



C61400

ALUMINUM BRONZE

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



Offered in rod, bar, sheet & plate.

C61400 Aluminum Bronze is recommended for corrosive applications requiring high-strength characteristics. For example, it has roughly 1 1/2 the strength of low carbon steel, and the tensile and hardness strength can be further improved by cold working. Plate in this alloy is resistant to grain boundary stress corrosion cracking. This allows the material's strength to exceed potential stress levels in corrosive environments.

Sizes Available From NBM

SOLID BAR 3/8" - 4"
HOLLOW BAR in the above O.D. size ranges available upon request
SHEET & PLATE cut to size up to 2" thick

Spec Equivalents

ASTM B-150, B-169,
FEDERAL QQ-C-450
SAE J463, J461

Chemical Composition

	Cu ⁽¹⁾	Al	Fe	Pb	Mn	Sn	Zn
min/max	Rem.	6.0-8.0	1.5-3.5	.01	1.0	.015	.20
nominal	91.0	7.0	2.0	-	-	-	-

%max, unless shown as range or min)
(1) Cu value includes Ag.
Note: Cu + Sum of Named Elements, 99.5% min.

Typical Uses

Fasteners

Threaded Members, Stringers, Bolts, Nuts

Industrial

Piping Systems, Structural Components, Machine Parts, Corrosion Resistant Vessels, Sea Water Piping, Condenser Tube and Piping Systems, Tube Sheets, Welded Pipe, Seamless Tubing and Pipe, Chutes for Abrasive Grains, Heat Exchanger Tubes, Mining Shovels, Tanks, Condenser Head Plates

Marine

Fasteners, Protective Sheathing, Pressure Vessels, Marine Hardware, Welded Tanks

Ordinance

Blending Chambers, Mixing Troughs



**NATIONAL
BRONZE &
METALS, INC.**

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Room Temp Tensile & Hardness Data

FORM	TEMPER	SECTION SIZE (INCHES)	TENSILE STRENGTH (KSI) MIN	YIELD (KSI) .5% ext under load	ELONGATION IN HD MIN	ROCKWELL HARDNESS (B)	SHEAR STRENGTH (ksi)	FATIGUE STRENGTH (ksi)
ROD	H04	0.5	85	45	35%	85	48	-
		1	82	40	35%	90	45	-
		2	80	35	35%	88	40	-
FLAT PRODUCTS	H04	0.125	89	60	32%	87	-	-
		0.312	85	58	35%	86	-	-
		0.5	80	54	38%	85	-	-
		1	78	45	40%	84	-	-
	060	0.125	82	45	40%	84	45	30
		0.312	80	40	40%	83	42	26
		0.5	78	35	42%	82	40	25
		1	76	33	45%	81	40	28

Physical Properties

Melting Point - Liquidus	1915 F
Melting Point - Solidus	1905 F
Density	0.285 lb/in ³ at 68 F
Specific Gravity	7.89
Electrical Resistivity	74.1 ohms-cmil/ft @ 68 F
Electrical Conductivity	14 %IACS @ 68 F
Thermal Conductivity	39.0 Btu · ft/(hr · ft ² ·°F) at 68F
Coefficient of Thermal Expansion	9.0 · 10 ⁻⁶ per °F (68-572 F)
Specific Heat Capacity	0.09 Btu/lb/°F at 68 F
Modulus of Elasticity in Tension	17000 ksi
Modulus of Rigidity	6400 ksi
Machinability Rating	20



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