

Zirconia Grinding Media

CHEMSHUN[®]
CERAMICS



Zirconia Grinding Media

Chemshun zirconia grinding media includes zirconia grinding beads and zirconia grinding cylinders. This series grinding medias have high fracture toughness and excellent impact resistant that causes no break under high speed impact.



Y-TZP Zirconia Ceramic Media

The Y-TZP beads have 30-50 times higher wear-resistance as glass beads, 5times higher as zirconium silicate beads and 6-8 times higher as Al_2O_3 beads. Because of the high density and excellent grinding efficiency of our TZP beads , they greatly apply to grinding and dispersing high viscosity materials.

Properties of Y-TZP Zirconia Ceramic Media

Properties	Unit	Data
Composition	wt%	94.6% ZrO_2 5.2% Y_2O_3
Specific Density	g/cm^3	5.95-6.0
Moh's Hardness	Grade	≥ 9.0
Elastic Modulus	Gpa	205
Thermal Conductivity	W/m.K	3
Crushing Load	KN	≥ 20 (Dia 7mm)
Fracture Toughness	$Mpa\cdot m^{1/2}$	7-10
Grain Size	μm	≤ 0.5
Thermal Expansion Coefficient (20-400℃)	$10 \times 10^{-6}/^{\circ}C$ (20-400)	11
Size Range of Beads	mm	0.1-55
Size Range of Cylinders	mm	6-40



PINGXIANG CHEMSHUN CERAMICS CO.,LTD



in English



En español

Factory & Office Address: Non-metal Area of Shangliuyuan, Economic Development Zone
Pingxiang City, Jiangxi Province, P.R. China. Code 337000
Tel: 86-799-6790781, 2181002, 2181004 Fax: 86-799-6790785
Website: www.chemshun.com & www.chemshun-es.com Email: office@chemshun.com

Zirconia Grinding Media

CHEMSHUN[®]
CERAMICS



Ce-TZP Zirconia Ceramic Media

With the properties of never aging and never broken, Chemshun Ce-TZP zirconia media has a very long uselife, and it's abrasion is smallest of all zirconia media with excellent wear-resistance performance. So, it widely used in grinding and the factories of inks,paper, paints, metal and non-metallic mineral, etc.



Properties of Ce-TZP Zirconia Ceramic Media

Properties	Unit	Data
Composition	wt%	78-80% ZrO ₂ 20-22% CeO ₂
Bulk Density	Kg/L	3.8(Φ7mm)
Specific Density	g/cm ³	≥6.20
Moh's Hardness	Grade	≥9.0
Vickers Hardness	HV	≥1100
Elastic Modulus	Gpa	200
Thermal Conductivity	W/m.K	3
Fracture Toughness	Mpam ^{1/2}	≥8.5
Grain Size	μm	≤0.5
Thermal Expansion Coefficient (20-400℃)	10×10 ⁻⁶ /℃ (20-400)	9

PINGXIANG CHEMSHUN CERAMICS CO.,LTD



in English



En español

Factory & Office Address: Non-metal Area of Shangliuyuan, Economic Development Zone
Pingxiang City, Jiangxi Province, P.R. China.Code 337000
Tel: 86-799-6790781,2181002,2181004 Fax: 86-799-6790785

Website: www.chemshun.com & www.chemshun-es.com Email: office@chemshun.com

Ceramic Grinding Media

CHEMSHUN[®]
CERAMICS



Alumina Grinding Media

Chemshun alumina grinding series Include alumina grinding balls, alumina grinding cylinder and alumina bricks. this series products are used widely in ball mill, pot mill, etc in sanitary ware plant, cement factory, ceramic floor tile plant and other nonferrous metal factory, etc.

Alumina Grinding Balls

Chemshun alumina grinding balls has advantages of high hardness, high density and anti-corrosion. With the smashing efficiency and scuff-resistance much better than that of common ball-stone or natural cobblestone, it is widely used in ceramics, metallurgy, glass, porcelain enamel, pigment, chemicals and other fields.

