



Updated on 15/10/2021

Product name	Ceramic Beads (Balls), Zirconia Toughened Alumina, Sintered
Product type	ZTA-W (Invented for Wet Grinding)
Features	<ul style="list-style-type: none"> - A unique product in the market, developed by CHEMCO expert R&D team after several years of research and experiments; - Standard Size from 2.0-70 mm; - Proved by comparison wear rate tests, ZTA-W is 4-30 times better in wear resistance than various quality High Alumina (90- 92 % Al₂O₃) grinding medias in global market; - The similar density enables this product to substitute High Alumina media very well - Superior performance-price ratio saving users' cost
Main applications	<p>ZTA-W beads/balls are specifically suitable for wet grinding of following materials in ceramic and mining industry, just name a few:</p> <ul style="list-style-type: none"> - Ceramic body, glaze and zircon - Gold, silver, platinum, lead, copper and zinc sulfide
Technical data	
Specific density*	3.65 g/cm ³
Bulk density*	2.3 kg/l
Hardness	1230 (HV10) / (Mohs' hardness 9)
Porosity	0 %
Flexural Strength	≥ 380 MPa
Breaking Strength*	1000 Kgf/Pcs (8mm Bead)
Water Absorption	< 0.01%
Color	White
Wear Rate	0.03%
(Wet Grinding)	Test Condition: a Lab Ball Mill (Jar Mill) Size: 7.6 L, Media Size: 40 mm, Media Feed: 4 kg (Media Filling Volume =23%), Water Feed: 4 L, Material Feed: 3 kg Zircon sand, Mill Speed: 90 rpm, Grinding Test Time: 24 hrs

*typical values

Standard sizes (∅,mm) *				
Beads			Balls	
2.0 – 2.5	5.5 – 6.5	12 – 14	20 ± 1	45 ± 2
2.5 – 3.0	6.5 – 7.5	14 – 16	26 ± 1.5	52 ± 2
3.0 – 3.5	7.5 – 8.5	16 – 18	32 ± 1.5	63 ± 2
3.5 – 4.5	9 – 11	18 – 20	35 ± 2	70 ± 3
4.5 – 5.5	11 – 13		40 ± 2	

*other sizes can be customized

Manufacturer / supplier	<p>Chemco Advance Material (Suzhou) Co., Ltd Guangfu Industrial Park, Fengshan Road, Suzhou, 215159, CHINA Email: info@chemcobeads.com Website: www.chemcobeads.com</p>
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Composition	Weight*	CAS No.
Aluminum oxide Al ₂ O ₃	90 %	1344-28-1
Zirconium dioxide ZrO ₂ + Hafnium dioxide HfO ₂	2 %	1314-23-4 12055-23-1
Silicon oxide SiO ₂	4 %	7631-86-9
Others	4 %	

*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°C: 0% Boiling point: NAIF Melting point: over 1600°C
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
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