

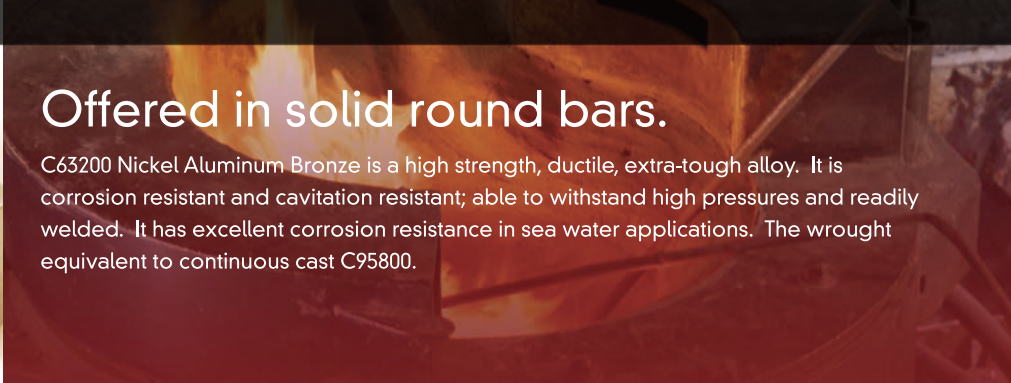


**C63200**

**NICKEL ALUMINUM BRONZE**

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

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



**Offered in solid round bars.**

C63200 Nickel Aluminum Bronze is a high strength, ductile, extra-tough alloy. It is corrosion resistant and cavitation resistant; able to withstand high pressures and readily welded. It has excellent corrosion resistance in sea water applications. The wrought equivalent to continuous cast C95800.

**Sizes Available From NBM**

ROUND BAR . . . . . 1" - 10" diameter

**Spec Equivalents**

ASTM B150, ASTM B124  
MIL-B-24059

**Typical Uses**

**Fasteners**

Fasteners, Sea Water Hardware, Nuts, Bolts

**Other Industrial**

Bearing Cages, Sleeve Bearings, Valve Stems, Shafts, Cams, Sea Water Valves, Sea Water Pump Bodies, Bushings

**Marine**

Drive Shafts, Marine Service, Marine Propellers, and Other Salt Water Applications

**Chemical Composition**

	Cu <sup>(1)</sup>	Al	Fe <sup>(2)</sup>	Pb	Mn	Ni <sup>(3)</sup>	Si
mni/max	Rem.	8.7-9.5	3.5-4.3	.02	1.2-2.0	4.0-4.8	.10
nominal	82.0	9.0	4.0	-	1.6	4.4	-

(1) Cu value includes Ag.  
(2) Fe content shall not exceed Ni content.  
(3) Ni value includes Co.  
Note: Cu + Sum of Named Elements, 99.5% min.

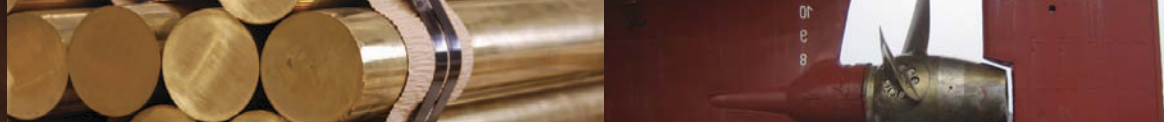
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[www.nbmmetals.com](http://www.nbmmetals.com)



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## Room Temp Tensile & Hardness Data

FORM	TEMPER	SECTION SIZE (INCHES)	TENSILE STRENGTH (KSI) MIN	YIELD STRENGTH (KSI) MIN	ELONGATION IN HD MIN	ROCKWELL HARDNESS (B)	SHEAR STRENGTH (ksi)	FATIGUE STRENGTH (ksi)
ROD	050	1	105	53	22%	96	-	-
		2	103	52	24%	94	-	-
		3	102	51	24%	93	-	-

## Physical Properties

Melting Point - Liquidus . . . . .	1940 F
Melting Point - Solidus . . . . .	1905 F
Density . . . . .	0.276 lb/in <sup>3</sup> at 68 F
Specific Gravity . . . . .	7.64
Electrical Resistivity . . . . .	148.0 ohms-cmil/ft @ 68 F
Electrical Conductivity . . . . .	7 %IACS @ 68 F
Thermal Conductivity . . . . .	20.0 Btu · ft/(hr · ft <sup>2</sup> ·°F)at 68F
Coefficient of Thermal Expansion . . . . .	9.0-10.0 ·10 <sup>-6</sup> per °F (68-572 F)
Specific Heat Capacity . . . . .	0.105 Btu/lb/°F at 68 F
Modulus of Elasticity in Tension . . . . .	17000 ksi
Modulus of Rigidity . . . . .	6400 ksi

## Fabrication Properties

Machinability Rating . . . . .	30
Forgability Rating . . . . .	70
Soldering . . . . .	Fair
Brazing . . . . .	Fair
Oxyacetylene Welding . . . . .	Not Recommended
Gas Shielded Arc Welding . . . . .	Excellent
Coated Metal Arc Welding . . . . .	Good
Spot Weld . . . . .	Good
Seam Weld . . . . .	Fair
Butt Weld . . . . .	Good
Capacity for Being Cold Worked . . . . .	Fair
Capacity for Being Hot Formed . . . . .	Good



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