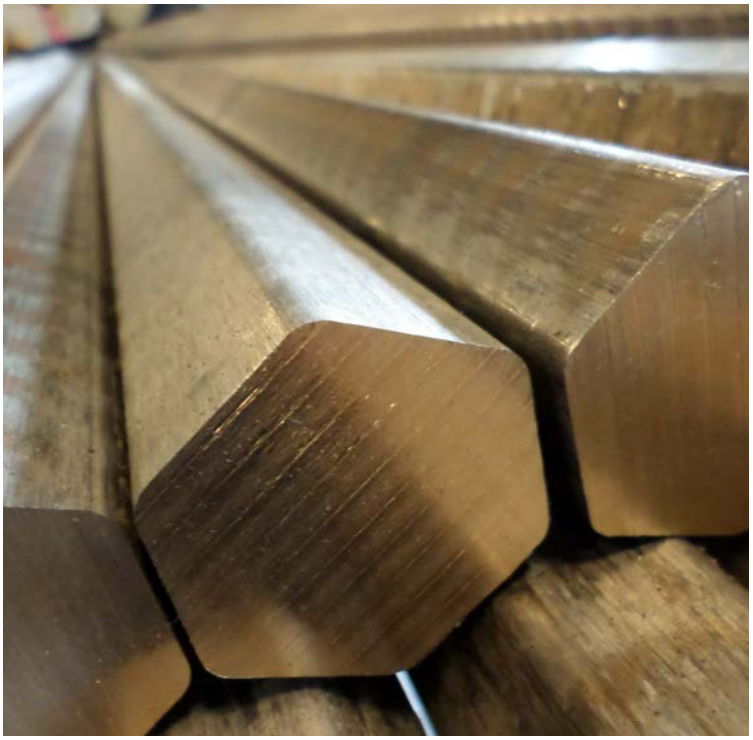
C90300 TIN BRONZE

High Tin Bronze



C90300 Tin Bronze, also known as modified Navy G, provides good mechanical properties and corrosion resistance. NBM Metals maintains a stock of hollow and solid bar of this C90300 Tin Bronze. Common applications include lead free applications, plumbing fixtures, potable water applications, bearings & bushings, seal rings, gears, piston rings, pump impellers, steam fittings, valve components, marine fittings and pump components and many more.

Sizes Available from NBM

Solid Bar	3/8" - 16" diameter
Hollow Bar (Continuous Cast)	1/2" I.D. x 1" O.D. thru 14" I.D. x 16" O.D.
Hollow Bar (Centrifugal)	up to 30" O.D. (stock) / 100" O.D. plus, special order
Square Bar	up to 10" square
Hex Bar	5/8" AF - 4" AF
Wear Plate	1/4" - 10" thick thru 16" widths (up to 22" upon request)

Similar or Equivalent Specifications

Continuous
ASTM B505, SAE J462, J461

Ingot
ASTM B30

Centrifugal
ASTM B271, SAE J462, J461

Sand
ASTM B763, B584, SAE J461, J462

Typical Uses

- lead free applications
- plumbing fixtures
- bearings & bushings
- seal rings
- piston rings
- gears
- potable water applications
- steam fittings
- pump impellers
- valve components
- marine fittings
- pump components

Benefits

High wear resistance, hardness, good corrosion resistance, moderate machinability, proven alloys in wide uses. C90300 Tin Bronze has a solder rating of excellent and offers good brazing.

Items on this page are stocked for quick shipment on a global basis at competitive prices.

NBM Metals can maintain lead at lower limits, upon request.

C90300 TIN BRONZE/ MODIFIED NAVY G

Chemical Composition, Tensile & Hardness, Physical Properties

Chemical Composition

	Cu	Sn	Pb	Zn	Ni + Co	Fe	Si	Al	P	Sb	S
min/max	86 - 89	7.5 - 9.0	0.3 max	3.0 - 5.0	1.0 max	0.2 max	0.005 max	0.005 max	0.05 max	0.2 max	0.05 max
nominal	87.5	8.2	-	4.0	-	-	-	-	-	-	-

1. Cu + sum of named elements: 99.4% min
2. In determining Cu min, Cu may be calculated as Cu + Ni
3. For continuous castings, P shall be 1.5% max
4. Lead can be maintained at lower limits, upon request

Room Temp Tensile & Hardness Data

Casting Process	Temper	Tensile (KSI) Min	Yield (KSI) Min	Elongation In Hd Min	Brinell (3000 Kg)
Centrifugal	M02	40	18	20	-
Continuous	M07	44	22	18	-

Physical Properties

Melting Point - Liquidus °F **1832**
Melting Point - Solidus °F **1570**
Density lb/cu in @ 68 °F **0.318**
Specific Gravity **8.80**
Electrical Resistivity ohms-cmil/ft @ 68 °F **87.2**
Electrical Conductivity % IACS @ 68 °F **12**
Coefficient of Thermal Expansion 10^{-6} per °F (68-212 °F) **10**
Specific Heat Capacity Btu/lb/ °F @ 68 °F **0.09**
Modulus of Elasticity in Tension ksi **14000**
Machinability Rating **30**

The values listed on this document represent reasonable approximations suitable for general engineering use. Due to commercial variations in composition and to manufacturing limitations, they should not be used for specification purposes. See applicable A.S.T.M. Specification references.

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