



Product name	Ceramic Beads (Shots) for Ultra-Fine Shot Peening
Product type	AYZ (Yttria-zirconia)
Description	CHEMCO AYZ high-density yttria-zirconia ceramic shots combine extreme hardness, high density, and exceptional toughness in a fine-particle format. Engineered for both intensive peening and surface finishing, they deliver the highest Almen intensities on metallic substrates while producing an ultra-smooth, satin-like finish.
Features	- Intensified surface compression – Compared to conventional steel shots, AYZ transfers kinetic energy more efficiently, embedding deeper and more uniform compressive residual stresses right where they matter most. - Flawless finishing – The smooth, round morphology ensures gentle yet effective treatment, preserving the geometric integrity of even delicate parts. - Signature satin gloss – From consumer electronics to automotive trim and architectural surfaces, AYZ imparts a distinctive matte-sheen finish that elevates visual appeal.
Industrial Standards	Conforms to AMES2431/10-2024
Technical data	
Specific density (g/cc)	> 6.02
Hardness (HV0.5) *	1250
Surface discolor (%)	< 15

*typical values

Product code	Size range (Ø,mm)*	Product code	Size range (Ø,mm)*
AYZ 350	0.3 – 0.425 mm	AYZ 100	0.090 – 0.15 mm
AYZ 300	0.25 – 0.355 mm	AYZ 80	0.063 – 0.106 mm
AYZ 250	0.21 – 0.3 mm	AYZ 50	0.045 – 0.090 mm
AYZ 200	0.18 – 0.25 mm	AYZ 40	0.032 – 0.063 mm

*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
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Safety Data Sheet **Type AYZ**

In compliance with REACH regulation EC No.1907/2006 and US GHS



CHEMCO

Updated 17/09/2026

Identification	REACH registration numbers: Exempted from registration under REACH regulation EC No. 1907/2006			
Composition	Components	Weight*	CAS No.	EC No.
	Zirconium dioxide ZrO_2	93.5- 95 %	1314-23-4	215-227-2
	Yttrium Oxide Y_2O_3	4.5- 6 %	1314-36-9	215-233-5
	Other constituent, total	< 0.5 %	-	-
	Additional information: The ingredients of the silica-alumina vitreous phase cannot be dissociated by the product application in surface treatment by impact and it is free from crystalline silica. Traces of radioactive elements of natural origin (Series U238 & Th232, U + Th < 0.05 %) *typical values			
Hazards identification	CLP regulation EC 1272/2008: Not classified as a hazardous product OSHA GHS (US): Not classified as a hazardous product Health rating: 0 – None Flammability rating: 0 – None Reactivity rating: 0 – None 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.			
Firefighting 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 restricted			