



**C95400**  
[WWW.NBMMETALS.COM](http://WWW.NBMMETALS.COM)

# ALUMINUM BRONZE - 9C

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

Offered in solid & hollow bars and wear plates.

C95400 is a cast aluminum bronze with high strength properties, and excellent resistance to wear and corrosion. Although this alloy is supplied in the cast condition, it can be heat treated to enhance its mechanical properties and comply to more demanding applications.

## Sizes Available From NBM

- SOLID BAR . . . . . 1/2" - 12" diameter
- HOLLOW BAR (Continuous Cast) . . . . 1/2" I.D. x 1" O.D. thru 9" I.D. x 10" O.D.
- HOLLOW BAR (Centrifugal) . . . . . up to 20" O.D. (stock) / up to 50" O.D. special order
- WEAR PLATE . . . . . 1/4" x 12" thru 6" x 12"
- SQUARE BAR . . . . . up to 8"

## Spec Equivalents

- Continuous**  
 ASTM B-505  
 AMS 4871, 4873  
 SAE J461, J462
- Centrifugal**  
 ASTM B-271  
 ASME SB-271  
 SAE J462, J461

## Chemical Composition

	Cu	Al	Fe	Mn	Ni <sup>(1)</sup>
min/max	83.0 min	10.0-11.5	3.0-5.0	.50	1.5
nominal	83.2	10.8	4.0	-	-

(1) Ni value includes Co.  
 NOTE: Cu +(sum of named elements) = 99.5% min.

## Typical Uses

- Oil & Gas**  
 Bearing Surfaces, Wear Plates, Guides, Pipe Welding  
 Back-up Shoes
- Automotive**  
 Weld Guns, Guide Post Bushings, Stamping Dies
- Fasteners**  
 Large Hold Down Screws, Nuts
- Other Industrial**  
 Valve Seats, Pressure Blocks, Bearing Segments, Valves,  
 Bushings, Machine Parts, Valve Bodies, Bearings, Worm  
 Gears, Landing Gear Parts, Pump Parts, Heavily Loaded  
 Worm Gears, Spur Gears, High Strength Clamps, Gears,  
 Valve Guides, Pickling Hooks
- Marine**  
 Ship Building, Covers for Marine Hardware



**NATIONAL  
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## Room Temp Tensile & Hardness Data

CASTING PROCESS	TEMPER	TENSILE (KSI) MIN	YIELD (KSI) MIN	ELONGATION IN HD MIN	BRINELL (3000 KG)
CENTRIFUGAL	AS CAST	75	30	12	150
	HEAT TREATED	90	45	6	190
CONTINUOUS	AS CAST	85	32	12	170
	HEAT TREATED	95	45	10	220

## Physical Properties

Melting Point - Liquidus	1900 F
Melting Point - Solidus	1880 F
Density	0.269 lb/in <sup>3</sup> at 68 F
Specific Gravity	7.45
Electrical Resistivity	80.2 ohms-cmil/ft @ 68 F
Electrical Conductivity	13 %IACS @ 68 F
Thermal Conductivity	33.9 Btu · ft/(hr · ft <sup>2</sup> ·°F) at 68F
Coefficient of Thermal Expansion	9.0 · 10 <sup>-6</sup> per °F (68-572 F)
Specific Heat Capacity	0.1 Btu/lb/°F at 68 F
Modulus of Elasticity in Tension	15500 ksi
Machinability Rating	60%



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