

Article	Packaging Size	Art.-No.
BonOs® Inject 1 x 24 CE-Version	1 x 24 g	01-0310




## BonOs® Inject

Bone Cement for Spinal Applications



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## BonOs® Inject

PMMA is been used in orthopedics for almost 50 years.

Within that time the indication fields have been extended step by step until in the 80's PMMA cements were applied in spinal surgery, too. There, they serve to stabilize, to fill cavities of erected vertebral bodies and to eliminate pain. For these specific indications BonOs® Inject was developed.

**BonOs® Inject** fulfills all requirements for bone cements in spinal surgery:

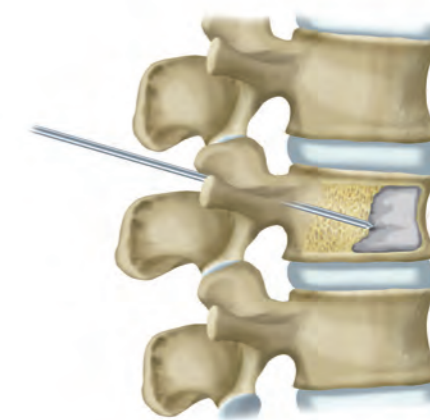
- Suitable viscosity for vertebroplasty and kyphoplasty
- Approved for the augmentation of pedicle screws where bone quality is poor, e.g. in patients with osteoporosis or degenerative or neoplastic changes.
- Short mixing time, long application time
- Fast achievement of application viscosity
- High radiodensity with 45% ZrO<sub>2</sub>
- Good fatigue strength

### Fast achievement of application viscosity

The composition of the polymers ensures a high initial cohesion and therefore reduces the risk of cement leakage.

After a short waiting time the cement attains an ideal viscosity for application.

BonOs® Inject can be used for vertebroplasty, kyphoplasty as well as for the augmentation of pedicle screws.



Example of a cemented vertebra

### Long application time

Both components bind quickly to a homogenous paste with the suitable viscosity for percutaneous injection.

After a short mixing time, the surgeon has sufficient time for the transfer of BonOs® Inject in the application instruments followed by a long application time.

Max. Time [Min.] at 21°C

Mixing	0.5
Waiting	5.0
Application	7.5
Hardening	9.0

at 21°C*	Mixing	Filling of the application instruments and waiting time	Application	Hardening
Max. Time	0.5 ▶	5.0 ▶	7.5 ▶	9.0 ▶
[Min]*	▶ 0			
	▶ 22 ▶			

Temperature-Time-chart (Example for 21°C)

Test conditions: Application needle: ø 3 mm, length 210 mm, Syringe capacity: 1 ml

\* For further information see the Instructions for Use

### Chemical composition

#### Powder (24 g)

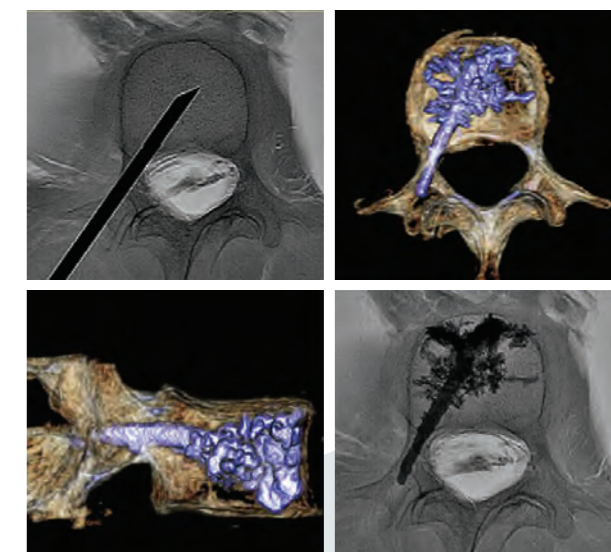
Poly(methyl methacrylate)	10.95 g
Poly(methyl acrylate / methyl methacrylate)	1.75 g
Zirconium dioxide	10.80 g
Benzoyl peroxide	0.50 g

#### Liquid (10 ml)

Methyl methacrylate	9.93 ml
Dimethyl-p-toluidine	0.07 ml
Hydroquinone	60 ppm

### High radiopacity

The addition of zirconium dioxide (ZrO<sub>2</sub>) allows an optimal X-ray visualization of BonOs® Inject for a safe use.



X-ray Images  
Cadaver Tests © PD Dr. K. Wilhelm, Bonn

### Good mechanical properties

The composition of BonOs® Inject guarantees optimized mechanical properties which exceed the respective requirements of the ISO 5833 standard.

Thanks to its medium viscosity, BonOs® Inject can be used with all currently approved PMMA cements application tools.