

DESCRIPTION

CZ135 is a high tensile brass which is alloyed with aluminium, manganese and silicon etc. By alloying brass with strength-increasing elements, you get an alloy that is almost as hard as aluminium bronze, but considerably easier to process. The material also has good corrosion and wear resistance.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	57.00	60.00
Pb	-	0.80
Sn	-	0.30
Fe	-	0.50
Al	1.00	2.00
Mn	1.50	3.50
Ni	-	0.20
Si	0.30	1.30
Total Others (excl.Sn,Pb,Fe,Ni)	-	0.50
Zn	Remainder	



MECHANICAL PROPERTIES ACCORDING TO BS2874 CZ135 (AS PER TEMPER M)

Range (mm)	From	To	UTS Min (N/mm ²)	PS Min (N/mm ²)	Elo Min (%)	Hardness Min	Hardness Max
Round (Dia)	1.5	40	550	270	12	-	-
	40	75	550	270	12	-	-
Hex (A/F)	3	40	550	270	12	-	-
	40	70	550	270	12	-	-
Square (A/F)	3	40	550	270	12	-	-
	40	60	550	270	12	-	-
Rectangle (Thickness)	3	40	550	270	12	-	-
	40	50	550	270	12	-	-

PHYSICAL PROPERTIES

Melting Point	875-910 °C
Density	8.0 g/cm ³
Electrical Conductivity	7-8 MS/m
Heat conductivity	60-70 W/(m*K)
Heat capacity	377 J/(kg*K)
Coefficient of thermal expansion	20 10-6/ K
Young's modulus	95 GPa

FABRICATION PROPERTIES

Technique	Suitability
Cold formed	Poor
Hot worked	Good
Machinability Rating	30%
Resistance to corrosion	Excellent
Suitability for soldering	Excellent

