



## GRINDING MEDIA PRICE LIST

### GLENMILLS® LEAD-FREE GLASS (sp. gr. 2.5)

These soda-lime lead-free glass beads are extremely round, have a narrow size spread, and their durability makes them ideal for thinner suspensions such as agricultural chemicals, tape coatings, aqueous suspensions, biologicals, and many other milling operations. Smaller sizes offered.

\*Standard packaging weight is 44 lbs. (20 kg). Packing Density 3.6 lbs./liter.

<u>Catalog No.</u>	<u>Actual Size</u>	<u>Nearest US Mesh</u>	<u>Quantity lbs</u>	<u>Price/lb.</u>
7200-000250	0.25 - 0.50mm	60 - 35	1 - 132	\$4.00
7200-000400	0.40 - 0.60	40 - 30		
7200-000500	0.50 - 0.75	35 - 25	176 - 572	3.50
7200-000750	0.75 - 1.00	25 - 18		
7200-001000	1.00 - 1.30	18 - "15"		
7200-001250	1.25 - 1.65	"15" - "13"	616 - 2156	3.20
7200-001550	1.55 - 1.85	"13" - "11"		
7200-001700	1.70 - 2.10	12 - 10		
7200-002000	2.00 - 2.40	10 - 8		
7200-002500	2.40 - 2.90	8 - 7		
7200-002850	2.85 - 3.45	7 - 6		
7200-003300	3.40 - 4.00	6 - 5	2200 and up	2.95
7200-003700	3.80 - 4.40	"5.5" - "4.5"		

### LARGER DIAMETER GLASS BALLS

<u>Catalog No.</u>	<u>Actual Size</u>	<u>1-220 lbs.</u>	<u>264 - 2,156 lbs.</u>	<u>2,200 and up</u>
7200 - 005000	5 mm	\$4.50/lb.	\$3.50/lb.	\$3.25/lb.
7200 - 006000	6	4.50	3.50	3.25
7200 - 007000	7	4.85	3.85	3.60
7200 - 008000	8	4.85	3.85	3.60
7200 - 009000	9	4.85	3.85	3.60
7200 - 009525	9.5 (3/8 inch)	4.85	4.10	4.00
7200 - 010000	10	4.10	3.10	2.95
7200 - 011000	11	4.10	3.10	2.95
7200 - 012000	12	4.10	3.10	2.95
7200 - 012700	12.7 (1/2 inch)	4.10	3.10	2.95
7200 - 013000	13	4.10	3.10	2.95
7200 - 014000	14	4.10	3.10	2.95
7200 - 014300	14.3 (9/16 inch)	4.10	3.10	2.95
7200 - 015000	15	4.10	3.10	2.95
7200 - 015875	15.9 (5/8 inch)	4.10	3.10	2.95
7200 - 016000	16	4.10	3.10	2.95
7200 - 019000	19	4.10	3.10	2.95
7200 - 019050	3/4 inch	4.10	3.10	2.95
7200 - 022225	22.2 (7/8 inch)	4.10	3.10	2.95
7200 - 025400	25.4 (1 inch)	4.10	3.10	2.95



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**Colored Glass**                                      0.04mm to 50.8mm (2") and up                                      **Call for price.**

Suitable for both engineering and decorative applications. Available in color surface, through color, opaque, or translucent. Available in precision and non-precision grades.

**Precision Glass Beads**                                      0.8mm to 1 inch ±0.01 or ±0.02mm                                      **Call for price.**

Suitable for ball bearings, check valves, level gauges, and low temperature critical applications.

Available in soda lime glass:                      0.8 – 50.8 mm diameters.

Available in borosilicate glass:                      2.5 – 50.8 mm diameters

**Borosilicate Glass Beads**                                      2.0mm to 18mm                                      **Call for price.**

Special glass for unique chemical environments.

**ALUMINA: 60%, 87%, 90%, 92%, 94%, 99.5%, 99.8% (sp. gr. 3.0 - 3.9); 0.4mm to 2.5 inch**

This line of media has replaced glass and sand as the next higher density media. Still very popular, they are somewhat more abrasive than the zirconium oxides that follow.

Large variety of compositions, shapes, and sizes.