Chemshun Ceramics Advantages

- Tailor Made Engineered Ceramics Available
- Accept OEM & ODM Wear Engineered Ceramics & Project
- Provide Professional Industrial Wear Consult and Solution
- Accept Small & Big Quantity Orders
- Delivery Fast



Typical Characteristics of series of Alumina Grinding Balls

Properties	Unit	High Quality Alumina Grinding Ball	High Alumina Grinding Ball	
		CHEMSHUN 92A	CHEMSHUN 95	CHEMSHUN 92B
Al ₂ O ₃	%	92	95	92
Density	g/cm ³	3.60	3.65	3.60
Moh's Hardness	Grade	9	9	9
Self Abrasion Loss (24Hours, Wet Grinding)	%	≤0.009	<0.01	<0.01
Size Range	mm	0.5-20	6-30	20-60
Application	-	Zirconia silicate sand and similar products. (wet grinding and dry grinding are available)	Glaze/body material in ceramic factory, pigment, metallurgy, glass, chemicals and other fields, etc. (wet grinding only)	

PINGXIANG CHEMSHUN CERAMICS CO.,LTD



in English



En español

Factory & Office Address: Non-metal Area of Shangliuyuan, Economic Development Zone
Pingxiang City, Jiangxi Province, P.R. China. Code 337000
Tel: 86-799-6790781, 2181002, 2181004 Fax: 86-799-6790785

Website: www.chemshun.com & www.chemshun-es.com Email: office@chemshun.com



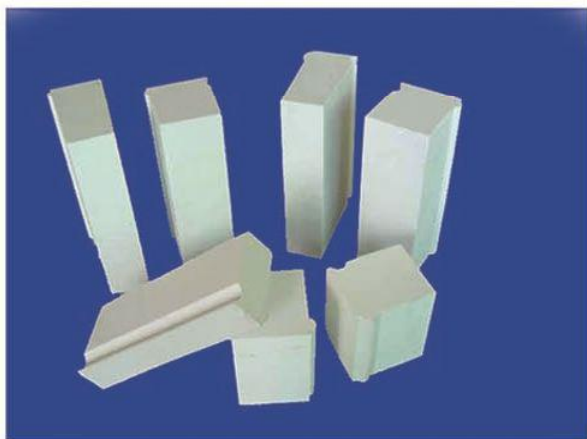
Alumina Grinding Cylinder

Chemshun alumina grinding cylinder is used as grinding media for ceramic body and glaze preparation. It's high purity and low abrasion loss make it to be suitable for both wet and dry superfine grinding of alumina, zirconium silicate, glaze, kaolin clay, quartz, feldspar, inks and ceramics in ball mill.



Properties	Unit	CHEMSHUN 95
Al ₂ O ₃	%	≥95
Density	g/cm ³	≥3.68
Moh's Hardness	Grade	9
Water Absorption	%	≤0.01
Self Abrasion Loss	‰	0.06

Alumina Lining Bricks for Mill



Alumina bricks have these shape rectangular brick, half rectangular brick, ladder brick, thin brick and half ladder brick, with the advantages of high density, high hardness, low abrasion loss, anti-corrosion and the good shape, it is used for ball mill as the wear-resistance lining, widely used in ceramic, cement, paint, chemical, pharmaceutical, coating etc. The lining brick can effectively improve the grinding efficiency, reduce the grinding cost and product pollution.

Alumina Lining Bricks 92% Al ₂ O ₃	L x H x W1 x W2 (mm)	
A. Rectangular Brick	150x50/60/70x50	
B. Half Rectangular Brick	75x50/60/70x50	
C. Ladder Brick	150x50/60/70x45	
D. Thin Brick	150x50/60/70x22.5x21	
E. Half Ladder Brick	75x50/60/70x50x45	

PINGXIANG CHEMSHUN CERAMICS CO.,LTD



in English



En español

Factory & Office Address: Non-metal Area of Shangliuyuan, Economic Development Zone
Pingxiang City, Jiangxi Province, P.R. China. Code 337000
Tel: 86-799-6790781, 2181002, 2181004 Fax: 86-799-6790785

Website: www.chemshun.com & www.chemshun-es.com Email: office@chemshun.com

Alumina Grinding Media for Cement Mill

CHEMSHUN[®]
CERAMICS



Alumina Grinding Media for Cement Mill

With the advantages of high density, low cost, excellent abrasion properties, Chemshun alumina grinding ball becomes an ideal grinding media instead of traditional high chromium steel ball for cement mill.

Physical Properties Comparison

Materials	Density	Bulk Weight	Moh's Hardness	Crushing Rate	Abrasion Loss
	g/cm ³	Kg/cm ³	Grade	%	g/Kg.h
High Chromium Steel Ball	7.6-7.8	4500	6.8	<1-3	0.18
Alumina Grinding Media	3.6-3.8	2200-2300	9.0	<1-3	0.09



