



# C65500

# HIGH-SILICON BRONZE "A"

[WWW.NBMMETALS.COM](http://WWW.NBMMETALS.COM)

LEADING MANUFACTURER & MASTER DISTRIBUTOR OF BRASS, BRONZE, & COPPER ALLOYS



C65500 is a high strength, engineering alloy that has excellent resistance to a wide range of corrosives, including fresh and salt water, most acids, alkalis, salts, and organic chemicals. However, it is not suitable for use with sulfides, nitric acid, acid chromates, or oxidizing salts such as ferric chloride. It has a combination of corrosion resistance, strength, resilience, and formability that makes them among the most widely used copper alloys. Noted to be non-sparking, galling resistant, and fatigue resistant. Typical applications of C65500 include electrical conduit, pump shafts, valve stems, tie rods, fasteners, marine and pole-line hardware, nuts, bolts, screws, rivets, nails, bushings, screen cloth and wire.

## Sizes Available From NBM

- SOLID BAR . . . . . 1/8" - 8" Dia
- HEXAGONAL . . . . . 1/4" - 2" A/F
- WIRE . . . . . 1/16" - 7/8" Dia
- SHEET & PLATE . . . . . 48" x 144" & 1/8" - 4" Thick\*

\*(Thicker plates and other dimensions can be made to order)

## Spec Equivalents

ASTM B-96, B-124, B-98, B-99

## Chemical Composition

	Cu <sup>(1)</sup>	Fe	Pb	Mn	Ni <sup>(2)</sup>	Si	Zn
min/max	Rem.	.8	.05	.50-1.3	.6	2.8-3.8	1.5
nominal	97.0	-	-	.9	-	3.0	-

(1) Cu value includes Ag.  
Note: Cu + Sum of Named Elements, 99.5% min.

## Typical Uses

### Architecture

Handrails, Sculptures, Fountains, Outdoor Decor

### Electrical

Pole Line Hardware, Motors, Rotor Bar

### Fasteners

Bolts, Nuts, Screws, Rivets, Burrs, Nails, Cotter Pins, Clamps

### Industrial

Screen Cloth, Wear Plates, Screen Plates, Shafting, Wire, Welded Pressure Vessels, Oil Refinery Plumbing Tube, Bearing Plates, Butts, Bushings, Cable, Channels, Chemical Equipment, Heat Exchanger Tubes, Kettles, Hydraulic Pressure Lines, Tanks, Piston Rings, Doctor Blades, Paper Industry, Pressure Vessels, Welded Tanks

### Marine

Hardware, Propeller Shaft



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**Tempers Most Commonly Used**

Flat Products	
Plate M20	
Sheet M20	
Strip, Rolled	H01, H02, H04, H06, H08, OS015, OS035, OS070
Wire, Rolled	H02, H06

Other	
Rod	H02, H04, H06, OS050
Tube	H58, H80, OS050
Wire	H00, H01, H02, H04, H08, OS015, OS035

**Physical Properties**

Melting Point - Liquidus	1880 F
Melting Point - Solidus	1780 F
Density	0.308 lb/in <sup>3</sup> at 68 F
Specific Gravity	8.530
Electrical Resistivity	148 ohms-cmil/ft @ 68 F
Electrical Conductivity	7 %IACS @ 68 F
Thermal Conductivity	21 Btu · ft/(hr · ft <sup>2</sup> ·oF) at 68F
Coefficient of Thermal Expansion	9.0 ·10 <sup>-6</sup> per °F (68-572 F)
Specific Heat Capacity	0.090 Btu/lb/oF at 68 F
Modulus of Elasticity in Tension	15000 ksi
Modulus of Rigidity	5600 ksi



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