

304 STAINLESS STEEL BALLS

AISI type 304 stainless steel balls meet requirements for an unhardened ball with excellent toughness and resistance to corrosion. Corrosion resistance may be increased through annealing. Both non-annealed and annealed balls are widely used in valves and related equipment.

Stainless type 304 balls are capable of resisting corrosion by such agents as oxidizing solutions, most organic chemicals, food stuffs and sterilizing solutions. They are moderately resistant to sulfuric acids. Non-magnetic properties available upon request.

Applications include aerosol, sprayers, finger pump mechanisms, milk machine blenders, food processing equipment and medical applications.

Material	AISI	Federal	Military	ASTM	UNS	AMS	Military & Gov't Standards
Stainless Steel (Type 302)	302	QQ-S-763	-	A-493	S-30200	-	-

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

Material Analysis:

All sizes and grades are of the highest quality and in accordance with AISI type 304. Passivation to ASTM A380 available upon request.

Chemical Analysis	
Carbon	0.15% maximum
Chromium	17 to 19% maximum
Manganese	2.0% maximum
Silicon	1.00% maximum
Sulphur	0.03% maximum
Phosphorus	0.045% maximum
Nickel	8 - 10% maximum

Mechanical Properties:

Non-annealed hardness, uniform throughout, typical Hardness, as measured on parallel flat surface, is Rockwell "C" 25 to 39 and includes the following properties:

Non-Annealed Mechanical Properties	
Tensile strength	80,000 to 180,000 psi
Yield strength	50,000 to 150,000 psi
Elongation in two inches	10 to 50%
Reduction in area	55 to 65%
Modulus of elasticity	29,000,000 psi
Density	0.286 lbs/cu. in.

Annealed hardness is Rockwell "B" 75 to 90. Annealing of Type 304 stainless steel balls is available upon request during time of quotation and order. Rockwell "B" 75 to 90, standard (annealed) AISI type 304 stainless steel balls include the following properties:

Annealed Mechanical Properties	
Tensile strength	100,000 to 180,000 psi
Yield strength	50,000 to 150,000 psi

Elongation in two inches	10 to 50%
Reduction in area	55 to 65%
Modulus of elasticity	29,000,000 psi
Density	0.286 lbs/cu. in.

Available Grades and Sizes:	
Grade	Size Range (inches)
50	3/64" - 5/32"
100	3/64" - 2"
200	3/64" - 2"

General Information:			
Size (inches)	Balls (p/lb)	Size (inches)	Balls (p/lb)
3/64"	64,800	5/16"	219
1/16"	27,030	11/32"	164
3/32"	8,060	3/8"	127
1/8"	3,410	7/16"	79.7
5/32"	1,750	1/2"	53.4
3/16"	1,010	9/16"	37.5
7/32"	638	5/8"	27.4
1/4"	427	3/4"	15.8
9/32"	300	1"	6.7

MM sizes available on request.

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