



# C64200

## SILICON ALUMINUM BRONZE (AMS 4631, 4634)

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

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



### Offered in solid bars.

Silicon aluminum bronze combines the self lubricity of the silicon with the higher mechanical properties of aluminum bronze and is sometimes used in place of C63000 where specifications permit. C64200 is free-machining and has good anti-galling and anti-seizing properties. Typical applications involve valve stems, gears, marine and pole line hardware, wing pylons, bolts, nuts, bushings and valve body components.

### Sizes Available From NBM

SOLID BAR . . . . . 3/16" - 8" diameter  
HEX BAR . . . . . 5/8" - 2 1/2" across the flats

### Spec Equivalents

ASTM B-124, B-150, B-249  
AMS 4631, 4634  
ASME SB 150  
SAE J463, J461

### Euro Equivalents

**Designation**  
CuAl7Si2 | CW302G  
**Standard**  
EN 12420 : 1999

### Chemical Composition

	Cu <sup>(1)</sup>	Al	As	Fe	Pb	Mn	Ni <sup>(2)</sup>	Si	Sn	Zn
min/max	Rem	6.3-7.6	.09	.30	.05	.10	.25	1.5-2.2	.20	.50
nominal	91.2	7.0	-	-	-	-	-	1.8	-	-

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

### General Notes

We also offer an extruded only condition of C64200 which is suitable for hot forging applications

### Typical Uses

- Aerospace**  
Landing Gear Parts, Strut Bushings
- Oil & Gas**  
Rock Bit Bearing Bushings, Blowout Preventer Parts, Wellhead Components
- Automotive**  
Valve Guides, Automobile Engine Cam Parts, Safety Belt Assemblies
- Electrical**  
Pole Line Hardware
- Fasteners**  
Bolts, Nuts
- Other Industrial**  
Valve and Pump Components, Valve Bodies, Gears, Valve Stems, Cams, Hooks, Forged and Machined Components
- Marine**  
Hardware, Pins, Fasteners

LOOK FOR OUR NEW AND IMPROVED WEBSITE!  
[www.nbmmetals.com](http://www.nbmmetals.com)



**NATIONAL BRONZE & METALS, INC.**

713-869-9600  
1-800-231-0771 TOLL FREE  
sales@nbmmetals.com  
www.nbmmetals.com

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





**C64200**  
[WWW.NBMMETALS.COM](http://WWW.NBMMETALS.COM)

**SILICON ALUMINUM BRONZE (AMS 4631, 4634)**  
 LEADING MANUFACTURER & MASTER DISTRIBUTOR OF BRASS, BRONZE, & COPPER ALLOYS

## Room Temp Tensile & Hardness Data

FORM	TEMPER	SECTION SIZE (INCHES)	TENSILE STRENGTH (KSI) MIN	YIELD STRENGTH (KSI) MIN	ELONGATION IN HD MIN	ROCKWELL HARDNESS (B)	SHEAR STRENGTH (ksi)	FATIGUE STRENGTH (ksi)
ROD	H04	1.5	93	60	26%	90	-	-
	H04	0.75	102	68	22%	94	59	50

## Physical Properties

Melting Point - Liquidus	1840 F
Melting Point - Solidus	1800 F
Density	0.278 lb/in <sup>3</sup> at 68 F
Specific Gravity	7.69
Electrical Resistivity	113.0 ohms-cmil/ft @ 68 F
Electrical Conductivity	8 %IACS @ 68 F
Thermal Conductivity	26.0 Btu · ft/(hr · ft <sup>2</sup> ·°F)at 68F
Coefficient of Thermal Expansion	10.0 · 10 <sup>-6</sup> 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	60



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



713-869-9600  
 1-800-231-0771 TOLL FREE  
[sales@nbmmetals.com](mailto:sales@nbmmetals.com)  
[www.nbmmetals.com](http://www.nbmmetals.com)