\*Standard packaging weight is 50 lbs. Packing Density (90%) 4.9 lb/liter

**1,000+lbs. Call for price.**

Catalog No.	Size	90% BALLS		
		1 – 49 lbs.	50 – 249 lbs.	250 – 999 lbs.
7250-005556-2	7/32"	\$35.00/lb.	\$14.40/lb.	\$12.40/lb.
7250-006350-2	1/4"	35.00	13.90	11.90
7250-009525-2	3/8"	35.00	8.35	6.35
7250-012700-2	1/2"	35.00	7.00	5.00
7250-015875-2	5/8"	35.00	6.65	4.65
7250-019050-5	3/4"	35.00	6.50	4.50
7250-025400-2	1"	35.00	5.80	3.80
7250-031750-2	1-1/4"	35.00	5.60	3.60
7250-038100-2	1-1/2"	35.00	5.45	3.45
7250-044450-2	1-3/4"	35.00	5.40	3.40
7250-050800-2	2"	35.00	5.40	3.40
7250-063500-2	2-1/2"	35.00	5.60	3.60

Catalog No.	Size	90% RODS		
		1 – 49 lbs.	50 – 249 lbs.	250 – 999 lbs.
7251-006350-2	1/4" x 1/4"	\$35.00/lb.	\$13.50/lb.	\$11.50/lb.
7251-012700-2	1/2" x 1/2"	35.00	5.71	3.75
7251-020638-2	13/16" x 13/16"	35.00	5.53	3.53
7251-031750-2	1-1/4" x 1-1/4"	35.00	5.07	3.07



## GRINDING MEDIA PRICE LIST

**ALUMINA:** (continued)

The following is for **99.5% Alumina** in small lots to 150 pounds. For larger quantities, the prices are much lower. These may have a band about the equator. For **99.5% Alumina** there may be a quantity order minimum. The **99.8% Alumina** is available at additional cost.

<b>99.5% BALLS</b>		
<u>Catalog No.</u>	<u>Size</u>	<u>Price per lb.</u>
7250-005556-4	7/32"	\$49.00
7250-006350-4	1/4"	40.00
7250-009525-4	3/8"	30.00
7250-012700-4	1/2"	22.00
7250-015875-4	5/8"	21.00
7250-019050-4	3/4"	16.50
7250-025400-4	1"	15.00
7250-031750-4	1-1/4"	12.50

<b>99.5% RODS</b>		
<u>Catalog No.</u>	<u>Size</u>	<u>Price per lb.</u>
7251-006350-3	1/4" x 1/4"	\$45.00
7251-012700-3	1/2" x 1/2"	20.00
7251-020638-3	13/16" x 13/16"	18.00

**GLENMILLS® ZIRCONIUM OXIDE (sp. gr. 3.8) "ZrO"**

These are also called "fused zirconium oxide" or "zirconia silica". Perhaps the most popular media available has established a strong market position in the past four decades. They are 66% ZrO<sub>2</sub> and 29% SiO<sub>2</sub>, and 5% Others. Their surface is extremely smooth which minimizes mill wear. Pre-conditioned grade "S" material has most hollow, weak, and other debris removed. It is available in both wide and narrow spreads. Packing Density 5.1 lb/liter. \*Standard Packaging is 55 lbs. (25 kg.)

<b><u>PRE-CONDITIONED ZIRCONIUM OXIDE "S"</u></b>		
<u>Catalog No.</u>	<u>Approx. Size</u>	<u>Actual US Mesh</u>
7305-000001	0.1 – 0.2 mm	
7305-000002	0.2 – 0.3 mm	70-50
7305-000003	0.3 – 0.4 mm	50-40
7305-000004	0.4 – 0.6 mm	40-30
7305-000007	0.6 – 0.8 mm	30-20
7305-000010	0.8 – 1.0 mm	20-18
7305-000020	1.0 – 1.25 mm	18-16
7305-000031	1.25 – 1.6 mm	16-12
7305-000500	1.6 – 2.5 mm	12-10
Pricing:	1 - 220 lbs.	\$10.70/lb.
	221 - 1100 lbs.	\$10.45/lb.
	1101 - 2199 lbs.	\$9.95/lb.
	2200 lbs. and up	\$9.55/lb.



## GRINDING MEDIA PRICE LIST

### MEDIUM DENSITY ZIRCONIUM OXIDE “MD ZrO” (sp. gr. 4.0+)

A novel media on the market, these are developing a position where lower cost is desired with a medium density zirconium. Also known as "sintered zirconium oxide" these are a bit more abrasive on mill components than the "fused zirconium oxide".

