C89320

Cast • GreenAlloy™

Product Description:	Bismuth Tin Bronze
Solids:	½" to 10" O.D.
Tubes:	1⅛" to 9" O.D.
Rectangles:	Up to 15"
Standard Lengths:	144"
Shape/Form:	semi-finished, mill stock or near-net shapes, anode, bar stock, billet/bloom, squares, hex, plate, profile or structural shape, flats/rectangular bar
Compliance:	C89320 is compliant with key legislation including (1) Federal Safe Drinking Water Act 1974 – SDWA, (2) Federal Reduction of Lead in Drinking Water Act of 2011 and (3) California AF1953

Typical Uses

Fasteners	washers
Industrial	backs for lined bearings, cam bushings for diesel engines, crankshaft main bearings, deep well pump bowl bushings, deep well pump line shaft bearings, electric motor bearings, general utility bearings, guide bushings for piston rods, guide bushings for valves, hydraulic gland seals, main bearings for presses, piston pin bearings, pump sleeves, rod bushings, rolling mill bearings, seals, sleeve bushings, spacer bushings, wrist pin bushings

Similar or Equivalent Specification

CDA	ASTM	Asarcon	SAE	AMS	Federal	Military	Other
C89320	B505 B505M						

Chemical Composition

Cu%	Pb%	Sn%	Zn%	Fe%	P%	Ni%[1]	Al%	Bi%	S%	Sb%	Si%
87.00- 91.00	0.09	5.00- 7.00	1.00	0.20	0.30	1.00	0.005	4.00- 6.00	0.08	0.35	0.005

Chemical Composition according to ASTM B505/B505M-18

[1]Ni value includes Co.
Note: Cu + Sum of Named Elements, 99.5% min. Single values represent maximums.

Machinability

Copper Alloy UNS No.	Machinability Rating	Density (lb/cu in at 68° F)
C89320	80	0.318

Mechanical Properties

Tensile Strength, min		Yield Strength, at .5% Extension Under Load, min		Elongation, in 2 in. or 50 mm min	Brinell Hardness	Remarks
ksi	MPa	ksi	MPa	%	typical BHN	
35	241	18	124	15	70 (500 kg)	

Mechanical Properties according to ASTM B505/B505M-18

Physical Properties

	US Customary	Metric
Melting Point – Liquidus	1913˚ F	1045˚ C
Melting Point – Solidus	1702˚ F	928˚ C
Density	0.318 lb/in^3 at 68˚ F	8.8 gm/cm^3 at 20˚ C
Electrical Conductivity	14.7% IACS at 68˚ F	0.082 MegaSiemens/cm at 20˚ C
Thermal Conductivity	32.4 Btu · ft/(hr · ft^2 · ˚F) at 68˚ F	56.1 W/m at 20˚ C
Modulas of Elasticity in Tension	13900 ksi	95827 MPa

Physical Properties provided by CDA