



Rua José Gomes Ferreira nº1, Arm. D  
2660-360 São Julião do Tojal  
Loures - Portugal

+351 210 966 988  
www.ceramed.pt  
ceramed@ceramed.pt



Neobone®

# CALCIUM PHOSPHATE CERAMIC for BONE FILLING

## RAW MATERIALS

- Chitosan
- Hydroxyapatite
- Biphasic Mixtures (HA+ $\beta$ TCP)

## MEDICAL DEVICES

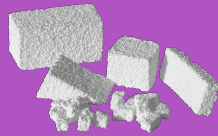
- 3D Bone Substitutes
- Injectable Bone Substitutes
- Bone Cement
- Wound Dressing
- Membranes

## COATINGS

- Hydroxyapatite (HA)
- Titanium (Ti)
- Double Layer (Ti+HA)
- Triple Layer (Ti+Ti+HA)
- PVD
- Anodizing

### 3D Scaffolds of Hydroxyapatite and Tricalcium Phosphate biphasic mixture

**Neobone®** is presented in form of blocks, wedges, cylinders, irregular granules and sphere-like granules



#### Specifications

##### Blocks, Wedges, Cylinders and Irregular granules

Density:  $\sim 0.7 \text{ g/cm}^3$

Total Porosity: 60% - 80%

Cell size:  $200 \mu\text{m}$  -  $500 \mu\text{m}$

Compressive Strength:  $> 0.2 \text{ MPa}$

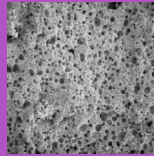
##### Composition

Hydroxyapatite  $[\text{Ca}_{10}(\text{PO}_4)_6(\text{OH})_2]$  and beta-TriCalcium Phosphate  $[\text{Ca}_3(\text{PO}_4)_2]$



### Biocompatible material with Interconnected Porosity

Promotes bone growth, allows the proliferation of fibroblasts, osteoblasts and other cells



### Neobone® is **BIOCOMPATIBLE**

due to its chemical composition similar to bone

### Neobone® is **OSTEOCONDUCTIVE**

due to its 3D interconnected porosity



### Neobone® is **SAFE**

It is a synthetic calcium phosphate and presents no risks of disease transmissions

### CASE #1

35 years old Female with bone cyst in the femoral head and neck

#### Surgical procedure

Removal of bone cyst and total bone defect filling with Neobone® irregular granules

#### Follow up

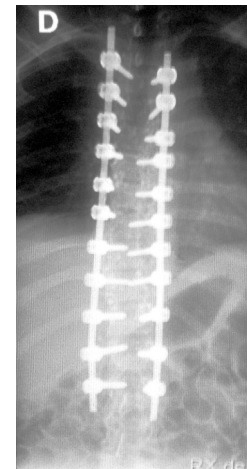
- No signs of local infection;
- No complications reported;
- Normal cicatrization;
- New bone formation verified by radio-opaque tissue visibility;
- No bone substitute displacement was observed.



Post-operative X-Ray

### CASE #2

29 years old Female with Adolescent Idiopathic Scoliosis.



Post-operative X-Ray

#### Surgical procedure

Implant of two rods and pedicle screws in T3 thoracic vertebrae to L1 lumbar vertebrae in order to potentialize the posterolateral fusion.

#### Follow up

- No complications were reported in the follow up performed 6 months after surgery.
- Fusion was reported which means that surgery was successfully.