

C92600

Material

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

Applications: Bearings, bushings, pump impellers, piston rings, valve components, steam fittings, and gears. Superior machinability.

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	8.70 g/cc	0.314 lb/in ³	
Mechanical Properties	Metric	English	Comments
Hardness, Brinell	72	72	
Hardness, Rockwell F	78	78	
Tensile Strength, Ultimate	304 MPa	44100 psi	
Tensile Strength, Yield	140 MPa @Strain 0.500 %	20300 psi @Strain 0.500 %	
Elongation at Break	30 %	30 %	in 50 mm
Modulus of Elasticity	105 GPa	15200 ksi	
Compressive Strength	85.0 MPa	12300 psi	at permanent set of 0.1%
	275 MPa	39900 psi	at permanent set of 10%
Machinability	400 %	400 %	UNS C36000 (free-cutting brass) = 100%
Izod Impact	9.00 J	6.64 ft-lb	
Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00001916 ohm-cm @Temperature 20.0 °C	0.00001916 ohm-cm @Temperature 68.0 °F	
Thermal Properties	Metric	English	Comments
Specific Heat Capacity	0.376 J/g-°C	0.0899 BTU/lb-°F	
Melting Point	845 - 980 °C	1550 - 1800 °F	
Solidus	845 °C	1550 °F	
Liquidus	980 °C	1800 °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 %	

Antimony, Sb	<= 0.25 %	<= 0.25 %
Copper, Cu	86 - 88.5 %	86 - 88.5 %
Iron, Fe	<= 0.15 %	<= 0.15 %
Lead, Pb	0.80 - 1.2 %	0.80 - 1.2 %
Nickel, Ni	<= 0.75 %	<= 0.75 %
Phosphorous, P	<= 0.030 %	<= 0.030 %
Silicon, Si	<= 0.0050 %	<= 0.0050 %
Sulfur, S	<= 0.050 %	<= 0.050 %
Tin, Sn	9.3 - 10.5 %	9.3 - 10.5 %
Zinc, Zn	1.3 - 2.5 %	1.3 - 2.5 %