

C89520 EnviroBrass II

Continuous Cast • GreenAlloys™

Product Description:	Bismuth Tin Bronze
Solids:	½" to 9" O.D.
Tubes:	1½" 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:	C89520 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 AB1953

Typical Uses

Plumbing plumbing castings

Similar or Equivalent Specification

CDA	ASTM	SAE	AMS	Federal	Military	Other
C89520	B584					

Chemical Composition

Cu%	Pb%	Sn%	Zn%	Fe%	Ni% ¹	Al%	Bi% ²	S%	Sb%	Se% ²
85.00- 87.00	0.09	5.00- 6.00	4.00- 6.00	0.20	1.00	0.005	1.60- 2.20	0.08	0.25	0.80- 1.10

Chemical Composition provided by CDA

¹Ni value includes Co. ²Bi:Se >= 2:1

Note: Cu + Sum of Named Elements, 99.5% min. Single values represent maximums.

Machinability

Copper Alloy UNS No.	Machinability Rating	Density (lb/in ³ at 68 ° F)
C89520	85	0.318

Mechanical Properties

Tensile Strength, min		Yield Strength, at 0.5% Extension Under Load, min		Elongation, in 2 in. or 50 mm min	Brinell Hardness (500 kg load)	Remarks
ksi	MPa	ksi	MPa	%	minimum BHN	
25	172	18	124	6	54	

Physical Properties

	US Customary	Metric
Melting Point – Liquidus	1842 °F	1006 °C
Melting Point – Solidus	353 °F	178 °C

Physical Properties provided by CDA

Fabrication Properties

Technique	Suitability
Soldering	Excellent
Brazing	Good
Oxyacetylene Welding	Not Recommended
Gas Shielded Arc Welding	Not Recommended
Coated Metal Arc Welding	Not Recommended
Machinability Rating	85

Fabrication Properties provided by CDA