C90300

✓ STANDARD-STOCKED PRODUCT

Cast • GreenAlloy™

Product Description:	Tin Bronze
Solids:	½" to 10" O.D.
Tubes:	1" to 16" O.D.
Rectangles:	Up to 20"
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

Typical Uses

Building	heavy construction equipment
Fasteners	swivel
Industrial	bearings, bushings, gear blanks, gears, piston rings, pump bodies, pump impellers, valve bodies, valves
Plumbing	steam fittings

Chemical Composition

Cu%[1]	Pb%	Sn%	Zn%	Fe%	P%[2]	Ni%[3]	Al%	S%	Sb%	Si%
86.00-89.00	0.30	7.50-9.00	3.00-5.00	0.20	0.05	1.00	0.005	0.05	0.20	0.005

Chemical Composition according to ASTM B505/B505M-18

[1]In determining Cu min., Cu may be calculated as Cu + Ni. [2]For continuous castings, P shall be 1.5% max. [3]Ni value includes Co.
Note: Cu + Sum of Named Elements, 99.4% min. Single values represent maximums.

Machinability

Copper Alloy UNS No.	Machinability Rating	Density (lb/cu in at 68 °F)
C90300	30	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	
44	303	22	152	18	70 (500 kg)	

Mechanical Properties according to ASTM B505/B505M-18

GREEN ALLOYS™

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Physical Properties

	US Customary	Metric
Melting Point – Liquidus	1832 ˚F	1000 ˚C
Melting Point – Solidus	1570 ˚F	854 ˚C
Density	0.318 lb/in^3 at 68 ˚F	8.80 gm/cm^3 at 20 ˚C
Specific Gravity	8.8	8.8
Electrical Conductivity	12% IACS at 68 ˚F	0.069 MegaSiemens/cm at 20 ˚C
Thermal Conductivity	43.2 Btu/sq ft/ft hr/˚F at 68 ˚F	74.8 W/m at 20 ˚C
Coefficient of Thermal Expansion 68-392	10 · 10^{-6} per ˚F (68-392 ˚F)	17.3 · 10^{-6} per ˚C (20-200 ˚C)
Specific Heat Capacity	0.09 Btu/lb/˚F at 68 ˚F	377.1 J/kg at 20 ˚C
Modulas of Elasticity in Tension	14000 ksi	96527 MPa
Magnetic Permeability	1	1

Physical Properties provided by CDA

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