

C89835

Bismuth Tin Bronze

Chemical Composition

	Element											
	Cu ^(1,2)	Pb	Sn	Zn	Fe	P	Ni ⁽³⁾	Al	Bi	S	Sb	Si
(1) Cu + Sum of Named Elements 99.0% min.(2) 0.01 - 2.0% as any single or combination of Ce La or other rare earth(x) elements as agreed upon. (x)ASM International definition: one of the group of chemically similar metals with atomic numbers 57 through 71 commonly referred to as lanthanides(3) Ni value includes Co.												
Min (%)	85.0		6.0	2.0					1.7			
Max (%)	89.0	0.09	7.5	4.0	0.20	0.10	1.0	0.005	2.7	0.08	0.35	0.005

Mechanical Properties*

Form	Temper Code	Tensile Strength (ksi)	YS-0.5% Ext (ksi)	Elongation (%)	Brinell Hardness, 500 kg load	Izod (ft-lbs)
Continuously Cast	M01	30 Min	14 Min	6 Typ	65 Typ	8 Typ

* Measured at room temperature, 68°F (20°C).

Physical Properties

Melting Point – Liquidus °F	1855
Melting Point – Solidus °F	1445
Density lb /cu in. at 68°F	0.321
Specific Gravity	8.89
Electrical Conductivity% IACS at 68°F	14.5
Thermal Conductivity Btu/ sq ft/ ft hr/ °F at 68°F	38
Coefficient of Thermal Expansion 68-39210 ⁻⁶ per °F (68 – 392°F)	10
Specific Heat Capacity Btu/ lb /°F at 68°F	0.093
Modulus of Elasticity in Tension ksi	16900

