ADVANCED MATERIALS
BY VIVARA SCIENTIFIC

TECHNICAL DATA SHEET
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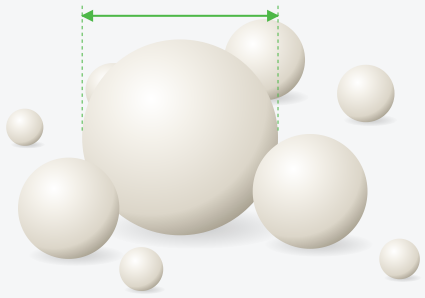
GRINDING MEDIA

YSZ Grinding Media

Yttria-stabilized zirconia (ZrO_2 / Y_2O_3)

Our densest ceramic media. High density and toughness transfer more energy per impact, so YSZ reaches fine particle sizes faster than alumina or silicate media while contributing very little wear debris to the batch.

6.0 g/cm³	2500 N	0.1 ‰/h
DENSITY	CRUSH STRENGTH	WEAR LOSS



Stocked Ø 3mm · 5mm · 10mm · 15mm · 20mm

CHEMICAL COMPOSITION

ZrO_2	≥ 94.8 %
Y_2O_3	≤ 5.2 %

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	≥ 6.0 g/cm³
Vickers hardness	≥ 11 GPa
Crushing strength	≥ 2500 N
Wear loss	≤ 0.1 ‰/h
Sphericity	≥ 95 %
Water absorption	≤ 0.01 %
Color	Milky white

STOCKED SIZES

Ø 3 mm	1 kg pack
Ø 5 mm	1 kg pack
Ø 10 mm	1 kg pack
Ø 15 mm	1 kg pack
Ø 20 mm	1 kg pack
Other sizes	1 to 30 mm

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

TYPICAL APPLICATIONS

- High-energy planetary and mixer milling of battery cathode and anode powders
- Advanced ceramics, electronic materials and pigments where purity matters
- Fine and nano grinding in wet or dry processes

USE & CARE

Pair with: Zirconia planetary jars. Matching media and jar material avoids cross-contamination.

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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