



**C95520**  
[WWW.NBMMETALS.COM](http://WWW.NBMMETALS.COM)

**NICKEL ALUMINUM BRONZE (AMS 4881)**  
**LEADING MANUFACTURER & MASTER DISTRIBUTOR OF BRASS, BRONZE, & COPPER ALLOYS**



**Offered in solid & hollow bars.**  
 The additional heat treating process improves mechanical properties and the strength to weight ratio exceeding the range of typical aluminum bronzes. C99520 is commonly used in applications involving heavy loads abrasion, friction, and deformation at high temperatures. In many cases C99520 can replace C63020 with the advantage of this material being available in tube form, which provides economic cost savings to you the customer.

**Sizes Available From NBM**

SOLID BAR . . . . . 1/2" - 12" diameter  
 HOLLOW BAR . . . . . thru 10" O.D.

**Spec Equivalents**

**Continuous**  
 ASTM B-505  
 AMS 4881  
 SAE J462, J461

**Centrifugal**  
 ASTM B-271  
 AMS 4881

**Euro Equivalents**

**Designation**  
 CuAl10Fe5Ni5-B | CB333G  
**Standard**  
 EN 1982 : 1998-11

**Typical Uses**

- Oil & Gas**  
 Rock Bit Bearings, Bushings, & Washers, BOP Parts, Wellhead Components
- Aerospace**  
 Landing Gear Bushings and Bearings
- Automotive**  
 Bearings, Off-Highway Truck Bushings, Forming Roll Bearings
- Marine**  
 Pump Parts, Bushings
- Industrial**  
 Cams, Shafting, Hydraulic Bushings for Earth Moving Equipment, Valve Balls, Cryogenics, Drill Guide Bushings
- Military**  
 Tank Track Bearings, Bushings, Aircraft Components

**Chemical Composition**

	Cu	Al	Cr	Co	Fe	Pb	Mn	Ni <sup>(1)</sup>	Si	Sn	Zn
min/max	74.5 min	10.5-11.5	.05	.20	4.0-5.5	.05	1.5	4.2-6.0	.15	.25	.30
nominal	-	11.0	-	-	4.7	-	-	5.1	-	-	-

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

**General Notes**

Our material is DFARS compliant.



**NATIONAL BRONZE & METALS, INC.**

PO BOX 800818  
 HOUSTON, TX 77280  
 fax: 713-869-9124



713-869-9600  
[sales@nbmmetals.com](mailto:sales@nbmmetals.com)  
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## Room Temp Tensile & Hardness Data

CASTING	CONDITION	TENSILE STRENGTH (KSI) MIN	YIELD STRENGTH (KSI) MIN	ELONGATION IN HD MIN	BRINELL (3000 KG)
CENTRIFUGAL	TH04	125	95	2%	262

## Physical Properties (Based on C95500)

Melting Point - Liquidus . . . . .	1930 F
Melting Point - Solidus . . . . .	1900 F
Density . . . . .	0.272 lb/in <sup>3</sup> at 68 F
Specific Gravity . . . . .	7.53
Electrical Resistivity . . . . .	122.8 ohms-cmil/ft @ 68 F
Electrical Conductivity . . . . .	8.5 %IACS @ 68 F
Thermal Conductivity . . . . .	24.2 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 . . . . .	16000 ksi
Magnetic Permeability . . . . .	1.2
Machinability Rating . . . . .	50



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