



ZHONGLONG CHEMICAL

60% to 95%

HIGH DENSITY

HIGH PURITY

ZIRCONIA CERAMIC

Chemically Inert

Smooth Tough

Sapphire Hard





Yttria Stabilized Zirconia Bead

Yttrium-stabilized zirconia balls are a type of ceramic grinding media that are widely used in various industries. They are made from a combination of zirconium dioxide and yttrium oxide, which are compressed and sintered at high temperatures to form a dense, hard material that is resistant to wear and corrosion.

One of the main advantages of using yttrium-stabilized zirconia balls as grinding media is their high density. This allows for more efficient grinding and milling, as the balls are able to exert more force on the material being ground. Additionally, their high density means that they are less likely to break or wear down, which can lead to longer-lasting grinding media and reduced downtime for maintenance.

Another advantage of yttrium-stabilized zirconia balls is their high strength and toughness. They have a high degree of resistance to fracture and can withstand the stresses and strains of high-speed milling and grinding without breaking or cracking. This makes them an ideal choice for use in mining applications, where they can be used to grind and crush hard ores and minerals.

Yttrium-stabilized zirconia balls also have a high degree of chemical stability. They are highly resistant to corrosion and can withstand exposure to a wide range of chemicals and solvents. This makes them an ideal choice for use in industries such as pharmaceuticals, where the risk of contamination is high.

Yttrium-stabilized zirconia balls are a versatile and effective type of ceramic grinding media that offer many advantages over other types of media. Their high density, strength, toughness, and chemical stability make them an ideal choice for a wide range of applications, from pharmaceuticals to mining and beyond. As technology continues to advance, it is likely that we will find even more ways to utilize this remarkable material in various industries.

CHEMICAL PROPERTIES

ZrO ₂	94.8±0.2%
Y ₂ O ₃	5.2±0.2%
Others	0%

PHYSICAL PROPERTIES

Colour	White
Surface Finish	Smooth
Bulk Density	3.7 g/cm ³
Density	>6.05g/cm ³
Compressive strength	>2.0KN (2mm)
Vickers hardness	>1200
Self consumption (ppm/h)	<0.5
Roundness	0.98 (Xmin/Xmax)

PACKAGE

20kgs or 25kgs/plastic drum

APPLICATIONS



ZHONGLONG YTTRIA STABILIZED ZIRCONIA BEAD CAN PROVIDE THE FOLLOWING SIZES

Broad Fraction Size (mm)	
0.05-0.1	0.1-0.2
0.2-0.3	0.2-0.4
0.3-0.4	0.4-0.5
0.4-0.6	0.5-0.7
0.6-0.8	0.7-0.8
0.7-0.9	0.8-1.0
0.9-1.0	0.9-1.1
1.0-1.2	1.2-1.4
1.4-1.6	1.6-1.8
1.8-2.0	2.0-2.2
2.2-2.5	2.5-2.8
2.8-3.2	3.2-3.5
4	5
6	7
8	10

**Remark : can be customized for clients*

CALCULATION METHOD

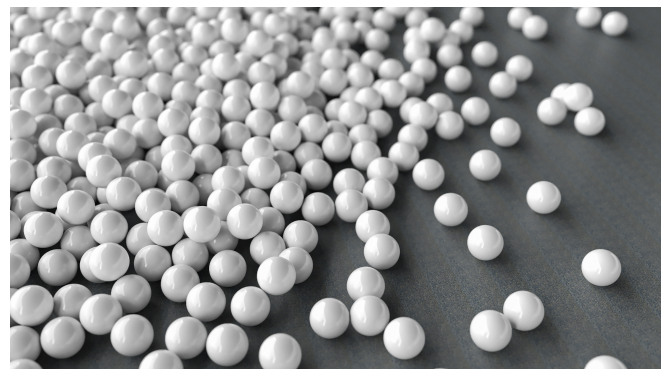
$$M=3.14 \times R^2 \times D \times L \times (25\%-50\%) \div 1000$$

M: Total quantity of ceramic ball

D: Density (g/cm³)

R: Radius of the mill (cm)

L: Length of the mill (cm)



Cerium Stabilized Zirconia Bead



FEATURES

Cerium-stabilized zirconia balls are a type of ceramic grinding media that are used in various industries. They are made from a combination of zirconium dioxide and cerium oxide, which are compressed and sintered at high temperatures to form a dense, hard material that is resistant to wear and corrosion.

One of the main advantages of using cerium-stabilized zirconia balls as grinding media is their high density. This allows for more efficient grinding and milling, as the balls are able to exert more force on the material being ground. Additionally, their high density means that they are less likely to break or wear down, which can lead to longer-lasting grinding media and reduced downtime for maintenance.

