

LOW ALLOYED COPPER			
Alloy Number	C14500	C18700	C19150
Trade Name	C42	C99	C98
Alloy Description	Tellurium Copper	Leaded Copper	Leaded Nickel Copper
Nominal Composition (%)	Cu - 99.4 Te - 0.6 P - 0.008	Cu - 98.8 Pb - 1.0 P - 0.2	Cu - 98.2 Ni - 1.0 Pb - 0.6 P - 0.2
ASTM Specification	B 301	B 301	-

Physical Properties (at 68°F/20°C)

Electrical Conductivity (% IACS)	>90	>85	>50
Density (lb./in. ³)	0.322	0.322	0.322

Mechanical Properties (Annealed - Extra Hard Temper)

Tensile Strength (KSI)	29-59	29-59	36-102
Yield Strength (KSI)	6-52	6-52	12-80
Elongation (% in 2 inches)	40-8	40-8	30-6

Workability

Machinability Rating (C36000 = 100)	85	85	50
Tool Life Rating (C36000 = 110)	71	71	40
Cold Deformability (C26000 = excellent)	GOOD	GOOD	GOOD
Electroplating	EXCELLENT	EXCELLENT	EXCELLENT
Corrosion Resistance	POOR	POOR	FAIR

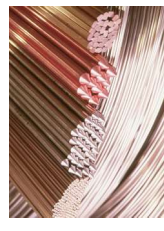


BRASS									
C31400	C33500	~C34000	C34500	C35000	C35300	C36000	C36000	C38500	~C46400
90A	62C	62B	62A	61C	61B	61M	61D	58A	SwisseCO
Leaded Commercial Bronze	Low Leaded Brass	Medium Leaded Brass	Leaded Brass	Leaded Brass	High Leaded Brass	Leaded Brass	Non-magnetic Leaded Brass	Leaded Architectural Bronze	Non-leaded Brass
Cu - 89.0 Zn - 9.1 Pb - 1.9	Cu - 64.0 Zn - 35.5 Pb - 0.5	Cu - 64.0 Zn - 35.0 Pb - 1.0	Cu - 62.5 Zn - 35.5 Pb - 2.0 Fe ≤ 0.1	Cu - 61.5 Zn - 37.0 Pb - 1.5	Cu - 61.5 Zn - 36.5 Pb - 2.0	Cu - 60.7 Zn - 35.6 Pb - 3.0 Fe ≤ 0.25	Cu - 62.0 Zn - 35.0 Pb - 3.0 Fe ≤ 0.01	Cu - 58.0 Zn - 39.0 Pb - 3.0	Cu - 60.0 Zn - 39.0 Al - 0.5 Sn - 0.5
B 140	B 453	-	B 453	B 453	B 453	B 16	B 16	B 455	-

42	26	26	26	26	26	26	26	28	26
0.318	0.307	0.307	0.307	0.307	0.307	0.307	0.307	0.307	0.300

39-59	50-75	50-75	46-88	40-80	42-78	49-88	49-88	55-86	50-70
15-52	35-57	35-57	15-74	15-70	15-70	19-73	19-73	26-73	25-45
35-10	12-4	12-4	38-5	35-7	45-7	30-3	30-3	28-3	15-5

75	65	70	80	80	90	100	100	100	70
80	70	75	80	80	80	110	110	100	70
GOOD	EXCELLENT	GOOD	GOOD	GOOD	FAIR	FAIR	FAIR	BAD	FAIR
GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
FAIR	BAD	BAD	BAD	BAD	BAD	BAD	BAD	POOR	POOR



Avins USA, Inc.

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Tarzana, CA 91356

PHOSPHOR BRONZE		
Alloy Number	C51000	C54400
Trade Name	BZ5	BP5
Alloy Description	Phosphor Bronze	Phosphor Bronze
Nominal Composition (%)	Cu - 95.22 Sn - 4.7 P - 0.08	Cu - 88.0 Pb - 4.0 Sn - 4.0 Zn - 3.9 P - 0.1
ASTM Designation	B 139	B 139

NICKEL SILVER			
C75200 C75900 C76400	C76300	C79300	C79800
M18	N29	N12	NM2/ NM3
Nickel Silver	Nickel Silver	Nickel Silver	Nickel Silver
Cu - 61.0 Zn - 21.5 Ni - 17.5	Cu - 61.5 Zn - 19.65 Ni - 17.8 Pb - 1.05	Cu - 57.0 Zn - 29.8 Ni - 12.0 Pb - 1.2	Cu - 49.10 Zn - 40.95 Ni - 7.25 Pb - 2.70 Mn - 2.45
B 151	B 151	-	-

HIGH PERFORMANCE				
C53800	C69750	NP6	C17300	NIBCUTPlus 2
B05	PS2	NP6	X73	NIBCUTPlus 2
High Tin Bronze	Silicon Brass	Copper Nickel Tin	Beryllium Copper	Copper Nickel Silicon
Cu - 86.0 Sn - 13.5 Pb - 0.5	Cu - 80.5 Zn - 16.45 Si - 2.0 Pb - 1.05	Cu - 84.1 Ni - 8.9 Sn - 6.0 Pb - 1.0	Cu - 97.3 Be - 1.9 Ni - 0.4 Pb - 0.4	Cu - 96.1 Ni - 2.1 Si - 0.6 Pb - 1.0 Fe ≤ 0.02
-	-	-	B 196	-

Physical Properties (at 68°F/20°C)

Electrical Conductivity (% IACS)	20	20	19
Density (lb./in ³)	0.319	0.318	0.318

6	6	8	7	5
0.316	0.316	0.313	0.305	0.300

9	10	14	22	35
0.314	0.311	0.324	0.298	0.318

Mechanical Properties (Annealed - Extra Hard Temper)

Tensile Strength (KSI)	70-120	49-120	49-120
Yield Strength (KSI)	58-87	23-109	25-105
Elongation (% in 2 inches)	15-2	40-3	35-2

58-100	58-93	60-93	71-122	67-122
43-90	22-80	41-80	29-107	29-107
45-3	40-2	20-1	40-2	40-2

67-150	65-146	115-175	60-225	85-118
25-138	22-124	100-160	20-160	60-114
60-1	50-1	5-1	20-8	12-1

Workability

Machinability Rating (C36000 = 100)	20	60	90
Tool Life Rating (C36000 = r10)	20	60	80
Cold Deformability (C28000 = excellent)	EXCELLENT	FAIR	GOOD
Electroplating	GOOD	GOOD	GOOD
Corrosion Resistance	FAIR	GOOD	GOOD

50	50	55	90	90
50	50	55	90	90
EXCELLENT	EXCELLENT	GOOD	GOOD	GOOD
EXCELLENT	EXCELLENT	GOOD	GOOD	GOOD
EXCELLENT	EXCELLENT	GOOD	FAIR	EXCELLENT

75	90	90	50	70
80	80	70	30	70
GOOD	BAD	GOOD	GOOD	GOOD
EXCELLENT	EXCELLENT	EXCELLENT	BAD	EXCELLENT
GOOD	FAIR	EXCELLENT	FAIR	GOOD

Services

- ⇒ No minimum order quantity for many of our products
- ⇒ Offering custom dynamic supply chains
- ⇒ Full range of stock available in the USA



Product Features

- ⇒ World-leading precision dimensional tolerances
- ⇒ Point and chamfer ends standard for all rods
- ⇒ Excellent consistency control lot-to-lot