



C51000

PHOSPHOR BRONZE (5% A)

WWW.NBMMETALS.COM

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



Offered in solid bars, sheet, and plate.

C51000 Phosphor Bronze alloy is a cold worked bronze which possess a higher yield strength than is readily available in most cast bronze products. Typical applications for C51000 phosphor bronze include bearings, bushings, gears, pinions, shafts, thrust washers and valve parts. C51000 Phosphor bronze can be readily brazed or soldered. Capacity for being cold worked is good.

Sizes Available From NBM

SOLID BAR 3/16" - 6" diameter
HEX BAR 3/8" - 2" across the flats
SHEET AND PLATE available upon request

Spec Equivalents

ASTM B-139, B-103, B-100
ASTM F-468
AMS 4625
SAE J463, J461

Chemical Composition

	Cu	Fe	Pb	P	Sn	Zn
min/max	Rem.	.10	.05	.03 - .35	4.2 - 5.8	.30
nominal	94.8	-	-	.20	5.0	-

Note: Cu + Sum of Named Elements, 99.5% min.

Typical Uses

Architecture

Bridge Bearing Plates

Electrical

Switch Parts, Electromechanical Spring Components, Resistance Wire, Electrical Flexing Contact Blades, Electrical Connectors, Electronic Connectors, Wire Brushes, Electronic and Precision Instrument Parts, Fuse Clips

Fasteners

Lock Washers, Fasteners, Cotter Pins

Other Industrial

Bellows, Textile Machinery, Perforated Sheets, Chemical Hardware, Truss Wire, Springs, Sleeve Bushings, Diaphragms, Clutch Disks, Bourdon Tubes, Beater Bar, Welding Rods, Pressure Responsive Elements

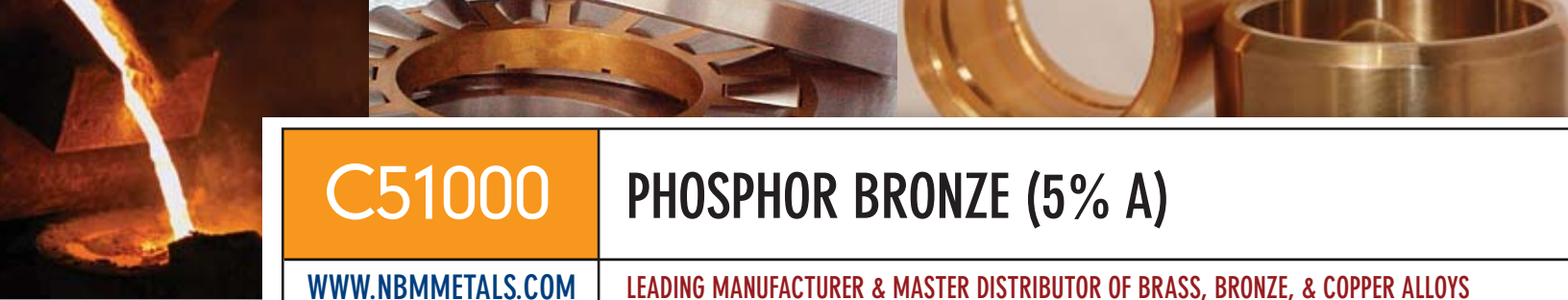
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www.nbmmetals.com



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Room Temp Tensile & Hardness Data

TEMPER	SECTION SIZE (INCHES)	TENSILE (KSI) MIN	ELONGATION IN HD MIN
H04 Hard	1/4" - 1/2"	70	13%
	Over 1/2" - 1"	60	15%
	Over 1"	55	18%

Physical Properties

- Melting Point - Liquidus 1920 F
- Melting Point - Solidus 1750 F
- Density 0.32 lb/in³ at 68 F
- Specific Gravity 8.86
- Electrical Resistivity 69.1 ohms-cmil/ft @ 68 F
- Electrical Conductivity 15 %IACS @ 68 F
- Thermal Conductivity 40.0 Btu · ft/(hr · ft²·°F)at 68F
- Coefficient of Thermal Expansion 9.9 ·10⁻⁶ per °F (68-572 F)
- Specific Heat Capacity 0.09 Btu/lb/°F at 68 F
- Modulus of Elasticity in Tension 16000 ksi
- Modulus of Rigidity 6000 ksi
- Machinability Rating 20



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