ADVANCED MATERIALS
BY VIVARA SCIENTIFIC

TECHNICAL DATA SHEET
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GRINDING MEDIA

Ceria Zirconia Beads

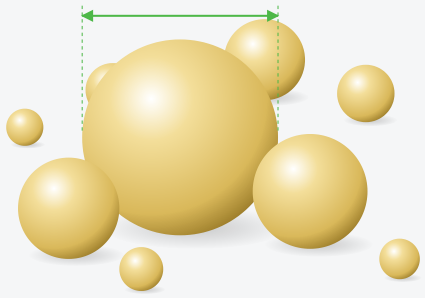
Ceria-stabilized zirconia (ZrO_2 / CeO_2)

A high-density zirconia bead stabilized with ceria instead of yttria. Nearly the density of YSZ with high crush strength, suited to bead mills running fine and ultrafine dispersions.

5.95 g/cm³
DENSITY

2000 N
CRUSH STRENGTH

0.1 ‰/h
WEAR LOSS



Stocked Ø 0.6–0.8mm · 2.8–3.2mm

CHEMICAL COMPOSITION

ZrO_2	≥ 80 %
CeO_2	≤ 20 %

Mass fraction, specification limits.

DENSITY VS. AMV MEDIA

YSZ	6.00
Ceria zirconia	5.95
Zirconium silicate	4.08
ZTA	3.70
Alumina	3.60

g/cm³, minimum values.

PHYSICAL PROPERTIES

Density	≥ 5.95 g/cm³
Vickers hardness	≥ 10 GPa
Crushing strength	≥ 2000 N
Wear loss	≤ 0.1 ‰/h
Sphericity	≥ 95 %
Water absorption	≤ 0.01 %
Color	Yellow

STOCKED SIZES

Ø 0.6 – 0.8 mm	1 kg pack
Ø 2.8 – 3.2 mm	1 kg pack
Other sizes	On request

Bulk quantities and custom size ranges available. Ask us for a quote.

TYPICAL APPLICATIONS

- Horizontal and vertical bead mills for inks, pigments and coatings
- Fine dispersion of electronic pastes and functional powders
- Planetary milling where high density is needed and yttria is not preferred

USE & CARE

Pair with: Zirconia planetary jars, or the grinding chamber of your bead mill.

Rinse new media before first use to remove fines. As a starting point for planetary milling, fill about one third of the jar with media, one third with sample and leave one third free.

Values are specification limits (minimum or maximum) and typical results for guidance only; they are not a warranty of performance in a specific process. Customers should confirm suitability for their application. Specifications may change without notice; the current version is on our website.

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