

## STAINLESS STEEL BALLS TYPE 440-C

AISI type 440-C stainless steel balls afford the advantage of maximum hardness combined with corrosion-resisting properties. This hardness, together with precise geometry and fine surface finish, makes them especially useful for bearing and valve applications where severe environmental conditions may occur.

Consumable electrode vacuum melted (CEVM) and vacuum induction melted/vacuum arc remelted (VIM-MAR) materials are available upon request.

Material	AISI	ASTM	UNS	AMS	Military	DIN	JIS/SUJ
Stainless Steel Type 440	440-C	A-756 Type 440-C	S 44004 S 44003	5630 7445	MILS-862	14125	SUS 440C

*Additional testing may be required to certify that materials comply with specific standards.*

### Material Analysis

All sizes and grades of corrosion-resisting hardened stainless steel balls are made to ASTM 755.

Passivation to ASTM A380 and QQP35 is available upon request.

Chemical Analysis	
Carbon	0.95% to 1.10%
Chromium	16.0% to 18.0%
Manganese	1.0% maximum
Silicon	1.0% maximum
Molybdenum	0.40% to 0.65%
Phosphorus	0.025% maximum
Sulphur	0.025% maximum
Nickel	0.75% maximum
Copper	0.5% maximum

### Mechanical Properties

Type 440-C steel balls are uniformly hardened and tempered throughout their entire diameter to achieve maximum strength and quality. Ball hardness is 58-65 Rockwell "C" as measured on parallel flat surfaces. Also, Type 440-C stainless balls are magnetic. Custom heat treating is available for special hardness requirements.

Tensile Strength	285,000 psi
Yield Strength	275,000 psi
Elongation in two inches	2.0%
Reduction in area	10.0%
Modulus of elasticity	29,500,000 psi
Density	0.277 lbs./cu. in.

## AVAILABLE GRADES AND SIZES

Miniature Precision Stainless Steel 440-C Balls		
Grade	Size Range in Inches and Millimeters	
3	.025 - 3/16	0.793 - 4.792
5	.025 - 3/16	0.793 - 4.762
10	1/32 - 11/64	0.793 - 4.365
24	1/32 - 11/64	0.793 - 4.365
48	1/32 - 11/64	0.793 - 4.365
100	1/32 - 3/32	0.793 - 2.381
200	1/32 - 3/32	0.793 - 2.381

Precision Stainless Steel 440-C Balls		
Grade	Size Range in Inches and Millimeters	
10	3/16 - 1 1/4	4.762 - 31.750
16	3/16 - 1 1/4	4.762 - 31.750
24	3/16 - 2	4.762 - 50.800
48	3/16 - 2	4.762 - 50.800
100	1/8 - 4 1/2	3.175 - 114.300
200	1/8 - 4 1/2	3.175 - 114.300
1000	1/8 - 4 1/2	3.175 - 114.300
Media	1/8 - 3/4	3.175 - 19.050

## BALLS PER POUND

Size		
Inches	Millimeters	Balls Per Pound
1/32	0.793	226,000
3/64	1.190	66,900

Size		
Inches	Millimeters	Balls Per Pound
1 1/4	31.750	3.53
1 5/16	33.337	3.05

1/16	1.587	28,500
3/32	2.381	8,300
1/8	3.175	3,530
5/32	3.968	1,800
3/16	4.762	1,050
7/32	5.556	659
1/4	6.350	441
9/32	7.143	310
5/16	7.937	226
11/32	8.731	170
3/8	9.525	131
7/16	11.112	82.3
1/2	12.700	55.2
9/16	14.287	38.7
5/8	15.875	28.2
11/16	17.462	21.2
3/4	19.050	16.3
13/16	20.637	12.9
7/8	22.225	10.3
15/16	23.812	8.37
1	25.400	5.89
1 1/16	26.987	5.75
1 1/8	28.575	4.84
1 3/16	30.162	4.12

1 3/8	34.925	2.65
1 7/16	36.512	2.32
1 1/2	38.100	2.04
1 9/16	39.687	1.81
1 5/8	41.275	1.61
1 11/16	42.862	1.43
1 3/4	44.450	1.29
1 13/16	46.037	1.16
1 7/8	47.625	1.05
1 15/16	49.212	.948
2	50.80	.862
2 1/8	53.975	.719
2 1/4	57.151	.604
2 3/8	60.325	.515
2 1/2	63.500	.441
2 5/8	66.675	.373
2 3/4	69.850	.325
2 7/8	73.025	.284
3	76.200	.250
3 1/4	82.550	.197
3 1/2	88.900	.157
3 3/4	95.250	.128
4	101.600	.105
4 1/2	114.300	.074

---

**GLOBAL PRECISION BALL AND ROLLER • Toll Free: 1-800-4-BALLS-1 (1-800-422-5571)**  
**178 Sunny Valley Road • New Milford, Connecticut 06776 • Tel: 860-210-0808 • Fax: 860-210-0818**