

CZ131

LEADED BRASS

DESCRIPTION

CZ131 is a material which has been successfully used in automotive industries. It has both good machining and good cold working properties.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	61.00	63.00
Pb	1.50	2.50
Fe	-	0.20
Total Others Excl Fe	-	0.50
Zn	Remainder	

MECHANICAL PROPERTIES ACCORDING TO BS2874 (AS PER TEMPER M)

Range (mm)	From	To	UTS Min (N/mm ²)	PS Min (N/mm ²)	Elongation Min (%)	Hardness Min	Hardness Max
Round (Dia)	1.5	18.00	350.00	-	22.00	-	-
	18.00	40.00	350.00	-	25.00	-	-
	40.00	75.00	350.00	-	28.00	-	-
Hex (A/F)	3.00	18.00	350.00	-	22.00	-	-
	18.00	40.00	350.00	-	25.00	-	-
	40.00	70.00	350.00	-	28.00	-	-
Square (A/F)	3.00	18.00	350.00	-	22.00	-	-
	18.00	40.00	350.00	-	25.00	-	-
	40.00	60.00	350.00	-	28.00	-	-
Rectangle (Thickness)	3.00	18.00	350.00	-	22.00	-	-
	18.00	40.00	350.00	-	25.00	-	-
	40.00	50.00	350.00	-	28.00	-	-

PHYSICAL PROPERTIES

Melting Point	885°
Density	8.50g/cm ³
Electrical Resistivity	0.066 x 10 ⁻⁶ Ωm
Thermal Conductivity Btu/ sq ft/ ft hr/ °F at 68°F	115 W/m.K
Modulus of Elasticity	105 Gpa

FABRICATION PROPERTIES

Technique	Suitability
Hot Formability	Good
Cold Formability	Good
Cold Reduction Between anneals	50%
Machinability rating (free cutting brass = 100)	75%
Soldering	Excellent
Brazing	Good
Oxy-acetylene welding	Not recommended
Gas-shielded arc welding	Not recommended
Resistance welding : Spot and Seam	Not recommended
Butt Welding	Fair

TYPICAL USES

- Fasteners
- Rivets
- Domestic appliances
- Automotive engineering
- Hose fittings
- Intricate parts such as clock components