



Updated 18/07/2022

<b>Product name</b>	Ceramic Beads, Zirconia Partially Stabilized with Yttria, Sintered
<b>Product type</b>	YTZP
<b>Features</b>	<ul style="list-style-type: none"> <li>- High purity: made of high-grade and nanometer yttria stabilized zirconia precursor, which is also proudly produced by CHEMCO's own facility in large and homogenous batches</li> <li>- High density media ideal for high energy mills, maximizing throughput and productivity</li> <li>- High fracture toughness and high wear resistance minimize the contamination of beads during high speed milling</li> <li>- At least 15% superior to Ceria Stabilized Zirconia beads in wear rate, proved by many tests</li> </ul>
<b>Main applications</b>	<p>YTZP beads can be used in milling and dispersion of following materials, just name a few:</p> <ul style="list-style-type: none"> <li>- Bio-tech (DNA, RNA &amp; protein extraction and isolation)</li> <li>- Chemicals including Agrochemicals e.g. fungicides, insecticides and herbicides</li> <li>- Coating, paints, printing and inkjet inks</li> <li>- Cosmetics (Lipsticks, Skin &amp; sun protection creams)</li> <li>- Electronic materials and components e.g. CMP slurry, ceramic capacitors, lithium iron phosphate battery</li> <li>- Wheat seeds and Food (Complying with the regulations of European Food 1935/2004/EC and FDA)</li> <li>- Minerals e.g. TiO<sub>2</sub>, Calcium Carbonate and Zircon</li> <li>- Pharmaceuticals</li> <li>- Pigments and dyes</li> </ul> <p>Some other applications:</p> <ul style="list-style-type: none"> <li>- Flow distribution in process technology</li> <li>- Sintering bed with good thermal conductivity, can sustain high temperatures</li> <li>- Vibro-grinding and polishing of jewelry, gemstones &amp; aluminum wheels</li> </ul>
<b>Technical data*</b>	
<b>Specific density</b>	6.0 ± 0.05 g/cm <sup>3</sup>
<b>Bulk density</b>	3.7 kg/l
<b>Hardness (HV5)</b>	1306 ( Ø2mm Bead )
<b>Mohs' Hardness</b>	9
<b>Breaking load</b>	> 1 KN
<b>Color</b>	White ( pearl sheen )

\*typical values

<b>Standard sizes*</b>						
<b>Beads (Ø,mm)</b>	0.1 – 0.15	0.1 – 0.2	0.2 – 0.3	0.2 – 0.4	0.3 – 0.4	0.4 – 0.6
	0.6 – 0.8	0.8 – 1.0	1.0 – 1.2	1.2 – 1.4	1.4 – 1.7	1.5 – 2.0
	2.0 – 2.5	2.6 – 3.3	3.5 – 4.5	4.5 – 5.5		
<b>Balls (Ø,mm)</b>	8.0 – 9.0		9.3 – 10.7		11.5 – 12.5	

\*other sizes can be customized

<b>Manufacturer/ supplier</b>	<p>Chemco Advance Material (Suzhou) Co., Ltd  Guangfu Industrial Park, Fengshan Road, Suzhou 215159, CHINA  Phone: +86 186 1680 9761  Email: info@chemcobeads.com      Website: www.chemcobeads.com</p>
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Composition	Weight*	CAS No.
Zirconium dioxide ZrO <sub>2</sub> + Hafnium dioxide HfO <sub>2</sub>	94.6 %	1314-23-4 12055-23-1
Yttrium oxide Y <sub>2</sub> O <sub>3</sub>	5.2 %	1314-36-9
Others	0.2 %	

\*typical values

<b>Hazards identification</b>	Health rating: 0 – None Flammability rating: 0 – None Reactivity rating: 0 – None Contact rating: 0 – Slight Possible irritation through abrasive friction. Risk of slipping if the product (beads) is spread out on the floor. As such, the product should not cause an inhalation problem but its utilization can create dust.
<b>First aid measures</b>	Eyes: may be abrasive through friction, treat as particle in eye.
<b>Fire fighting measures</b>	This product is not combustible or explosive. It is compatible with all standard fire-fighting methods.
<b>Accidental release measures</b>	Isolate the area and sweep the floor in order to collect the beads to avoid the slipping by rolling. Wear eye protectors and dust mask.
<b>Handling and storage</b>	In case of operations, which generate dust, wear dust mask. Wear eye protectors. Heavy material, respect the security rules in case of stocking. Use safety shoes for handling.
<b>Physical / Chemical Properties</b>	Appearance and odor: odorless white beads Solubility in water: insoluble Volatiles by volume at 21°C: 0% Boiling point: NAIF Melting point: over 1600°C
<b>Disposal consideration</b>	Whatever cannot be saved for recovery or recycling should be managed in an appropriate waste disposal facility. Dispose of packaging and unused contents in accordance with governmental and local requirements.
<b>Transport information</b>	Not regulated
<b>Manufacturer / supplier</b>	Chemco Advance Material (Suzhou) Co., Ltd Guangfu Industrial Park, Fengshan Road, Suzhou, 215159, CHINA Phone: +86 186 1680 9761 Email: info@chemcobeads.com      Website: www.chemcobeads.com