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Zirconia Ceramic Balls

Grinding Media-Zirconia Balls

Feature

1. Good roundness, smooth surface, brightness, high density, high strengthinertia and hardness, perfect grinding medium.

2. With very low wear rate, grinding media can prevent the material from.

3. Very long service life which can decreases its comprehensive operating cost.

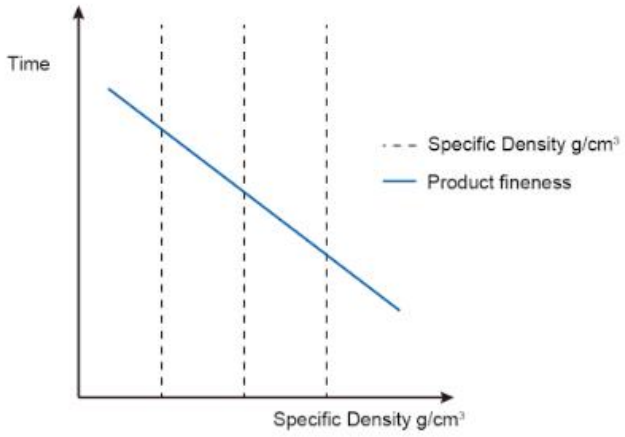
4. Good stability, strong acid resistance and alkali proof.

Main Technical Data

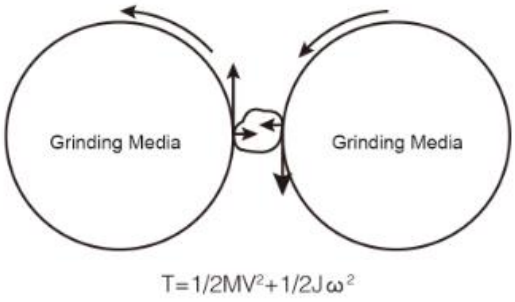
ZrO_2	94.6%
Y_2O_3	5.4%
Color	White
Specific Density	≥6.0 g/cm^3
Hardness	>10 GPa
Elastic Modulus	205 GPa
Fracture Toughness	7-10 Mpa.m$^{1/2}$
Bending Strength	1150 MPa
Grain Size	<0.5 μm
Thermal Conductivity	2.5 W/(m.k)
Bulk Density	-
Thermal Expansion Coefficient	9.6x10^{-6} (20-400°C) (K)

Applications

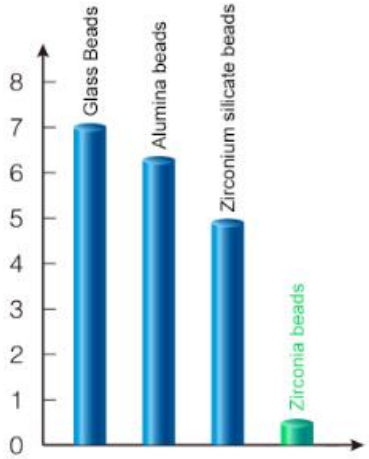
- Electronic ceramic
- Ink, paint, pigments, coating, dyes
- Food
- Cosmetic
- Pharmaceutical industry



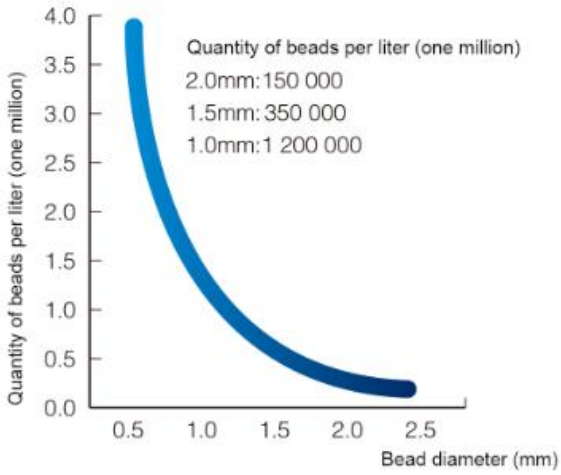
Correlation between grinding efficiency and bead density



Schematic diagram of dispersion



Grinding media wear level (% / t)



Quantity of beads per unit volume

Standard Sizes（ømm)

Beads

ø0.05-0.1	ø0.1-0.15	ø0.1-0.2	ø0.2-0.3	ø0.2-0.4	ø0.3-0.4
ø0.4-0.5	ø0.4-0.6	ø0.5-0.7	ø0.6-0.8	ø0.7-0.8	ø0.7-0.9
ø0.8-1.0	ø0.9-1.0	ø0.9-1.1	ø1.0-1.2	ø1.2-1.4	ø1.4-1.6
ø1.6-1.8	ø1.8-2.0	ø2.0-2.2	ø2.2-2.5	ø2.5-2.8	ø2.8-3.2
ø3.2-3.5	ø4	ø5			

Balls

ø6	ø7	ø8	ø10	ø15	ø20
ø30					

** Support customization.*

Zirconia Precision Ceramic Balls

Precision ceramic balls have excellent properties such as high strength, good wear resistance, corrosion resistance, high temperature resistance, electrical insulation, and non magnetic properties that metals do not possess. They are ideal products for use in the bearing industry, chemical industry, and valve industry.

Features

- High hardness, goodresistance, and long service life
- Self-lubricating never rusting， High temperature resistance
- Anticorrosion of acid and alk
- Nonmagnetic and electrical insulation
- At high temperatures, it does not adhere to the metal and almost does not react.

Ceramic Ball Accuracy Grade Table (Unit: um)

Level	Roundness Standard (ΔRSw max.)	Diameter Tolerance (VDws)	Surface Roughness (Ra max)	Tolerance Standard for Diameter Within A Batch (VDwl max.)
G3	0.08	0.08	0.010	0.13
G5	0.13	0.13	0.014	0.25
G10	0.25	0.25	0.020	0.50
G16	0.40	0.40	0.025	0.80
G20	0.50	0.50	0.032	0.80
G24	0.60	0.60	0.040	1.20
G28	0.70	0.70	0.05	1.4
G40	1.00	1.00	0.06	2.00
G60	1.50	1.50	0.08	3.00
G100	2.50	2.50	0.10	5.00
G200	5.00	5.00	0.15	10.00

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