METOXIT
high tech ceramics

Experience + Innovation = **Metoxit AG**

Competence

Where tradition and innovation become one, outstanding OEM solutions develop. With 40 year of experience in ceramics, Metoxit AG is the perfect partner for reaching the next milestone in dental applications.
The zirconia expert from Switzerland has redefined the tried-and-tested, and developed the ZIRALDENT® and ZIRCAPORE® systems – ready for use...

Materials

The following materials are available:

- Zirconia
- Ziraldent® high performance ceramic
- ZircaPore® surface
- ZTA ceramics
- Alumina ceramics
- Coloured zirconia
- Custom-made developments

All materials are available in BIO-HIP® quality, sintered or pre-sintered state.

Solutions

Ceramics can be employed in all areas of dental prosthetics:

- Implants
- Abutments
- CAD/CAM-blanks
- Root posts
- Instruments
- semi-finished products

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The Swiss spirit of innovation

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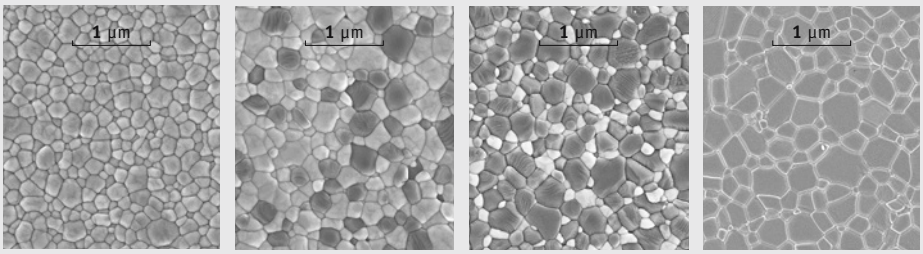
Implant Materials



	Units	TZP-A BIO-HIP®	Ziraldent®	ZTA BIO-HIP®	Al_2O_3 BIO-HIP®
Chemical Composition					
purity	wt%	> 99.5	> 99.5	> 98.0	> 99.9
		$ZrO_2/HfO_2/Y_2O_3/Al_2O_3$	$ZrO_2/HfO_2/Y_2O_3/Al_2O_3$	$ZrO_2/HfO_2/Y_2O_3/Al_2O_3$	Al_2O_3
MgO	wt%	≤ 0.04	≤ 0.04	≤ 0.01	0.05
SiO_2	wt%	≤ 0.02	≤ 0.02	≤ 0.01	≤ 0.01
Fe_2O_3	wt%	≤ 0.01	≤ 0.01	≤ 0.01	≤ 0.01
Na_2O	wt%	≤ 0.04	≤ 0.04	≤ 0.01	≤ 0.01
Properties					
Density	g/cm^3	6.08	5.50	4.40	3.98
Bending strength (4-point)	MPa	≥ 1100	≥ 1300	≥ 900	≥ 500
Grain Size (mli)	µm	≤ 0.4	≤ 0.6	0.7	1.8
Fracture Toughness K_{Ic}	MPa√m	8	8	5.3	3.5
Hardness HV_{10}	-	1250	1400	1700	2100
Coefficient of thermal expansion	$10^{-6}/K$	10	9	8.5	8
Thermal conductivity	W/mK	2.5	6	22	30
Suggested applications		Bioceramics such as dental implants, small joint implants	Bioceramics such as dental implants, small joint implants	Bioceramics such as hip implants	Bioceramics such as hip implants

All information and data correspond to the present state of our knowledge concerning properties and applications. They do not guarantee certain properties for products designed for specific applications utilizing material(s) described.

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