

C92500

Material

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

Applications: Gears, automotive synchronizer rings.

Classified under: Leaded tin bronzes

Data typical for sand-cast test bars. Alloy does not respond to heat treating

Physical Properties	Metric	English	Comments
Density	8.80 g/cc	0.318 lb/in ³	Estimated
Mechanical Properties	Metric	English	Comments
Hardness, Brinell	80	80	
Tensile Strength, Ultimate	305 MPa	44200 psi	
Tensile Strength, Yield	140 MPa @Strain 0.500 %	20300 psi @Strain 0.500 %	
Elongation at Break	20 %	20 %	in 50 mm
Modulus of Elasticity	110 GPa	16000 ksi	
Machinability	30 %	30 %	UNS C36000 (free-cutting brass) = 100%
Thermal Properties	Metric	English	Comments
Specific Heat Capacity	0.376 J/g-°C	0.0899 BTU/lb-°F	
Processing Properties	Metric	English	Comments
Melt Temperature	315 °C	599 °F	Incipient
Annealing Temperature	260 °C	500 °F	Stress-Relieving Temperature
Component Elements Properties	Metric	English	Comments
Aluminum, Al	<= 0.0050 %	<= 0.0050 %	
Copper, Cu	85 - 88 %	85 - 88 %	
Iron, Fe	<= 0.15 %	<= 0.15 %	
Lead, Pb	1.0 - 1.5 %	1.0 - 1.5 %	
Nickel, Ni	0.80 - 1.5 %	0.80 - 1.5 %	
Phosphorous, P	0.20 - 0.30 %	0.20 - 0.30 %	
Tin, Sn	10 - 12 %	10 - 12 %	
Zinc, Zn	<= 0.50 %	<= 0.50 %	