C90200 Tin Bronze

Copper Alloy No. C90200

High Leaded Tin Bronze CDA 934

ASTM B 505

Chemical Composition % by weight

Element	Nominal	Minimum	Maximum
Aluminum	-	-	.005
Antimony	-	-	.50
Copper	84	82	85
Iron	-	-	.15
Lead	8	7	9
Nickel	-	-	1
Phosphorus	-	-	.50
Silicon	-	-	.005
Sulfur	-	-	.08
Tin	8	7	9
Zinc	-	-	.8

Applications

Bearings and bushings

Mechanical Properties

M07 - As Continuous Cast

Hardness	Brinell Hardness (500 kg load)	60
Tensile Strength	KSI	34 min
Yield Strength	KSI (0.5% Ext. under load)	20 min
Elongation	% in 2 inch	8 min

Test values are nominal approximations and depend on specimen size and orientation.

Physical Properties

Thermal Conductivity	BTU/ (sq ft-ft-hr-F)	33.6
Specific Heat	BTU/lb/ºF @ 68F	.09

Thermal Expansion	Per °F from 68 F to 392 F	.000010
Density	lb/cu in @ 68 F	.320
Electrical Conductivity* (Annealed)	% IACS @ 68 F	12
Modulus of Elasticity	KSI	11,000

Volume basis

Fabrication Practices

Stress relieving temperature	500 F or 260 C
Time at temperature	1 hour per inch of section thickness
Responds to heat treatment	No
Machinability rating (Free Cutting Brass=100)	70
Suitability for being joined by:	Soldering/Good
	Brazing/Good*
	Oxyacetylene Welding/Not Recommended
	Gas Shielded Arc Welding/Not Recommended
	Coated Metal Arc Welding/Not Recommended

Since brazing is performed at temperatures within the hot-short range, strain must be avoided during the brazing and cooling of this alloy.

The values listed above represent reasonable approximations suitable for general engineering use. Due to commercial variations in composition and to manufacturing limitations, they should not be used for specification purposes. See applicable A.S.T.M. specification references.

ADDEESS:
Conex Bronze Fittings

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