

Metoxit Orthopedics

Ceramics for highest demands



*For the big jumps thanks to
Swiss precision*

Quality by Tradition

We are experts in technical ceramics. Since 1983 we manufacture high-precision components for orthopedic applications. We are a certified medical device manufacturer according to ISO 13485 and FDA 510(k).

OEM

We manufacture ceramic elements in the desired design, using only first quality raw materials. With our profound expertise we advise clients in material-related questions. All our products are exclusively made in Switzerland.

We manufacture ceramic components for:

- hip
- wrist
- finger joint
- spine
- jaw
- and much more

www.metoxit.com

The Swiss Spirit of Innovation

#metoxit

SWISS MADE

Proven millions of times!
When only the best is
good enough

Oxide Ceramics

for orthopedic applications

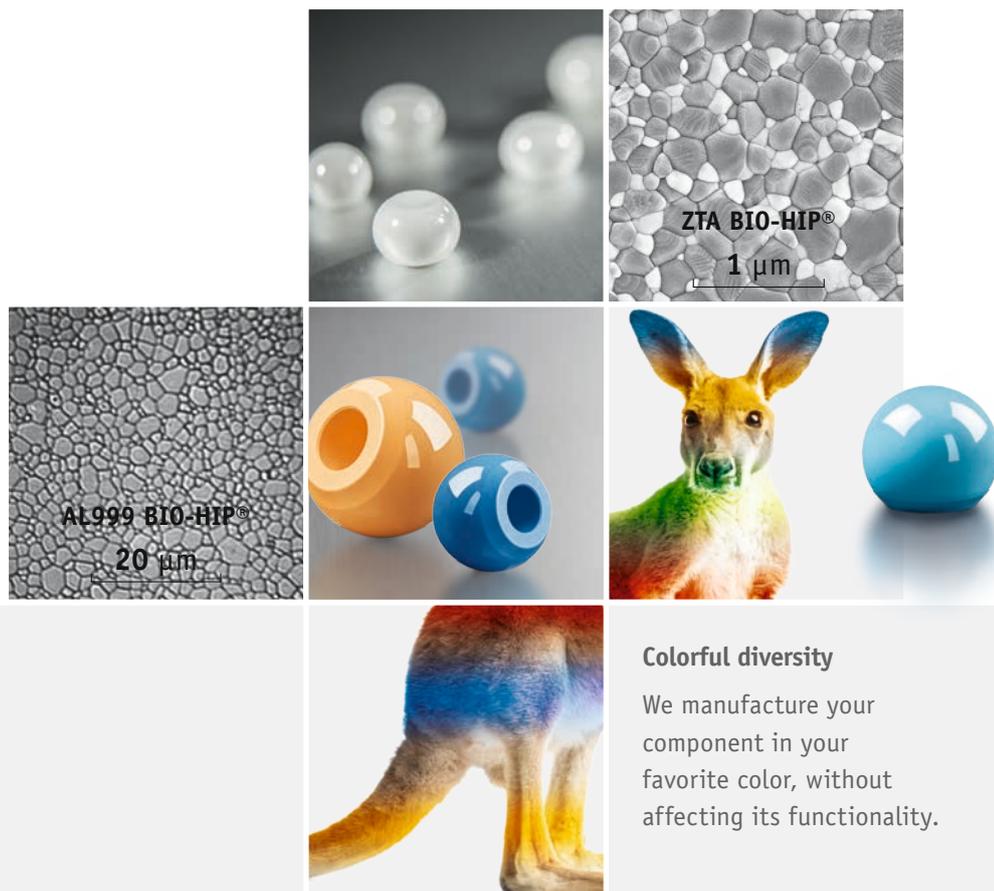
Ceramics is perfectly suitable as material for many kinds of implants. The advantages of ceramics include outstanding mechanical stability, corrosion resistance, minimal wear, excellent biocompatibility and longevity.

The material of choice for every application

Ceramics is a versatile material. We use different kinds of oxide ceramics with distinguished properties. The BIO-HIP® treatment grants extra-high stability and makes Metoxit products the first choice for the most demanding applications.

Quality first

Every material batch is subjected to an extensive quality control procedure. All our materials fulfil the requirements of ISO 6474 and ISO 13365.



Colorful diversity

We manufacture your component in your favorite color, without affecting its functionality.