Technical Datas

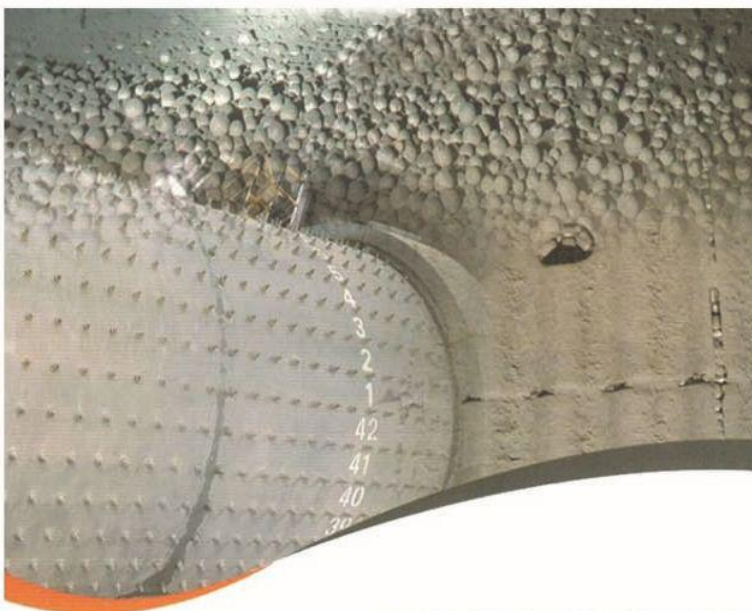
Properties	Unit	CHEMSHUN 92	CHEMSHUN 95
Al ₂ O ₃	%	≥92	≥95
SiO ₂	%	≤5	≤4
CaO+ MgO	%	≤2	≤2
Density	g/cm ³	>3.60	>3.70
Bulk Weight	Kg/cm ³	2200	2300
Moh's Hardness	Grade	9	9
Rockwell Hardness	HRA	83-85	85-87
Water Absorption	%	0	0

●Molding by Cold Isostatic Pressing

Diameter(mm)	Φ80	Φ70	Φ60	Φ50	Φ40	Φ30	Φ25
Range	80±3	70±3	63±2	52±2	40±2	32±1.5	26±1.5

●Molding by Rolling

Diameter(mm)	Φ20	Φ17	Φ15	Φ13
Range	20±1	17±1	15±1	13±1



PINGXIANG CHEMSHUN CERAMICS CO.,LTD



in English



En español

Factory & Office Address: Non-metal Area of Shangliuyuan, Economic Development Zone
Pingxiang City, Jiangxi Province, P.R. China. Code 337000
Tel: 86-799-6790781, 2181002, 2181004 Fax: 86-799-6790785

Website: www.chemshun.com & www.chemshun-es.com Email: office@chemshun.com

Alumina Grinding Media for Cement Mill

CHEMSHUN[®]
CERAMICS



Six Advantages of Alumina Grinding Media Instead of High Chromium Steel Ball for Cement Mill Application.

I. Save power

- Reducing the mill loading 20%;
- Saving power above 15% per ton cement.

II. Improve quality

- Improve the grinding efficiency;
- Improve the performance of cement;
- Rationalize the grains distribution more better;
- Increase 2% of the grain 3-32 μm ;
- Improve the spheroidization efficiency;
- Decrease 1-2% water in same standard consistency;
- Adapt the concrete admixture for cement well.

III. Reduce current

- The current of mill mainframe is reduced by more than 20%.

IV. Cooling and noise reduction

- The temperature could be down more above 20°C;
- Good effect of noise reduction.

