

## Technical sheet

### PLGA/HA

Medical grade copolymer filament

PLGA/HA is an amorphous, ivory-colored thermoplastic that resolves within 12 to 24 months once implanted. Our filament consists of 90% polylactic-co-glycolic acid (PLGA 85/15) and 10% hydroxyapatite (HAP). This innovative composition combines the resorption properties of PLGA with a natural component of bone, hydroxyapatite, improving osteoconductivity, making it an ideal filament for bone reconstruction applications.

The polymer is rigid because at room temperature it is above the glass transition.



### Product Identification

Product	90% PLGA 85/15 (polylactic-co-glycolic acid) + 10% hydroxyapatite (HAP)
Reference	PF-PGH
Technology	FDM - Filament Deposition
Diameters	1.75mm
Colours	Ivory
Conservation	After opening the package, store it in a dry, well-ventilated place. If possible, place the coils in a vacuum pack and away from moisture. Finally, if the packaging is airtight, the spool can be placed in the refrigerator at 4°C

#### Benefits

- Bioresorbable
- Biocompatible
- Implantable\*
- Ease of use

#### Applications

- Bone implant
- Orthopedic screws

\* The implantability of the filament depends on compliance with the entire regulatory process in force in the customer's country.

## Technical properties

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TESTS	RESULTS
Comonomer ratio: L-lactide	85 mol%
Comonomer Ratio: Glycolide	15 mol%
Mass percentage of HAPs	10%
Melting Range (DSC, 10°C/min)	150-170°C
Glass transition (DSC, 10°C/min)	52-57°C
Degradation Temperature	>250°C
Molar mass (g/mol)	25,000 – 35,000 g/mol

## Printing properties

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Print Temperature	210-230°C
Tray Temperature	55-65°C
Print speed	10-90 mm/s
Cooling fan speed	100 %

## Indication for use

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The PLGA/HA filament (diameter 1.75 mm) is compatible with most heated bed 3D printers, as long as it ensures good adhesion of the material to the print substrate.

**Tip** : It is recommended to use a nozzle with a minimum diameter of 0.4 mm to avoid the risk of clogging.

**Caution** : Under no circumstances can this product be implanted in humans. Lattice Medical disclaims any responsibility for the medical use of this product.

## Disclaimer

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The values presented in this document are for reference and comparison purposes only. This data may vary depending on printing conditions, materials, part design, environmental conditions, and should not be used for specification or quality control purposes.

Each user is responsible for complying with the safety standards of the product and its employees, its use, respect for the environment, and the rules for waste disposal and recycling. Lattice Services makes no warranties, unless separately stated, as to fitness for any use or application.

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