

AXOZ calcium phosphate cement

The new injectable, hardening and resorbable calcium phosphate

AXOZ is an optimized calcium phosphate with respect to its optimal rheology, allowing the cement to be applied by injection under pressure thanks to its unique composition, which associates resorbable polymers with phosphocalcic compounds. The mechanical properties aiming both at better resistance under compression and at a modulus of elasticity close to that of bone. The macroporousness, which ultimately guarantees the resorption of the cement and its replacement by the patient's bone tissue, is of importance and relatively high in AXOZ.



The progressive osteoclast resorption of AXOZ followed by new bone ensures that all of the material may be replaced eventually. Resorption of AXOZ will result in replacement by lamellar bone.

After time AXOZ implants will be totally covered by a thin layer of bone and osteoclasts, present at the interface, clearly resorbing the cement. At locations where AXOZ is resorbed, new bone will be deposited.

FEATURES

- Simple preparation in only 2 minutes (incl. mixing)
- After injection, AXOZ will harden within 20 – 25 minutes
- The AXOZ can be used, while prepared, for approx. 60 minutes
- The compressive strength of AXOZ is similar to that of human cancellous bone, 12 MPa.
- AXOZ manifests a total porosity of 65-70%, with roughly 8% of macroporosity
- Resorption within 6 – 8 months

INDICATIONS

- Spine fusion
- Cortical bone defects
- Cancellous bone defects
- Periodontal defects
- Sinus lift



STUDY



The conclusions of a preclinical study, where AXOZ is compared with a well-known predicate, was that the AXOZ is outperforming the predicate. The AXOZ can be injected for a longer period and with less force. The final porosity is 15% higher and the compressive strength is 6 times higher. Because of its nature apatitic, the predicate is a product that remains dense after implantation.

Interesting are the histomorphometrical results for newly formed mineralized bone. Bone had grown centripetally and progressed towards the center of the defects. AXOZ had, after 4, 8 and 12 weeks, respectively 2%, 8% and 13% more newly formed bone than the predicate.

AXOZ is biocompatible, osteoconductive as well as osteotransductive and is an ideal material for use as a bone substitute.

AVAILABLE AS

Art. No.	Type	Volume	Packing
4921005	Calcium Phosphate Cement	5.0 cc	Box of 1 unit
4921008	Calcium Phosphate Cement	8.0 cc	Box of 1 unit
4921016	Calcium Phosphate Cement	8.0 cc	Box of 2 units
4921100	AXOZ Injector (autoclavable)	---	Box of 1 unit

The injector is not included in each unit of cement

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