C86700

Cast

Product Description:	Manganese Bronze
Solids:	½" to 13" OD
Tubes:	1⅛" to 16" OD
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

Builders Hardware	brackets
Fasteners	screw down nuts
Industrial	bearings, cams, fittings, lever arms, machinery parts, moderate duty gears, propellers, valve stems
Marine	marine hardware, propellers

Chemical Composition

Cu%[1]	Pb%	Sn%	Zn%	Fe%	Ni%[2]	Al%	Mn%
55.00-60.00	0.50-1.50	1.50	30.00-38.00	1.00-3.00	1.00	1.00-3.00	0.10-3.50

[1]In determining Cu min., Cu may be calculated as Cu + Ni. [2]Ni value includes Co.
Note: Cu + Sum of Named Elements, 99.0% min. Single values represent maximums.

Machinability

Copper Alloy UNS No.	Machinability Rating	Density (lb/cu in at 68° F)
C86700	55	0.301

CONCAST METAL PRODUCTS CO.

P.O. Box 816 • Mars, PA 16046 • Phone (724) 538-4000 • Toll Free (800) 626-7071 • Fax (724) 538-3956

Mechanical Properties

Tensile Strength, typ		Yield Strength, at .5% extension under load typ		Elongation, in 2 in. or 50 mm typ	Brinell Hardness	Remarks
ksi	MPa	ksi	MPa	%	typical BHN	
85	586	42	290	20	155 (3000 kg)	

Mechanical Properties provided by CDA

Physical Properties

	US Customary	Metric
Melting Point – Liquidus	1616˚ F	880˚ C
Melting Point – Solidus	1583˚ F	862˚ C
Density	0.301 lb/in^3 at 68˚ F	8.33 gm/cm^3 at 20˚ C
Specific Gravity	8.33	8.33
Electrical Conductivity	17% IACS at 68˚ F	0.097 MegaSiemens/cm at 20˚ C
Coefficient of Thermal Expansion	11 · 10^{-6} per ˚F (68˚-392˚ F)	19 · 10^{-6} per ˚C (20˚-200˚ C)
Specific Heat Capacity	0.09 Btu/lb/˚F at 68˚ F	377.1 J/kg at 293˚ C
Modulas of Elasticity in Tension	15000 ksi	103422 MPa

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