

C93800 Bronze

C93800 High Lead Tin Bronze

- **Bronze Family:** High Lead 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
C93800	B505	715	J461		QQ-C-390B TYPE III	319	MIL-B-11553 COMP. 19	ANTI ACID METAL
	B66				QQ-B-1005 COMP. 19			

CHEMICAL COMPOSITION (ACCORDING TO ASTM B505-08)

Cu%	Sn%	Pb%	Zn%	Fe%	Ni%	Sb%	P%	S%	Al%	Mn%	Si%
75.00-79.00	6.30-7.50	13.00-16.00	0.80	0.15	1.00	0.80	1.5	0.08	0.005	N/A	0.005

Note: Single values represent maximums.

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			
25	172	16	110	5		

MACHINABILITY

Alloy	Rating	Density
C93800	80	0.334

PHYSICAL PROPERTIES (PROVIDED BY CDA)

	US Customary	Metric
Melting Point - Liquidus	1730 F	943 C
Melting Point - Solidus	1570 F	854 C

	US Customary	Metric
Incipient Melting	600 F	316 C
Density	0.334 lb/in ³ at 68 F	9.25 gm/cm ³ @ 20 C
Specific Gravity	9.250	9.25
Electrical Resistivity	91.10 ohms-cmil/ft @ 68 F	15.15 microhm-cm @ 20 C
Electrical Conductivity	11 %IACS @ 68 F	0.066 MegaSiemens/cm @ 20 C
Thermal Conductivity	30.20 Btu · ft/(hr · ft ² ·°F)at 68F	52.3 W/m · °K at 20 C
Coefficient of Thermal Expansion	10.30 ·10-6 per oF (68-392 F)	18.5 ·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	10500 ksi	72400 MPa
Magnetic Permeability	1	1.0

FABRICATION PROPERTIES (PROVIDED BY CDA)

Joining Technique	Suitability
Soldering	<i>Good</i>
Brazing	<i>Poor</i>
Oxyacetylene Welding	<i>Not Recommended</i>
Gas Shielded Arc Welding	<i>Not Recommended</i>
Coated Metal Arc Welding	<i>Not Recommended</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		
Hot Works Minimum		
Hot Works Maximum		

ADDEESS:

Conex Bronze Fittings

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KEYWORDS:

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