

C99500

Material

Notes: Casting methods recommended for this alloy: Centrifugal, Continuous, and Sand.

Applications: Same as C99400, but where higher yield strength is required.

Properties for as-sand-cast separately cast test bars(M01 temper). Alloy does not respond to heat treating

Physical Properties	Metric	English	Comments
Density	8.30 g/cc	0.300 lb/in ³	
Mechanical Properties	Metric	English	Comments
Hardness, Brinell	50	50	3000 kg
	145	145	500 kg
Tensile Strength, Ultimate	>= 483 MPa	>= 70100 psi	
Tensile Strength, Yield	>= 275 MPa	>= 39900 psi	
Elongation at Break	>= 12 %	>= 12 %	in 50 mm
Machinability	50 %	50 %	UNS C36000 (free-cutting brass) = 100%
Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.000012585 ohm-cm @Temperature 20.0 °C	0.000012585 ohm-cm @Temperature 68.0 °F	
Processing Properties	Metric	English	Comments
Annealing Temperature	315 °C	599 °F	Stress-Relieving Temperature
Component Elements Properties	Metric	English	Comments
Aluminum, Al	0.50 - 2.0 %	0.50 - 2.0 %	
Copper, Cu	87.9 %	87.9 %	
Iron, Fe	3.0 - 5.0 %	3.0 - 5.0 %	
Lead, Pb	<= 0.25 %	<= 0.25 %	
Manganese, Mn	<= 0.50 %	<= 0.50 %	
Nickel, Ni	3.5 - 5.5 %	3.5 - 5.5 %	
Silicon, Si	0.50 - 2.0 %	0.50 - 2.0 %	
Zinc, Zn	0.50 - 2.0 %	0.50 - 2.0 %	
Descriptive Properties			
Proportional Limit		145 MPa	

