

Filament-Oss HASint

FILAMENT-Oss HASint is an easily printable filament with a high content of hydroxyapatite particles. After printing your desired shape, the sintering process provides you a 100% Hydroxiapatite piece or scaffold.

FILAMENT-Oss HASint is specifically formulated to allow 100% inorganic parts to be obtained through 3D printing, allowing easy manufacturing of bone-inducing scaffolds with custom shapes and **FILAMENT-Oss HASint** can be sintered in the same way as if it were hydroxyapatite. Furthermore, it remains easily printable by FFF, without clogging problems.

Filament features

Particle	Hydroxyapatite
Polymeric matrix	PLA
Particle loading (wt./vol.%)	72 wt.%/ 50 vol.%
Diameter	1.75 ± 0.15 mm
Density	2.19 g/cm ³
Linear Density	0.053 g/cm
Format	Spool vacuum packed

Thermal Properties

Glass Transition Temp.	62 °C
Melting Temp.	156 °C
Degradation Temp.	320 °C

Printing Recommendations

Printing Temp.	155-165 °C
Hot Pad	40 °C
Printing Speed	15-30 mm/s
Layer Height	> 0.2 mm
Nozzle Diameter	> 0.5 mm
Head travel speed	< 80 mm/s
Stand-by Temp.	30 °C

Storage Conditions

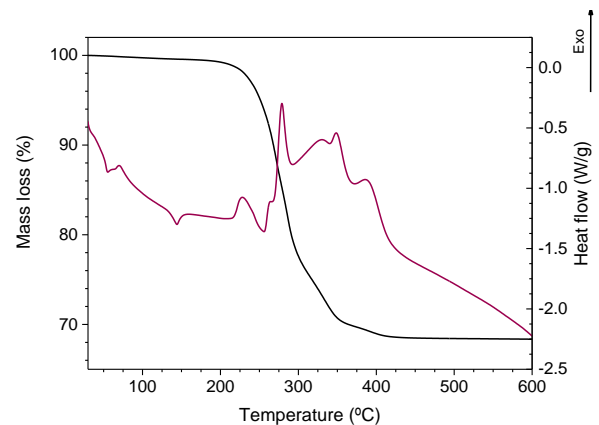
Keep in dry place
Protect from direct sunlight
Storage between 5°C- 30°C

Specific properties

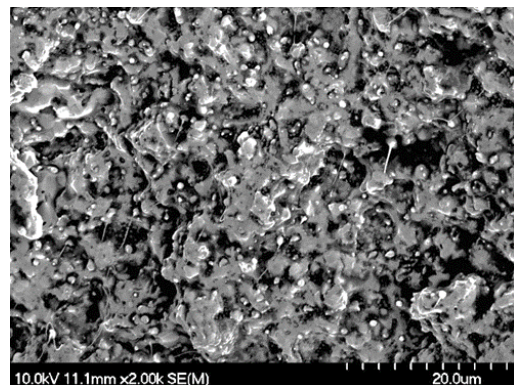
Osteoinductive and osteoconductive properties for bone regeneration.
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Sterilized by UV.

Thermal behavior



Filament cross-section



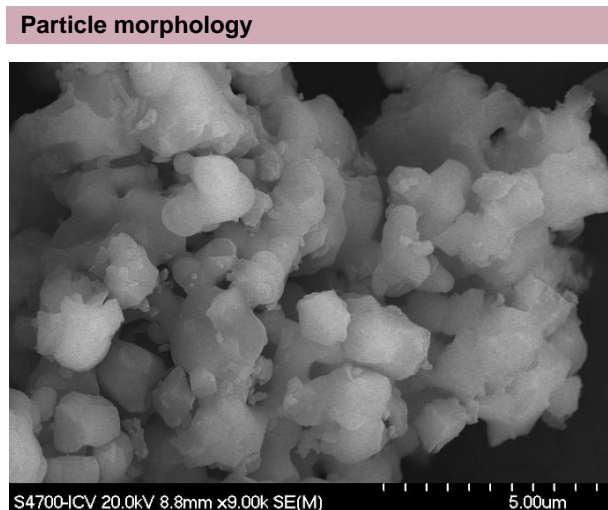
Sintered (two left) and green (right) samples, printed with Filament-Oss 50HA

Powder Specifications

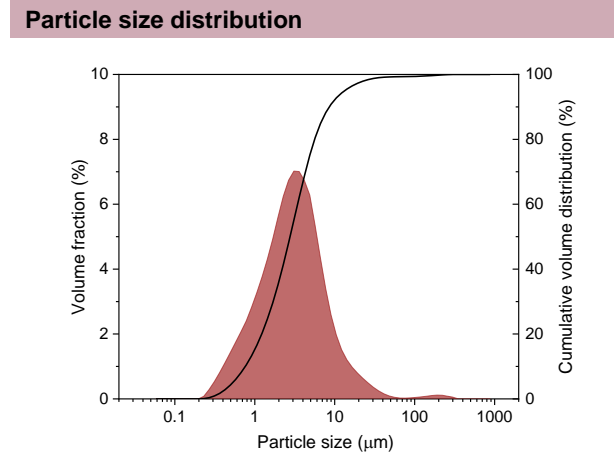
Hydroxyapatite Powder

Identification Product	
Commercial name	CAPTAL® Sintered Hydroxyapatite (1300 °C)
Chemical formula	Ca ₅ (PO ₄) ₃ OH
Supplier	Plasma Biototal Limited
Characteristics/ Description	Medical-grade, synthetic, high-purity, highly crystalline bioresorbable bone substitute material designed to closely mimic the properties and composition of natural bone.

Chemical composition		
Ca/P ratio	1.74	X-Ray Fluorescence
Purity	(99.5-99.8) %	
Density	3.16 g/cm ³	Helium picnometry
Spec. Surf. area	1.4 m ² /g	N ₂ adsorption-desorption



Scanning electron microscope image



D₁₀: 0.75 μm D₅₀: 2.76 μm D₉₀: 8.6 μm
 Measured by Laser Diffraction at small angles

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