

6912 FMN1

MANGANESE BRONZE

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 non-abrasive 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 (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	-	-

6912 FMN1

MANGANESE BRONZE

PHYSICAL PROPERTIES

Physical Properties	English
Density	0.303 lb/in ³
CTE, linear	14.4ujn/in-°F
Specific Heat Capacity	0.0908 BTU/lb-8F
Thermal Conductivity	784 BTU-in/hr-ftVF
Melting Point	1620- 1650 °F
Solidus	1620 °F
Liquidus	1650eF

FABRICATION PROPERTIES

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