Composition: 58% ZrO<sub>2</sub>, 37% SiO<sub>2</sub>, 5% Others. Packing Density ~5.4 lb/liter

Catalog No.	Size Range (mm)	Price <55 lbs. (<25 kg)	Price 55 lbs. to 2,145 lbs. (25-975 kg)	Price 2,200 lbs. or more (1,000kg +)
7310-000600	0.6 – 0.8	\$25.00/lbs.	\$9.70/lbs.	\$8.80/lbs.
7310-000800	0.8 – 1.0	25.00	9.70	8.80
7310-001000	1.0 – 1.2	25.00	9.30	8.50
7310-001200	1.2 – 1.4	25.00	9.30	8.50
7310-001400	1.4 – 1.6	25.00	8.95	8.10
7310-001600	1.6 – 1.8	25.00	8.95	8.10
7310-001800	1.8 – 2.0	25.00	8.95	8.10
7310-002000	2.0 – 2.2	25.00	8.95	8.10
7310-002200	2.2 – 2.4	25.00	8.95	8.10
7310-002400	2.4 – 2.6	25.00	8.95	8.10
7310-002500	2.5 – 2.8	25.00	8.95	8.10
7310-002800	2.8 – 3.15	25.00	8.95	8.10

## GRINDING MEDIA PRICE LIST

### HIGH DENSITY ZIRCONIUM OXIDE (sp. gr. 5.5) “HD ZrO”

This yellow colored material offers the highest density media at a moderate price. The material is used in applications where a higher specific gravity is needed for effective grinding. Composition is 97% ZrO with ~3% MgO stabilizer. \*Standard Packaging is 25 lbs. containers. Packing Density 7 lb/liter

<u>Catalog No.</u>	<u>Size (mm)</u>	<u>Tyler Mesh</u>	<u>1 – 24 lbs.</u>	<u>25 – 950 lbs.*</u>
7320-000100	0.6 - 0.85	28 - 20	\$60.00	\$46.00
7320-000101	0.85 - 1.18	20 - 14	55.00	35.00
7320-000103	1.4 - 1.7	12 - 10	55.00	35.00
7320-000104	1.7 - 2.3	10 - 8	55.00	30.00

For quantities greater than 1,000 pounds, prices are lower.

**Call for price.**

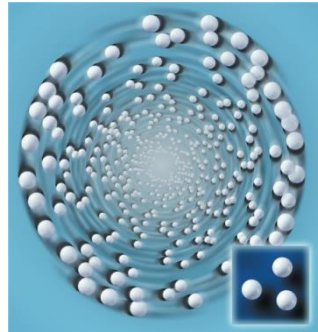
<u>Catalog No.</u>	<u>Size</u>	<u>1 – 49 lbs.</u>	<u>50 – 950 lbs.</u>
7320-006350	1/4" x 1/4"	\$55.00/lb.	\$41.00/lb.
7320-009525	3/8" x 3/8"	55.00	37.00
7320-012700	1/2" x 1/2"	55.00	33.00
7320-019050	3/4" x 3/4"	65.00	48.00
7320-025400	1" x 1"	65.00	48.00
7320-031750	1-1/4" x 1-1/4"	65.00	45.00

For quantities greater than 1,000 pounds, prices are lower.

**Call for price.**



## GRINDING MEDIA PRICE LIST



### **VERY HIGH DENSITY ZIRCONIUM OXIDE (sp. gr. 6.0) "VHD ZrO"**

This material is the highest density material available without the problems of metal contamination. The balls are very precise diameter, smooth surface for minimal mill and bead wear, and are offered in a wide range of diameters. Composition is 95% ZrO<sub>2</sub> and 5% Y<sub>2</sub>O<sub>3</sub>. Also known as "Yttria Stabilized Zirconium Oxide". The high initial cost is reasonable when the better grinds and extremely long life are considered. (Other alternative materials of similar composition but lower physical properties are available at lower cost, call). Sold in 1 kg (2.2 lbs) increments. Packing Density 3.7 kg/liter

