



Monel and K-Monel Balls

Material Characteristics

Monel: The ultimate in resistance to corrosion from steam, gas, salt water, ammonia, calcium chloride, acidic foods, high temperatures and other extreme environments. A low-hardness ball made from a special nickel-copper alloy.

Hardness: Monel 400

Typical hardness, as measured on parallel flats, is: Rockwell "B" 85 to 95†.

†Per ABMA Std 10, Table I

Material Analysis† – Monel

Nickel Minimum of 63.0%
 Copper 28.0 to 34.0%
 Iron Maximum of 2.50%
 Manganese Maximum of 0.20%
 Carbon Maximum of 0.30%
 Silicon Maximum of 0.50%

†Per ASM Metals Handbook

Material Characteristics

K-Monel: A slightly harder material with corrosion resistance equal to Monel.

Hardness: K-Monel 500

Typical hardness, as measured on parallel flats, is: Rockwell "C" 27 minimum †.

†Per ABMA Std 10, Table I

Material Analysis† – K-Monel

Nickel Minimum of 63.0%
 Copper 27.0 to 33.0%
 Iron Maximum of 2.00%
 Manganese Maximum of 1.50%
 Carbon Maximum of 0.25%
 Silicon Maximum of 0.50%
 Aluminum 2.0 to 4.0%

†Per ASM Metals Handbook

Material Conversion					
Material	AISI	Federal	ASTM	UNS	AMS
Monel 400	—	QQ-N-281	B164	N-04400	4730
		Class A			
K-Monel 500	—	QQ-N-286	—	N-05500	4676
		Class B			

Precision Balls

Monel and K-Monel Balls

General Data					
Size in Inches	Metric Sizes	Balls per Pound	Balls per Carton	Metric Balls per Carton	Weight per Carton in Pounds
1/16		25,564	200,000		9.8
3/32		7,574	60,000		13.2
7/64	3mm	4,762	60,000	50,000	12.6
1/8		3,195	40,000		12.5
9/64		2,247	30,000		13.4
5/32	4mm	1,636	20,000	20,000	12.2
11/64		1,228	15,000		12.2
3/16	5mm	946	12,500	10,000	13.2
13/64		745	10,000		13.4
7/32		596	8,000		13.4
15/64	6mm	485	6,000	6,000	12.4
1/4		399	5,000		12.5
17/64	7mm	333	4,000	4,000	12.0
9/32		280	3,500		12.5
5/16		204	2,500		12.2
11/32	8mm	153	2,000	2,500	13.0
3/8	9mm	118	1,500	1,750	12.7
7/16	10, 11, 12mm	74	1,000	1,250, 1,000, 750	13.4
1/2		50	500		10.0
9/16		35	300		8.6
5/8		25	250		9.8
3/4		15	150		10.1