

## Product specification

**Product Name:** Dental Zirconia Block

**Main components:**

ZrO<sub>2</sub>+HfO<sub>2</sub>+Y<sub>2</sub>O<sub>3</sub>: ≥99%;

Y<sub>2</sub>O<sub>3</sub>: 4.5%-6.0%;

HfO<sub>2</sub>: ≤5.0%;

Al<sub>2</sub>O<sub>3</sub>: ≤0.5%;

Other Oxides: ≤0.5%.

**Model and specification:**

Translucency type of products can be distinguished with high translucency(HT), high-plus translucency(HT-Plus),super translucency(ST). Color type own white and customized. Shape include cylinder, cuboid, and customized geometry.

Typical color of customized is as:A1,A2,A3,A3.5,A4,B1,B2,B3,B4,C1,C2,C3,C4,D2,D3,D4.

Typical shape of products is as followed.

Shape	Dimension
Cylinder	OD(Out diameter) *Thickness: 100*10/12/14/16/18/20/22/25; 98*10/12/14/16/18/20/22/25; 95*10/12/14/16/18/20/22/25;
Cuboid	Length*width*height:43*25*16/18/22,52*25*16/18/22,65*25*16/18/22,75*36*16/18/22,87*56*16/18/22,93*75*16/18/22,20*15*14/19,40*15/14/19,55*15*19,*65*25*22,65*40*22,85*40*22,26.5*25*20,50*25*20,60*25*20,72*40*25.
Customized geometry	Length*width*height: 89*71*10/12/14/16/18/20/22/25...
Pre-shaded	HT-plus-A1/A2/A3/A3.5/A4/B1/B2/B3/B4 of 98*10/12/14/16/18/20/22/25; ST 16 colors of 98*10/12/14/16/18/20/22/25

**Application scope:**

Use for the preparation of full ceramic crowns, onlays and bridges(anterior and molar).

**Application method:**

Take product from box, process it at CAD/CAM machine or manual grinding machine after fixation. Dyeing by dipping into coloring liquid or brush coloring liquid , then drying by infrared lamp, sintering at sintering temperature of 1480-1530°C.The recommended sintering curve is as followed: room temperature to 900°C,time is 90min; 900°C keep 30min;900°C to 1530°C, time is 168min; 1530°C keep 120min; 1530°C to 900°C, time is 120min; natural cooling to 200°C.

**Physical and chemical properties:**

1. Density ≥3.10g.cm<sup>-3</sup>;
2. Density after sintering: ≥6.0 g.cm<sup>-3</sup>;
3. Flexural strength after sintering: ≥1000Mpa;
4. Chemical solubility: <100 μ g.cm<sup>-2</sup>;
5. Radioactivity:U-238 no greater than 1.0 Bq.g<sup>-1</sup>.

**Biological properties:**

Cytotoxicity test: non- cytotoxicity;

Skin Sensitization test: non- sensitization;

Skin irritation test: non-irritation;

Systemic toxicity: non-systemic toxicity;

Ames test: negative.

Adverse reactions: this product has no any adverse reactions.

Period of validity: 5 years.

Storage: store at room temperature and drying condition.

Attention: avoid to collide with any hard matter, extrusion or shaking drastically.

Package: carton or plastic case.

Residue Disposal: this product has no pollution to environment after disposal.

Date of manufacture: reference to label.

Manufacturing enterprises:

Company name: Changsha Bloomden Bioceramics Co., Ltd

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