

LEADED RED BRASS C85400

CDA NUMBER	C85400	
Common Name	67-1-3-29	
COMPOSITION PERCENT	Min	Max
Copper (Cu)	65	70
Tin (Sn)	.5	1.5
Lead (Pb)	1.5	3.8
Zinc (Zn)	24	32
Iron (Fe)		0.7
Antimony (Sb)		
Nickel (Ni)		1
Sulphur (S)		
Phosphorous (P)		
Aluminum (Al)		0.35
Maganese (Mn)		
Silicon (Si)		0.05
Cu + Sum of Named Elements, 98.9% min		
In determining Cu min., Cu may be calculated as Cu + Ni.		
Ni value includes Co.		
NEAREST APPLICABLE CASTING STANDARDS		
ASTM (B Series)		
SAE (J Series)		
Federal (QQ-C- Series)		
Military (Mil-C- Series)		
TYPICAL PROPERTIES	Typ	Min
Tensile Strength (ksi)	35	
Yield Strength (.5% extension under load) (ksi)	11	
Elongation (2 inch gauge length) (%)	40	
Proportional Limit (ksi)		
Modulus of Elasticity (ksi)	15000	
Hardness (Brinell) (HB @ 500kg)		
Machinability (% of free cutting brass)	30	
Fatigue Strength (10 ⁸ cycles) (ksi)		
Impact Strength (Charpy) (ft-lb)		
Impact Strength (Izod) (ft-lb)		
Shear Strength (ksi)		
Compressive Strength (0.001 in. set/in.) (ksi)		
Compressive Strength (0.010 in. set/in.) (ksi)		
Compressive Strength (0.100 in. set/in.) (ksi)		
Creep Strength (0.00001% per hour) (ksi)		
Melting Range (Liquidus-Solidus)(F)	1750-1680	
Coefficient of Thermal Expansion (per F @ 68-400F)	.0000111	
Thermal Conductivity (Btu/sq.ft./ft./hr/F @ 68F)	70	
Specific Heat (Btu/lb/F @ 68F)	.09	
Electrical Conductivity (% IACS @ 68F)	28	
Density (lb/cu.in. @ 68F)	.308	
Pouring Temperature (Light Castings) (F)		
Pouring Temperature (Heavy Castings) (F)		
Patternmakers Shrinkage (in/ft)	3/16	
Drossing	High	
Gassing	Low	
Fluidity	Low	
Shrinkage	High	
Casting Yield	Medium	
Corrosion Resistance: Very good for hydrocarbons, and general corrosion.		
Applications: Low-pressure valve bodies, water pump parts and impellers, electrical hardware, boat hardware, plumbing goods, valve trim, fire equipment, small gears, ornamental fixtures, hydraulic pressure castings, injectors, gas and vapor valves and fittings, hydraulic-pressure castings.		

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.

We routinely pour and inventory this alloy.



St. Paul
Brass and Aluminum
Foundry

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