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Technical resources

## Zirconia grinding ball

<https://www.tencanballmills.com/en/products/grinding-series/ball-mill-media/zirconia-grinding-ball.html>

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# Zirconia grinding ball

Model:

Zirconia grinding balls, also known as zirconia ceramic beads, are high-density, wear-resistant media for ultra-fine grinding. Their smooth, pearl-like surface ensures efficient milling in paint, ink, and mineral processing.

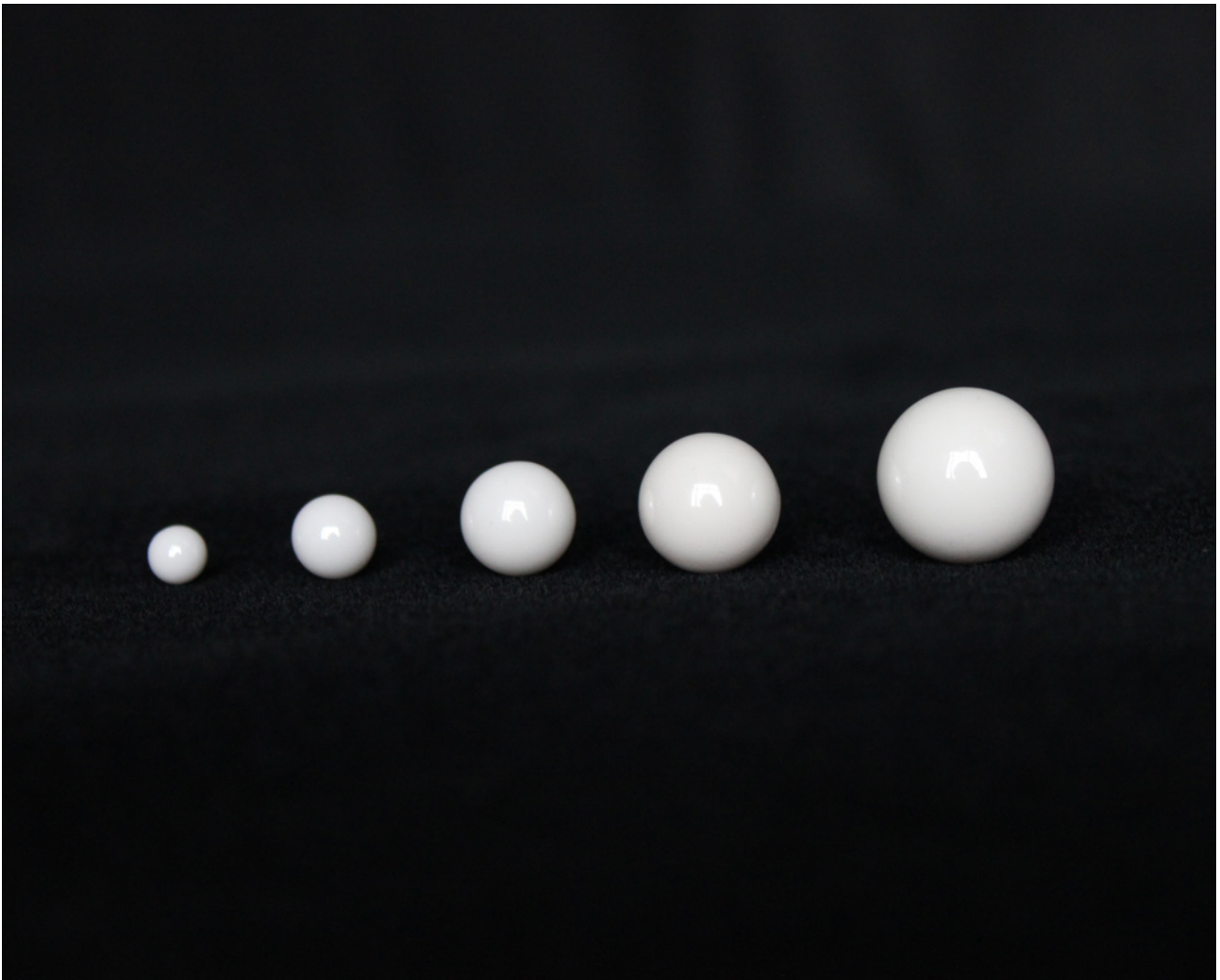
## Technical specifications

|          |                      |
|----------|----------------------|
| Diameter | 1~30mm               |
| Density  | 6.0g/cm <sup>3</sup> |
| Hardness | Mohs ~8.5, HV ~1250  |

These specifications describe the series. Confirm the selected model, power supply and configuration before ordering.



Zirconia balls, also known as zirconia grinding balls, zirconia ceramic balls, zirconium beads, ultra-fine grinding media, zirconia beads, zirconia grinding balls, have pearl-like luster and smooth working spherical surface, and are widely used in grinding media.





## Technical parameters

**diameter:**  $\phi 1\text{mm}-\phi 30\text{mm}$

**Main ingredients:**  $\text{ZrO}_2$  ( $\geq 95\%$ ),  $\text{Y}_2\text{O}_3$  stable

**Density ( $\text{g}/\text{cm}^3$ ):** 6.0

**hardness:** High, Mohs  $\sim 8.5$ , HV  $\sim 1250$

**Wear resistance (wear rate):** Excellent, approximately  $10^{-7}$  g/h

**Contamination risk:** Extremely low, inert, no metal contamination

**Main application areas:** High-purity, high-efficiency grinding, such as lithium battery materials, electronic ceramics, medicine, and high-end pigments.

**\* The above parameters are for reference only. The specific parameters are subject to actual conditions or customized parameters can be customized according to special requirements.;**

It has high strength and toughness, high density, good wear resistance, high temperature resistance and corrosion resistance, high stiffness, non-magnetic conductivity, electrical insulation, and thermal expansion coefficient close to steel at normal temperature.

Advantages: At  $600^\circ\text{C}$ , the strength and hardness of zirconia ceramic balls are the same as before.

1. High grinding efficiency: The specific gravity of yttrium-stabilized TZP zirconia ceramic beads is 1.6 times that of ordinary zirconia beads, and has higher grinding efficiency under the same conditions.

2. Good fluidity: The product has good roundness, smooth surface, and lower wear on equipment than other grinding media.

3. Impact resistance and low wear: TZP zirconia ceramic beads have good toughness and will not crack or peel in high-speed, high-concentration machines. The wear is only 1/2 of zirconium silicate beads.

4. Low cost of use: Choosing this product will definitely bring you a reduction in comprehensive costs such as media wear, power consumption, labor, equipment, etc., and greatly improve product quality.

## Contact

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Before operation, review the selected model's instructions and the material requirements.