

LEADED SEMI RED BRASS C84800

CDA NUMBER	C84800	
Common Name		
COMPOSITION PERCENT	Min	Max
Copper (Cu)	75	77
Tin (Sn)	2	3
Lead (Pb)	5.5	7
Zinc (Zn)	13	17
Iron (Fe)		0.4
Antimony (SB)		0.25
Nickel (Ni)		0.8
Sulphur (S)		0.08
Phosphorous (P)		0.02
Aluminum (Al)		0.005
Silicon (Si)		0.005
Maganese (Mn)		
Other (Total)		
Cu + Sum of Named Elements, 99.3% min		
In determining Cu min., Cu may be calculated as Cu + Ni.		
Ni value includes Co.		
For continuous castings, P shall be 1.5%, Max.		
NEAREST APPLICABLE CASTING STANDARDS		
ASTM (B Series)	B584	
SAE (J Series)		
Federal (QQ-C- Series)		
Military (Mil-C- Series)		
TYPICAL PROPERTIES	Typ	Min
Tensile Strength (ksi)	37.8	28
Yield Strength (.5% extension under load) (ksi)	14.9	12
Elongation (2 inch gauge length) (%)	30	16
Reduction of Area (%)	29	
Proportional Limit (ksi)		
Modulus of Elasticity (ksi)	15200	
Hardness (Brinell) (HB @ 500kg)	59	
Machinability (% of free cutting brass)	90	
Fatigue Strength (10 ⁸ cycles) (ksi)	11	
Impact Strength (Charpy) (ft-lb)	12	
Impact Strength (Izod) (ft-lb)		
Shear Strength (ksi)		
Compressive Strength (0.001 in. set/in.) (ksi)	12.8	
Compressive Strength (0.010 in. set/in.) (ksi)	15.8	
Compressive Strength (0.100 in. set/in.) (ksi)	34.3	
Creep Strength (0.00001% per hour) (ksi)	11.9 @ 350F	
Melting Range (Liquidus-Solidus)(F)	1527-1748	
Coefficient of Thermal Expansion (per F @ 68-400F)	0.0000104	
Thermal Conductivity (Btu/sq.ft/ft./hr/F @ 68F)	41.6	
Specific Heat (Btu/lb/F @ 68F)	0.09	
Electrical Conductivity (% IACS @ 68F)	16.4	
Density (lb/cu.in. @ 68F)	0.31	
Pouring Temperature (Light Castings) (F)	2100-2300	
Pouring Temperature (Heavy Castings) (F)	1950-2150	
Patternmakers Shrinkage (in/ft)	11/64	
Drossing	Medium	
Gassing	Medium	
Fluidity	Medium	
Corrosion Resistance: Very good in hydrocarbons and for general corrosion.		
Applications: General hardware fittings, low pressure valves and fittings, ornamental castings, plumbing supplies and fixtures, stops and wastes, air and gas fittings, pump bodies.		

Always use the design principles outlined on page two of this information sheet or at our website.

Consult your foundry early in the design process.

This is a high lead alloy. St Paul Brass and Aluminum does not offer it. We can offer low lead alternatives.



St. Paul
Brass and Aluminum
Foundry

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