

Yttria–Stabilized Zirconia Beads (YZ)

Technical Data Sheet

11/2024

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Yttria–Stabilized Zirconia Beads (YZ) are high–density, high–hardness fine ceramic beads made of stabilized zirconium oxide material, which can provide precise and consistent surface treatment effects. They have higher strength, density and impact resistance and are suitable for surface finishing and ultra–fine shot peening of hard metals.

- Smooth and even surface minimizes cracks
- Better energy transfer properties and higher compressive stress
- No particles embedded
- Durable and stable under high–intensity operations
- High density and easy to separate, especially suitable for ultra–fine sizes (<100μm)
- Certified with ISO9001:2015 and ISO14001 standards

CHEMICAL ANALYSIS

Typical values	ZrO ₂ +HfO ₂	Y ₂ O ₃
%	95±0.5	4.8±0.4

DESIGNATION AND AVAILABLE SIZES

Name	μm	Name	μm	Name	μm
YZ300	250–300	YZ200	200–250	YZ150	150–200
YZ100	80–125	YZ50	45–90	YZ50L	20–80
YZ30	15–35				

PHYSICAL PROPERTIES

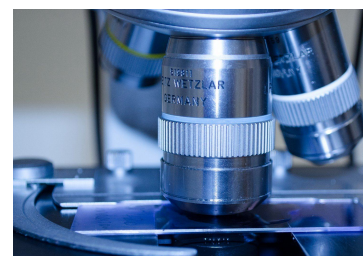
	Numerical Value
Vickers Hardness	≥1100HV
Grain Shape	Sphere
Particle Color	White
Density	≥6.0g/cm ³
Bulk Density	3.8g/cm ³
Crushing Load	≥20N
Specific Gravity	6.1g/cm ³

PACKAGING

- 25 kg plastic jerrycan, 1–ton bulk bag
- Big–bags available upon request

MAIN APPLICATIONS

- Improve fatigue strength and durability of aerospace and automotive metal parts
- Remove micro–defects on the surface of precision parts to achieve sub–micron smoothness
- Give consumer electronics and watches a uniform matte or smooth texture on their surfaces



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