<u>Catalog No.</u>	<u>Size</u>	<u>1 - 9 kg</u>	<u>10 - 49 kg*</u>
7361-000030	0.03mm	\$3,300.00/kg	\$3,275.00/kg
7361-000050	0.05	1,250.00	1,190.00
7361-000100	0.1	920.00	910.00
7361-000200	0.2	760.00	740.00
7361-000300	0.3	410.00	370.00
7361-000400	0.4	380.00	340.00
7361-000500	0.5	350.00	270.00
7361-000600	0.65	315.00	260.00
7361-000800	0.8	290.00	250.00
7361-001000	1.0	275.00	250.00
7361-001250	1.25	275.00	250.00
7361-001500	1.5	275.00	250.00
7361-002000	2.0	255.00	225.00
7361-003000	3.0	255.00	225.00
7361-005000	5.0	255.00	240.00
7361-010000	10.0	275.00	260.00
7361-015000	15.0	275.00	260.00
7361-020000	20.0	290.00	275.00
7361-025000	25.0	290.00	275.00
7361-00925CY	3/8" x 3/8" Cylinder	295.00	280.00
7361-012700CY	1/2" x 1/2" Cylinder	220.00	199.00

For quantities of 50 kg and greater, prices are lower.

## GRINDING MEDIA PRICE LIST

### STEEL BALLS (sp. gr. 7.0 to 7.8) “Near Ball Bearing Quality”

These balls are produced by essentially the same method as precision balls used in ball bearings. They are extremely round, good hardness of RHC 57-67, and tight sizes. From over 1 inch in diameter down to 0.8mm they are reasonably priced. Below 1.0mm the prices climb dramatically. For steel sizes below 1.5mm see steel shot below. Packing Density 11.3 lb/liter  
*Alloys available include:*

- |                              |  |
|------------------------------|--|
| <i><b>AISI 52100</b></i>     | <i><b>Chrome steel RHC 60-67</b></i>                 |
| <i><b>AISI 302/304</b></i>   | <i><b>Stainless steel RHC 25-39</b></i>              |
| <i><b>AISI 316</b></i>       | <i><b>Stainless steel RHC 25-39</b></i>              |
| <i><b>AISI 440C</b></i>      | <i><b>Stainless steel RHC 58-65</b></i>              |
| <i><b>AISI 1010/1022</b></i> | <i><b>Low carbon steel RHC 60 min (surface)</b></i>  |
| <i><b>AISI 1065</b></i>      | <i><b>High carbon steel RHC 60 min (surface)</b></i> |

Since steel pricing varies with market conditions and quantities, do call for current prices. As an example, the 52100 chrome steels in sizes of 3/8 to 3/4 inch diameter run in the \$1 to \$3 per pound price for quantities of 1,000 lbs.

### STEEL SHOT (sp. gr. 7.8)

These are conditioned to reduce irregular shapes and stuck debris, plus are hardened to Rockwell Hardness C 55-60 90% min. Shot is best for milling dark products. For the high density of steel in sizes below 1.5 mm they are the only reasonably priced material. Shot is a sifted product from 0.075mm to 3.0mm. Call for a detailed size chart.

<u>Carbon Steel Shot</u>		<u>300 Series Cast Stainless Steel Shot</u>	
1 - 499 lbs.	\$2.00/lb.	50 - 150 lbs.	\$7.00/lb.
500 - 1,000 lbs.	1.85	200 - 950 lbs.	6.00
1,000 - 1,999 lbs.	1.70	1,000 - 2,150 lbs.	5.50
2,000 lbs. and up	1.50	2,000 lbs. and up	5.00





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## GRINDING MEDIA PRICE LIST

### TUNGSTEN CARBIDE (sp. gr. 15) "WC"

This is the highest density grinding media currently available with ~94% WC and ~6% Cobalt or 6% Nickel GLEN MILLS offers unique bead sizes from ~0.5mm to 2.0mm and larger shapes 3/16" to 3/4".

**Call for price**

### OTHER MEDIAS AVAILABLE ...

This listing has included the more popular materials used for grinding applications. There are other materials GLEN MILLS supplies including: Plastics (polystyrene, polycarbonate, polyamide, acrylic), Ottawa Sand, Zirconium Toughened Alumina (ZTA), Silicon Carbide, Silicon Nitride, Syalon™, Porox™, Agate, WC-ZrO 9.5, Flint Pebbles, Rare Earth ZrO/CeO...  
**NEW → TEFLON COATED STEEL BALLS and RODS and more!**

\*Non Standard Packaging and documentation:

- *Additional \$20.00 per item for containers other than standard.*
- *Additional \$50.00 for documentation (COA, COC, et al). No charge for MSDS.*
- *All prices F.O.B. Clifton, New Jersey, or ex works.*
- *For Standard Terms and Conditions of Sale see: <http://www.glenmills.com/terms-conditions.html>*
- *Specifications, Order Minimums, and Prices subject to change without prior notice.*
- *All sales are final.*