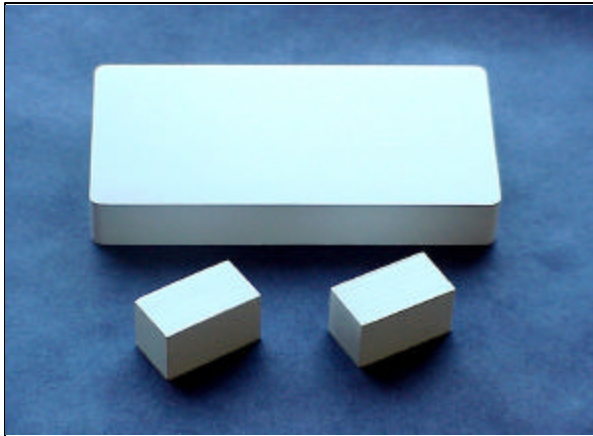




BISQUE ZIRCONIA BLANKS TYPE BYZ



Zirconia Blanks Type BYZ

FEATURES

- Rigid and Machinable
- High Strength when fully Sintered
- Predictable Isotropic Shrinkage
- Phase Stabilized with 3mol% Yttria
- Highest Quality Raw Materials
- Pre-fired and Organic Free
- 0.25wt% Alumina doped
- Sintered body meets ASTM F1873-98

Zircar Zirconia Blanks Type **BYZ** are high purity, bisque fired zirconia machining blanks. The powders pressed to form these blanks are of a uniform size and well dispersed, ensuring no agglomerates. The resultant fine grained, bisque body allows intricate shapes to be machined with tight tolerances.

BYZ blanks are phase stabilized with 3 mol% yttria and therefore do not undergo the usual phase transitions associated with pure zirconia. This phase transformation "toughens" the zirconia and stops crack propagation, yielding high fracture toughness and high strength.

The highest purity powders are used to make Type **BYZ** minimizing trace oxides. Type **BYZ** is 99.9 wt% $ZrO_2 + Y_2O_3 + HfO_2 + Al_2O_3$. The natural zirconia minerals contain hafnia, HfO_2 , which is so similar in structure and chemical properties to zirconia, that it has no effect on product properties. A small addition of alumina minimizes hydrothermal aging.

Trace Oxide	Typical Wt%
HfO_2	< 3
Al_2O_3	0.25
Na_2O	0.04
SiO_2	0.02
Fe_2O_3	0.01

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Product Data
Bulletin #F-AHA
October 2006
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Zircar Zirconia, Inc.
"Manufacturer of the original ZIRCAR products" ©

BISQUE ZIRCONIA BLANKS TYPE BYZ

PROPERTIES & CHARACTERISTICS

Bisque Density, g/cc (+/-0.10)	3.27
Sintered Density g/cc (+/- 0.01)	6.07
Sintering Temperature, °C (°F)	1530 (2786)
Fully Sintered Flexural Strength, MPa (psi)	>1000 (>145,000)
Fully Sintered Fracture Toughness, MPa (psi)	5 (725)
Hardness (HV10)	1250
Isotropic Shrinkage , %, 1 hr /1530°C (2786°F) (+/- 0.25%)	19.0-20.0

ORDERING INFORMATION

Zircar Zirconia Blanks Type **BYZ** are available in standard sized blocks which are listed below with their ordering item number. Please contact our Sales Department for pricing and availability.

- **To order** one of our standard sized blanks specify the Quantity you wish to order , the Item Number and Size.
For example: 10 each, Item # FAHA001, BYZ, 20mm x 19mm x 15mm

Custom sizes are available on request. Our forming process and machining capabilities allow custom shapes and sizes to be made. Please contact us with your special requirements and we'll be happy to provide you with a quotation.

Standard Sizes	Item Number
Zirconia Blank, Type BYZ, 20mm x 19mm x 15mm	FAHA001
Zirconia Blank, Type BYZ, 40mm x 19mm x 15mm	FAHA002
Zirconia Blank, Type BYZ, 100mm x 50mm x 15mm	FAHA003

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