powerbone®

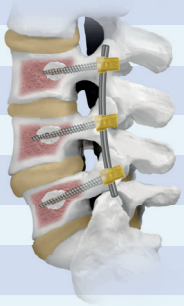
Gobal Leader In Synthetic & Resorbable Biomaterials

Bone Cement LV

For Vertebroplasty & Kyphoplasty

Powerbone Vertebral Bone Cement

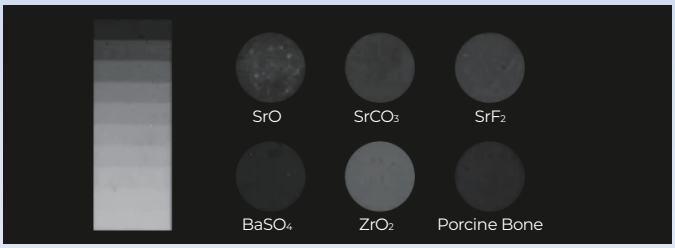
Key Features



- Reduced mixing time
- Low viscosity
- Unique dynamic mechanical properties
- Ideal for minimally invasive surgery
- Excellent handling characteristics
- Comply with ISO 5833 standard

Formulated with premium PMMA sourced from Evonik(Germany) to ensure the highest standards of safety and clinical reliability.

Zirconium Oxide Cement (ZrO_2)



- Zirconia provides equal radiopacity with lower negative impact on mechanics
- Zirconia is widely accepted as bioinert implant material

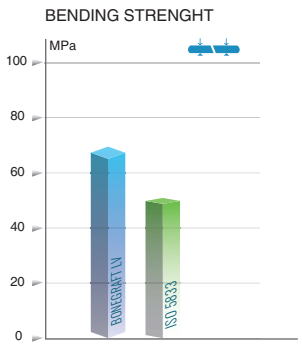
Indications

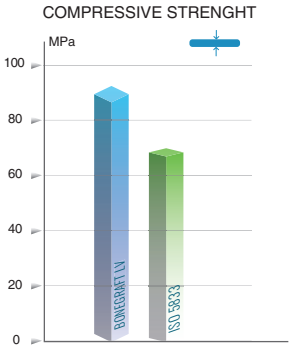
- PMMA BONE CEMENT LV is intended for use in vertebroplasty procedures to fill (replace) the missing (deficit) vertebral body.
- Other indications include:
  Fixation of pathological fractures where loss of bone substance or recalcitrance of the fracture renders more conventional procedures ineffective.

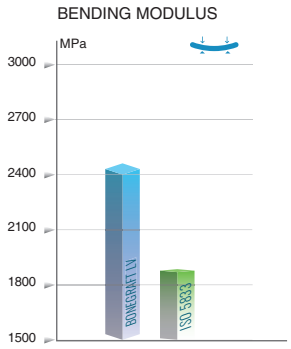
Side-by-Side Comparison (Barium Sulfate Cement ($BaSO_4$) / Zirconium Oxide Cement (ZrO_2)

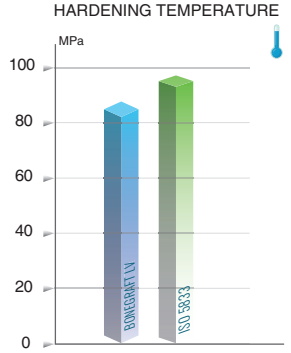
Parameter	Barium Sulfate Cement ($BaSO_4$)	Zirconium Oxide Cement (ZrO_2)
Radiopacity Level	Moderate–High	High
X-ray Contrast	Adequate	Superior (clearer visibility)
Edge Definition	Slightly diffuse	Sharp and well-defined
mmAl Equivalent	≥ 3 mmAl (meets ISO)	Higher at lower concentration
Filler Loading Requirement	Higher	Lower
Image Clarity in Dense Anatomy	Moderate	Better differentiation
Impact on Mechanical Properties	May reduce strength (high loading)	Better preservation
Clinical Interpretation	Acceptable visibility	Improved diagnostic confidence

Mechanical Properties According to ISO 5833









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