CZ136

MANGANESE BRONZE

DESCRIPTION

Manganese is possibly the most flexible element that can be added to copper alloys. Small additions of manganese are used to deoxidize the alloy and enhance its mechanical strength and castability. Manganese provides a favourable combination and balance of properties like ductility, formability, strain hardening, and strength level parameters.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	56.00	59.00
Pb	-	3.00
Mn	0.50	1.50
Total Others	-	0.70
Zn	Remainder	

MECHANICAL PROPERTIES ACCORDING TO BS2872 (AS PER TEMPER M)

Range (mm)	From	To	UTS Min (Mpa)	PS Min (Mpa)	Elo Min (%)	Hardness Min	Hardness Max
Round (Dia)	1.5	18	380	-	20	-	-
	18	40	350	-	25	-	-
	40	75	350	-	25	-	-
Round (Dia)	3	18	380	-	20	-	-
	18	40	350	-	25	-	-
	40	70	350	-	25	-	-
Square (A/F)	3	"8	380	-	20	-	-
	18	40	350	-	25	-	-
	40	50	350	-	25	-	-
Rectangle (Thickness)	3	18	380	-	20	-	-
	18	40	350	-	25	-	-
	40	50	350	-	25	-	-

RAJHANS METALS PRIVATE LIMITED

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MANANESE BRONZE

PHYSICAL PROPERTIES

Physical Properties	English
Density	0.303 lb/in3
CTE, linear	14.4 µin/in-˚F
Specific Heat Capacity	0.0908 BTU/lb-˚F
Thermal Conductivity	784 BTU-in/hr-ft^2-˚F
Melting Point	1620 – 1650 ˚F
Solidus	1620 ˚F
Liquidus	1650˚F

FABRICATION PROPERTIES

Machinability	80.00%
(CuZn39Pb3 = 100 %) Capacity for Being Cold Worked	Poor
Capacity for Being Hot Worked	Equivalent Alloy

TYPICAL USES

- Valves LPG

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