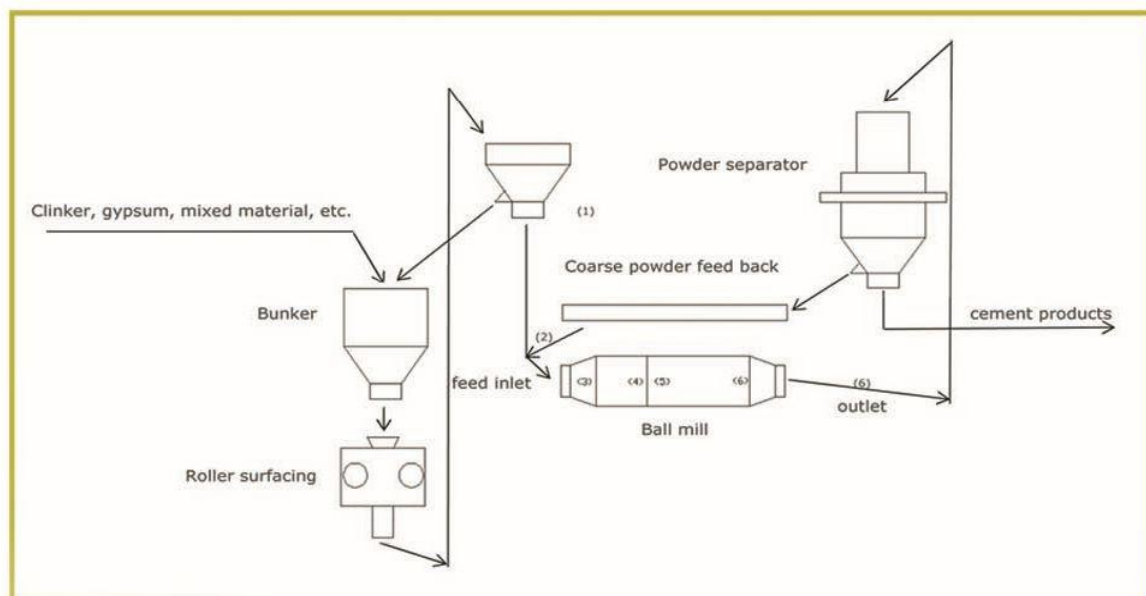
V. Excellent abrasion

- The abrasion loss of Chemshun alumina grinding media for cement mill is about a half of steel ball.

VI. Protect environment

- Using of Chemshun alumina grinding ball could protect environment effectively.

● Process Chart



PINGXIANG CHEMSHUN CERAMICS CO.,LTD



in English



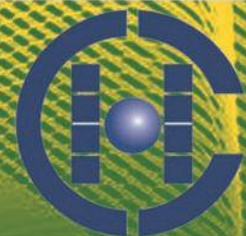
En español

Factory & Office Address: Non-metal Area of Shangliuyuan, Economic Development Zone
Pingxiang City, Jiangxi Province, P.R. China. Code 337000
Tel: 86-799-6790781, 2181002, 2181004 Fax: 86-799-6790785

Website: www.chemshun.com & www.chemshun-es.com Email: office@chemshun.com

Ceramic Grinding Media for Mining Industry

CHEMSHUN[®]
CERAMICS

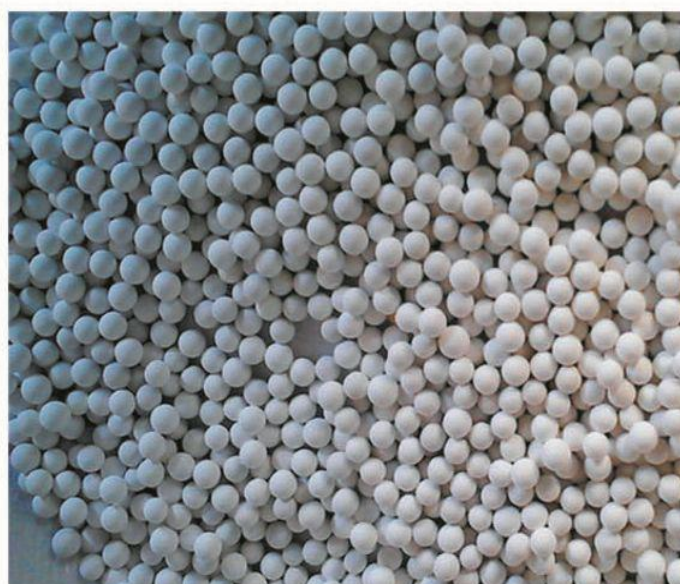


Ceramic Grinding Media for Mining

Chemshun ceramic grinding media for mining is small size ceramic balls(beads) used in high intensity stirred mills for fine and ultra fine grinding. The ceramic grinding media with different composition and size, and good feature of high impact resistance. The property of inert and non-pollution, the media can replace the traditional steel and chrome steel grinding media for applications where downstream processes are sensitive to surface chemistry and aslo could avoid to the generation of slimes which combined with those traditional media's angular shape and high wear rates.

Excellent Characters of Chemshun Ceramic Grinding Media for Mining

1. Low wear loss
2. High wear-resistance
3. Excellent corrosion-resistant



Technical Datas

Properties	Unit	CHEMSHUN 92	CHEMSHUN 75	CHEMSHUN ZTA
Al ₂ O ₃	%	92	75	74
ZrO ₂	%	-	-	25
SiO ₂	%	≤7	-	-
Density	g/cm ³	3.60	3.20	4.0
Color	-	White	White	White
Moh's Hardness	Grade	9	8	9
Water Absorption	%	0	0	0
Self Abrasion	%	≤0.01	≤0.02	≤0.01
Sphericity	%	≥95	≥95	≥95
Size	mm	2-20	2-20	2-20

PINGXIANG CHEMSHUN CERAMICS CO.,LTD



in English



En español

Factory & Office Address: Non-metal Area of Shangliuyuan, Economic Development Zone
Pingxiang City, Jiangxi Province, P.R. China.Code 337000
Tel: 86-799-6790781,2181002,2181004 Fax: 86-799-6790785

Website: www.chemshun.com & www.chemshun-es.com Email: office@chemshun.com