

C90700 HIGH TIN BRONZE

High Tin Bronze



C90700 High Tin Bronze, provides good mechanical properties and corrosion resistance. NBM Metals maintains a large inventory of hollow and solid bar of this C90700 High Tin Bronze. Common applications include gears, worm gears, bearings for heavy loads, gear boxes, speed reducers, valve bodies, worm wheels.



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

Centrifugal
ASTM B427, SAE J462, J461

Ingot
ASTM B30

Sand
ASTM B427, SAE J461, J462

Other
BS PB1, CuSn12, DIN 1705, RG 10

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.

Typical Uses

- Gears
- Worm Gears
- Bearings for Heavy Loads
- Gear Boxes
- Speed Reducers
- Valve Bodies
- Worm Wheels

Benefits

High wear resistance, hardness, good corrosion resistance, moderate machinability, proven alloys in wide uses. C90700 High Tin Bronze has a solder rating of excellent and offers good brazing.

NBM Metals
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The Leading USA Manufacturer & Master Distributor
of Brass, Bronze, & Copper Alloys

C90700 TIN BRONZE

Chemical Composition, Tensile & Hardness, Physical Properties

Chemical Composition

	Cu	Sn	Pb	Zn	Ni	Fe	Si	Al	P	Sb	S
min/max	88 - 90	10 - 12	0.5	0.5	0.5	0.15	0.005	0.005	1.5	0.2	0.05

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. Ni value includes Co.
5. 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)
Continuous	M07	44	22	18	-
Centrifugal	M02	40	18	20	-

Physical Properties

Melting Point - Liquidus °F.....	1830
Melting Point - Solidus °F.....	1528
Density lb/cu in @ 68 °F.....	0.317
Specific Gravity.....	8.77
Electrical Conductivity %IACS @ 68 °F.....	10
Coefficient of Thermal Expansion 10 ⁻⁶ per °F (68-212 °F).....	10.2
Specific Heat Capacity Btu/lb/°F @ 68 °F.....	0.09
Modulus of Elasticity in Tension ksi.....	15000
Machinability Rating.....	20

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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