www.metoxit.com

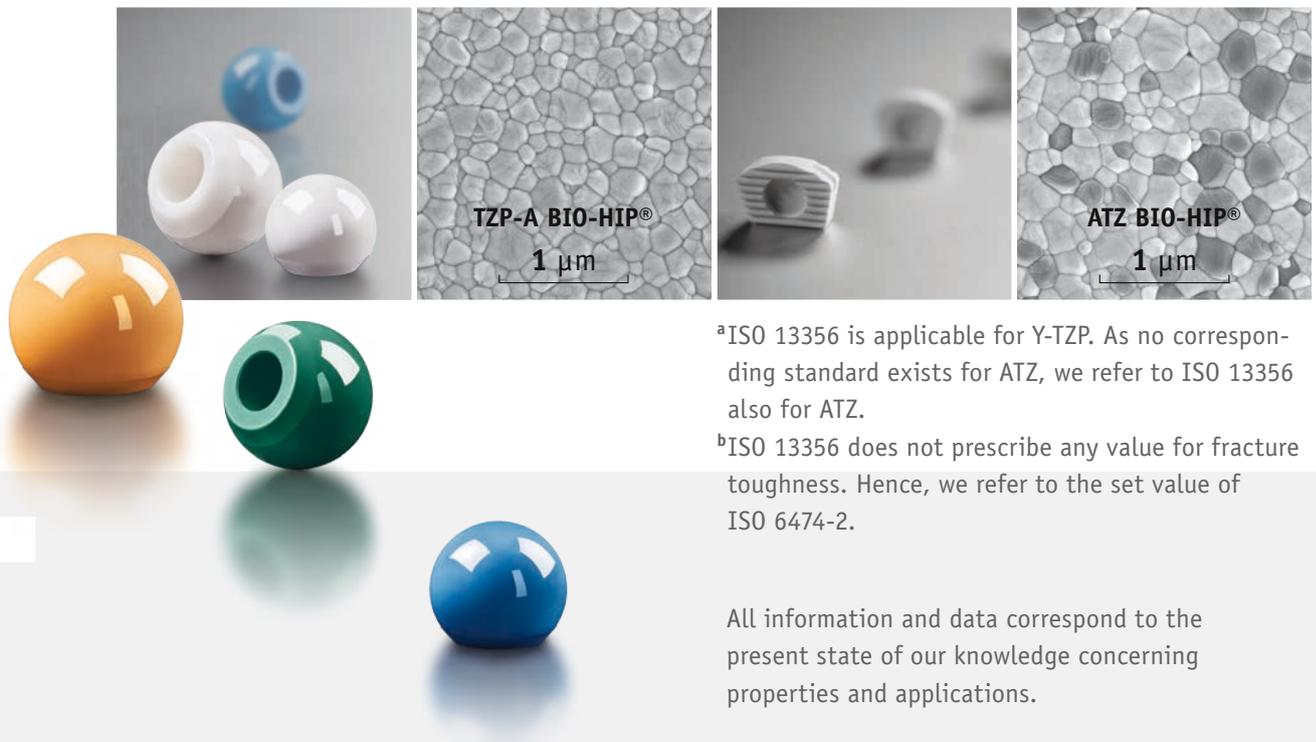
The Swiss Spirit of Innovation

#metoxit

Our materials

aluminum oxides und zirconia

measured quantity	unit	aluminum oxides				zirconia		
		Al999 BIO-HIP®	set value acc. to ISO 6474-1 Type A	ZTA BIO-HIP®	set value acc. to ISO 6474-2 Type S/X	TZP-A BIO-HIP®	ATZ BIO-HIP®	set value acc. to ISO 13356 ^a
density	g/cm ³	✓	≥ 3.94	✓	≥ 99%	✓	✓	≥ 6
ratio of Al ₂ O ₃	Gew.%	✓	≥ 99.7	✓	60-90	✓	20	≤ 0.5
ratio of ZrO ₂	Gew.%	≤ 0.05	N/A	✓	10-30	✓	80	≥ 99.0
flexural strength (4-point)	MPa	✓	≥ 500	✓	≥ 750/1000	✓	✓	≥ 800
flexural strength (biaxial, ring-on-ring)	MPa	✓	≥ 300	✓	≥ 450/600	✓	✓	≥ 500
young's modulus	GPa	✓	≥ 380	✓	≥ 320	✓	✓	≥ 200
hardness	GPa	✓	≥ 18	✓	≥ 15.5/16	✓	✓	≥ 11.8
fracture toughness	MPa * m ^{0.5}	✓	≥ 2.5	✓	≥ 3.5/4	✓	✓	≥ 4 ^b
fatigue resistance	MPa	✓	200 MPa at ≥ 10 ⁷ cycles	✓	300/400 MPa at ≥ 10 ⁷ cycles	✓	✓	320 MPa at ≥ 10 ⁶ cycles



^aISO 13356 is applicable for Y-TZP. As no corresponding standard exists for ATZ, we refer to ISO 13356 also for ATZ.

^bISO 13356 does not prescribe any value for fracture toughness. Hence, we refer to the set value of ISO 6474-2.

All information and data correspond to the present state of our knowledge concerning properties and applications.

About Metoxit AG

Founded in 1978, Metoxit possesses extensive experience in the field of high-tech ceramics.

Together with our clients, we develop highquality components for various industries.

Metoxit was among the first to use ceramics for biologic applications.

Virtually the entire value chain lies in Thayngen, Switzerland, which assures best possible quality control and flexibility.

We consistently strive for innovation.

Our dynamic team is looking forward to taking the next steps together with you.

Get in touch and grow with us.



*For the big jumps thanks to
Swiss precision*

www.metoxit.com

The Swiss Spirit of Innovation

#metoxit

Metoxit AG

Emdwiesenstrasse 6
CH-8240 Thayngen, Switzerland
phone +41 52 645 01 01
fax +41 52 645 01 00
www.metoxit.com
info@metoxit.com