

## Bone Cement Constituents

<i>Powder</i>	
Polymer	Polymethyl methacrylate/co-polymer (PMMA)
Initiator	<b>Benzoyl peroxide (BPO)</b>
Radio - opacifier	<b>Barium sulphate (BaSO<sub>4</sub>)/Zirconia (ZrO<sub>2</sub>)/ Bismuth salicylate<sup>2</sup> Zirconium dioxide (ZiO<sub>2</sub>)<sup>3</sup></b>
Infection control	(e.g. Gentamycin)
<i>Liquid</i>	
Monomer	<b>Methyl methacrylate (MMA)</b>
Accelerator	N, N-Dimethyl para-toluidine (DMPT) /diMethyl para-toluidine (DMpt)
Stabiliser	<b>Hydroquinone</b>
Colourants	<b>Copper, peanut oil<sup>4</sup></b>

## References

All information from Reference 1) – other than where listed

1) Raju Vaishya, Mayank Chauhan, and Abhishek Vaish  
Bone cement

*Journal of Clinical Orthopaedics and Trauma. 2013 Dec; 4(4): 157–163.*

2) L. Hernández et al (2006-9-7).

Acrylic bone cements with bismuth salicylate: Behavior in simulated physiological conditions.  
*Journal of Biomedical Materials Research Part A, Volume #80A, pp. 321 – 332*

3) Zhiwei Hea et al

Bone cements for percutaneous vertebroplasty and balloon kyphoplasty: Current status and future developments

*Journal of Orthopaedic Translation, Volume 3, Issue 1, January 2015, Pages 1–11*

4) FDA, CHAPTER I--FOOD AND DRUG ADMINISTRATION  
DEPARTMENT OF HEALTH AND HUMAN SERVICES

PART 73 -- LISTING OF COLOR ADDITIVES EXEMPT FROM CERTIFICATION, Subpart D--Medical Devices  
Sec. 73.3110 Chlorophyllin-copper complex, oil soluble.

<http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?fr=73.3110>

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