C92500 Tin Bronze

Copper Alloy No. C92500

Leaded Tin Bronze SAE 640 , CDA 925

ASTM B 505

Chemical Composition % by weight

Element	Nominal	Minimum	Maximum
Aluminum	-	-	.005
Antimony	-	-	.25
Copper	87	85	88
Iron	-	-	.30
Lead	1	1	1.5
Nickel	1	.8	1.5
Phosphorus	-	-	.30
Silicon	-	-	.005
Sulfur	-	-	.05
Tin	11	10	12
Zinc	-	-	.50

Applications

Gears, automotive synchronizer rings.

Mechanical Properties

M07 - As Continuous Cast

Hardness*	Brinell Hardness (500 kg load)	80
Tensile Strength**	KSI	38 min
Yield Strength **	KSI (0.5% Ext. under load)	24 min
Elongation**	% in 2 inch	10 min

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

Physical Properties

Thermal Conductivity	BTU/ (sq ft-ft-hr-F)	N/A
Specific Heat	BTU/lb/ºF @ 68F	.09
Thermal Expansion	Per °F from 68 F to 350 F	N/A

Density	lb/cu in @ 68 F	.317
Electrical Conductivity* (Annealed)	% IACS @ 68 F	12
Modulus of Elasticity	KSI	16,000

*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)	30
Suitability for being joined by:	Soldering/Excellent
	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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