

C90700 Tin Bronze

C90700 High Tin Bronze

- **Bronze C90700:** High Tin Bronze
- **Solids:** 1/2" to 10" OD
- **Tubes:** 1" to 16" OD
- **Rectangles:** Up to 20"
- **Standard Lengths:** 144"

SIMILAR OR EQUIVALENT SPECIFICATION

CDA	ASTM	ASARCON	SAE	AMS	Federal	Ingot#	Military	Other Desc
C90700	ASTM B505	110	SAE 65		QQ-C-390B TYPE III	205		HIGH TIN BRONZE, 65
			SAE J461					
			SAE J462					

CHEMICAL COMPOSITION (ACCORDING TO ASTM B505-08)

Cu%	Sn%	Pb%	Zn%	Fe%	Ni%	Sb%	P%	S%	Al%	Mn%	Si%
88.00-90.00	10.00-12.00	0.50	0.50	0.15	0.50A	0.20	1.5	0.05	0.005	N/A	0.005

Note: Single values represent maximums.

- A In determining copper minimum, copper may be calculated as copper plus nickel.

MECHANICAL PROPERTIES (ACCORDING TO ASTM B505-08)

Tensile Strength (min)		Yield Strength (at .5% extention under load min)		Elongation (in 2in. or 50mm min, %)	Brinell Hardness (min)	Remarks
Ksi	MPa	Ksi	MPa			
40	276	25	172	10	N/A	

MACHINABILITY

Alloy	Rating	Density
C90700	20	0.317

PHYSICAL PROPERTIES (PROVIDED BY CDA)

	US Customary	Metric
Melting Point - Liquidus	1830 F	999 C
Melting Point - Solidus	1528 F	831 C
Density	0.317 lb/in ³ at 68 F	8.77 gm/cm ³ @ 20 C
Specific Gravity	8.770	8.77
Electrical Resistivity	107.40 ohms-cmil/ft @ 68 F	17.86 microhm-cm @ 20 C
Electrical Conductivity	10 %IACS @ 68 F	0.056 MegaSiemens/cm @ 20 C
Thermal Conductivity	40.80 Btu · ft/(hr · ft ² ·°F)at 68F	70.6 W/m · °K at 20 C
Coefficient of Thermal Expansion	10.20 ·10 ⁻⁶ per oF (68-392 F)	18.4 ·10 ⁻⁶ per °C (20-200 C)
Specific Heat Capacity	0.090 Btu/lb/°F at 68 F	377.1 J/kg · °K at 293 K
Modulus of Elasticity in Tension	15000 ksi	103400 MPa
Magnetic Permeability	1	1.0

FABRICATION PROPERTIES (PROVIDED BY CDA)

Joining Technique	Suitability
Soldering	<i>Excellent</i>
Brazing	<i>Good</i>
Oxyacetylene Welding	<i>Fair</i>
Gas Shielded Arc Welding	<i>Fair</i>
Coated Metal Arc Welding	<i>Fair</i>

THERMAL PROPERTIES (PROVIDED BY CDA)

Treatment	Temp./Time - US	Temp./Time - SI
Stress Temperature	500	260
Solution Minimum		
Solution Maximum		
Solution Time	0.0	
Solution Medium	None	
Precipitation Value		
Precipitation Time		
Precipitation Medium	None	
Annealing Minimum		
Annealing Maximum		
Annealing Time		

Treatment	Temp./Time - US	Temp./Time - SI
Hot Works Minimum		
Hot Works Maximum		

ADDEESS:

Conex Bronze Fittings

CONTACTS:

PHONE : 91-22-43449300/27

FAX : 91 22 22834046

EMAIL : sales@conexbronze.com

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KEYWORDS:

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