

# CZ106

## LEAD FREE BRASS

### DESCRIPTION

CZ106 is a dezincification resistant brass with excellent cold working properties and a pure  $\alpha$ -structure. This alloy is used for applications in warm, acidic waters. CZ106 is also suitable for coining, riveting, crimping, flanging, cold extrusion or other cold working operations.

### CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	68.50	71.50
Pb	-	0.05
Fe	-	0.05
Total Others	-	0.30
Zn	Remainder	

### MECHANICAL PROPERTIES (AS PER TEMPER 1/2H)

Range (Inch)	From	To	UTS Min (Mpa)	UTS Max (Mpa)	PS Min	Elongation Min (%)	Hardness Min	Hardness Max
Round (Dia)	1.5	75	460	620	-	-	-	-
Hex (A/F)	3.00	70	460	620	-	-	-	-
Square (A/F)	3.00	60	460	620	-	-	-	-
Rectangle (Thickness)	3.00	50	460	620	-	-	-	-

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### PHYSICAL PROPERTIES

Electrical conductivity %IACS	28%
Thermal conductivity W/(m·K)	126
Thermal expansion coefficient (0-300 °C)	10-6/K19.7
Density	8.55 g/cm3
Modulus of elasticity	114 Gpa

### FABRICATION PROPERTIES

Technique	Suitability
Machinability (CuZn39Pb3 = 100 %)	25%
Capacity for being cold worked	Excellent
Capacity for being hot worked	Fair
Resistance welding (butt weld)	Good
inert gas shielded arc welding	Fair
Gas welding	Good
Hard soldering	Excellent
Soft soldering	Excellent
Melting range	910-965 °C
Hot working	750 - 870 °C
Soft annealing (1-3 h)	450-680 °C
Thermal stress relieving (1-3 h)	200-300 °C

### TYPICAL USES

- › Architecture
- › Automotive
- › Builders Hardware
- › Consumer
- › Electrical
- › Fasteners
- › Industrial
- › Ordnance
- › Plumbing