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 - 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 ± 0.05 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)	0.03	0.05	0.08 – 0.13	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
Balls (ø,mm)	8.0 – 9.0		9.5 – 10.5		11.5 – 12.5	

*other sizes can be customized

Manufacturer/ supplier	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

Composition	Weight*	CAS No.
Zirconium dioxide ZrO_2 + Hafnium dioxide HfO_2	94.6 %	1314-23-4 12055-23-1
Yttrium oxide Y_2O_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 measures	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.
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 Properties	Appearance and odor: odorless white beads 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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