

# CZ132

# LEADED BRASS

## DESCRIPTION

CZ132 a dezincification-resistant machining brass, is particularly suitable for use in warm, acidic waters. This material passes the dezincification test according to ISO 6509. For the manufacture of hot-stamped parts C35330 with better hot-working properties is recommended. To achieve dezincification resistance a heat treatment may be necessary after hot working.

## CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	Remainder	
Pb	1.70	2.80
Sn	-	0.20
Fe	-	0.20
As	0.08	0.15
Total Others	-	0.50
Zn	35.00	37.00

## MECHANICAL PROPERTIES ACCORDING TO BS2874 (AS PER TEMPER M)

Range (Inch)	From	To	UTS Min (N/mm <sup>2</sup> )	PS Min (N/mm <sup>2</sup> )	Elongation Min (%)	Hardness Min	Hardness Max
Round (Dia)	6.00	18.00	380.00	-	20.00	-	-
	18.00	40.00	350.00	-	22.00	-	-
	40.00	75.00	350.00	-	25.00	-	-
Hex (A/F)	6.00	18.00	380.00	-	20.00	-	-
	18.00	40.00	350.00	-	22.00	-	-
	40.00	70.00	350.00	-	25.00	-	-
Square (A/F)	6.00	18.00	380.00	-	20.00	-	-
	18.00	40.00	350.00	-	22.00	-	-
	40.00	60.00	350.00	-	25.00	-	-
Rectangle (Thickness)	6.00	18.00	380.00	-	20.00	-	-
	18.00	40.00	350.00	-	22.00	-	-
	40.00	50.00	350.00	-	25.00	-	-

## PHYSICAL PROPERTIES

Melting Point	910°C
Density	8.43 g/cm <sup>3</sup>
Specific Heat	377
Thermal conductivity (20°C)	117 W/m <sup>2</sup> K
Thermal expansion coefficient (20-200°C)	20.7 x 10 <sup>-6</sup> per °C
Electrical conductivity	26 % IACS
Electrical Resistivity	0.066 ohm mm <sup>2</sup> /m
Modulus of Elasticity	106 KN/mm <sup>2</sup>

## FABRICATION PROPERTIES

Technique	Suitability
Hot Working Temperature Range	800-850°C
Hot Formability	Very good
Cold Formability	Good
Machinability rating (free cutting brass = 100)	75%
Annealing Temp. Range	450-650°C
Stress Relieving Temp. Range	250-350°C
Soldering	Excellent
Brazing	Good
Oxy-acetylene welding	Not recommended
Gas-shielded arc welding	Not recommended
Resistance welding	Not recommended

## TYPICAL USES

- Plumbing