

Product name	Ceramic Beads, Zirconia Partially Stabilized with Yttria, Sintered
Product type	YTZP
Features	 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 High density media ideal for high energy mills, maximizing throughput and productivity High fracture toughness and high wear resistance minimize the contamination of beads during high speed milling At least 15% superior to Ceria Stabilized Zirconia beads in wear rate, proved by many tests
Main applications	YTZP beads can be used in milling and dispersion of following materials, just name a few: - Bio-tech (DNA, RNA & protein extraction and isolation) - Chemicals including Agrochemicals e.g. fungicides, insecticides and herbicides - Coating, paints, printing and inkjet inks - Cosmetics (Lipsticks, Skin & sun protection creams) - Electronic materials and components e.g. CMP slurry, ceramic capacitors, lithium iron phosphate battery - Wheat seeds and Food (Complying with the regulations of European Food 1935/2004/EC and FDA) - Minerals e.g. TiO ₂ , Calcium Carbonate and Zircon - Pharmaceuticals - Pigments and dyes Some other applications: - Flow distribution in process technology - Sintering bed with good thermal conductivity, can sustain high temperatures - Vibro-grinding and polishing of jewelry, gemstones & aluminum wheels
Technical data*	
Specific density	$6.0 \pm 0.05 \text{g/cm}^3$
Bulk density	3.7 kg/l
Hardness (HV5)	1306 (Ø2mm Bead)
Mohs' Hardness	9
Breaking load	> 1 KN
Color	White (pearl sheen)

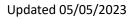
^{*}typical values

Standard sizes*						
Beads (Ø,mm)	0.09 - 0.11	0.1 - 0.15	0.2 - 0.3	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	6.0 – 7.0	6.5 – 7.5	7.5 – 8.5
Balls (Ø,mm)	8.0 – 9.0		9.3 – 10.7		11.0 – 13.0	

^{*}other sizes can be customized

Manufacturer/	Chemco Advance Material (Suzhou) Co., Ltd		
supplier	Guangfu Industrial Park, Fengshan Road, Suzhou 215159, CHINA		
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	Email: info@chemcobeads.com Website: www.chemcobeads.com		

Safety Data Sheet Type YTZP





Composition	Weight*	CAS No.
Zirconium dioxide ZrO ₂ +	94.6 %	1314-23-4
Hafnium dioxide HfO ₂		12055-23-1
Yttrium oxide Y ₂ O ₃	5.2 %	1314-36-9
Others	0.2 %	

^{*}typical values

Hazards identification	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.		
First aid measures	Eyes: may be abrasive through friction, treat as particle in eye.		
Fire fighting measures	This product is not combustible or explosive. It is compatible with all standard fire-		
	fighting methods.		
Accidental release	Isolate the area and sweep the floor in order to collect the beads to avoid the		
measures	slipping by rolling.		
	Wear eye protectors and dust mask.		
Handling and storage	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.		
Physical / Chemical	Appearance and odor: odorless white beads		
Properties	Solubility in water: insoluble		
	Volatiles by volume at 21℃: 0%		
	Boiling point: NAIF		
	Melting point: over 1600℃		
Disposal consideration	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.		
Transport information	Not regulated		
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