Another advantage of cerium-stabilized zirconia balls is their chemical resistance. They are highly resistant to corrosion and can withstand exposure to a wide range of chemicals and solvents. This makes them an ideal choice for use in industries such as pharmaceuticals, where the risk of contamination is high.

Cerium-stabilized zirconia balls also have a high degree of thermal stability. They can withstand high temperatures without undergoing significant changes in their physical or chemical properties. This makes them an ideal choice for use in high-temperature applications, such as in the production of advanced ceramics and refractory materials.

Cerium-stabilized zirconia balls are a versatile and effective type of ceramic grinding media that offer many advantages over other types of media. Their high density, chemical resistance, and thermal stability make them an ideal choice for a wide range of applications, from pharmaceuticals to advanced materials production and beyond. As technology continues to advance, it is likely that we will find even more ways to utilize this remarkable material in various industries.

CHEMICAL PROPERTIES

ZrO ₂	83-87%
CeO ₂	9-13%
Others	<2.0% Others

PHYSICAL PROPERTIES

Colour	Yellow
Surface Finish	Smooth
Bulk Density	3.75g/cm ³
Density	>6.0g/cm ³
Compressive strength	>1.5KN (2mm)
Vickers hardness	>1150
Self consumption (ppm/h)	<0.8
Roundness	0.97 (Xmin/Xmax)

PACKAGE

20kgs or 25kgs/plastic drum

APPLICATIONS



ZHONGLONG CERMIUM STABILIZED ZIRCONIA BEAD CAN PROVIDE THE FOLLOWING SIZES

Broad Fraction Size (mm)	
0.3-0.4	0.4-0.5
0.4-0.6	0.5-0.7
0.6-0.8	0.7-0.9
0.8-1.0	0.9-1.0
0.9-1.1	1.0-1.2
1.2-1.4	1.4-1.6
1.6-1.8	1.8-2.0
2.0-2.2	2.2-2.5
2.5-2.8	2.8-3.2
3.2-3.5	4
5	6

**Remark : can be customized for clients*

CALCULATION METHOD

$$M=3.14 \times R^2 \times D \times L \times (25\%-50\%) \div 1000$$

M: Total quantity of ceramic ball

D: Density (g/cm³)

R: Radius of the mill (cm)

L: Length of the mill (cm)





Zirconia Silicate Bead

Zirconium silicate balls are a type of grinding media used in ball mills and other milling applications. They are made from zirconium silicate powder, which is compressed and sintered at high temperatures to form a dense, hard material that is resistant to wear and corrosion.

One of the main advantages of using zirconium silicate balls as grinding media is their high density. This allows for more efficient grinding and milling, as the balls are able to exert more force on the material being ground. Additionally, their high density means that they are less likely to break or wear down, which can lead to longer-lasting grinding media and reduced downtime for maintenance.

Another advantage of zirconium silicate balls is their chemical resistance. They are highly resistant to corrosion and can withstand exposure to a wide range of chemicals and solvents. This makes them an ideal choice for use in industries such as pharmaceuticals, where the risk of contamination is high.

Zirconium silicate balls are also non-magnetic, which makes them an ideal choice for use in magnetic separation processes. They can be used to separate magnetic particles from non-magnetic particles, allowing for more efficient separation and purification of materials.

Zirconium silicate balls are a versatile and effective type of grinding media that offer many advantages over other types of media. Their high density, chemical resistance, and non-magnetic properties make them an ideal choice for a wide range of applications, from pharmaceuticals to mining and beyond. As technology continues to advance, it is likely that we will find even more ways to utilize this remarkable material in various industries.

CHEMICAL PROPERTIES

ZrO ₂	>64%
Si ₂ O ₂	30-35%
Others	1.0%

PHYSICAL PROPERTIES

Colour	White
Surface Finish	Smooth
Bulk Density	2.5 g/cm ³
Density	>4.0g/cm ³
Compressive strength	>2.0KN (2mm)
Vickers hardness	>800

PACKAGE

20kgs or 25kgs/plastic drum

APPLICATIONS



ZHONGLONG ZIRCONIA SILICATE BEAD CAN PROVIDE THE FOLLOWING SIZES

Broad Fraction Size (mm)	
0.6-0.8	0.8-1.0
1.0-1.2	1.2-1.4
0.4-1.6	1.5-2.0
2.0-2.5	2.5-3.0
3.0-3.5	4
5	6

**Remark : can be customized for clients*

CALCULATION METHOD

$$M=3.14 \times R^2 \times D \times L \times (25\% - 50\%) \div 1000$$

M: Total quantity of ceramic ball

D: Density (g/cm³)

R: Radius of the mill (cm)

L: Length of the mill (cm)



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