

DESCRIPTION

Manganese bronze contains small additions of manganese, iron, and aluminium, plus lead for lubricity, anti-seizing, and bonding. Like the aluminium bronzes, they combine high strength with excellent corrosion resistance. Manganese bronze bearings can operate at high speeds under heavy loads, but require high shaft hardness and nonabrasive operating conditions

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	56.50	60.00
Pb	1.00	1.50
Fe	-	0.30
Mn	0.50	1.20
Total Others	-	0.75
Zn	Remainder	

MECHANICAL PROPERTIES ACCORDING TO 6912 FHTB2 (AS PER TEMPER HB)

Range (mm)	From	To	UTS Min (Mpa)	PS Min (Mpa)	Elo Min (%)	Hardness Min	Hardness Max
Round (Dia)	1.5	75	395	-	20	-	-
Round (Dia)	3	70	395	-	20	-	-
Square (A/F)	3	60	395	-	20	-	-
Rectangle (Thickness)	3	50	395	-	20	-	-



PHYSICAL PROPERTIES

Physical Properties	Metric	English
Density	8.40 g/cc	0.303 lb/in ³
CTE, linear	26.0um/m-°C	14.4ujn/in-°F
Specific Heat Capacity	0.380 J/g-°C	0.0908 BTU/lb-8F
Thermal Conductivity	113 W/m-K	784 BTU-in/hr-ftVF
Melting Point	880-900 °C	1620- 1650 °F
Solidus	880 °C	1620 °F
Liquidus	900 eC	1650eF

FABRICATION PROPERTIES

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

