

# 6912 FHTB2

# MANGANESE BRONZE

## DESCRIPTION

High Tensile Brass are alloys of Copper and Zinc. 6912 FHTB2 is a duplex or alpha/beta alloy. Brass alloy 6912 FHTB2 is a versatile high strength, hot workable, machinable engineering alloy sometimes referred to as a Manganese Bronze or High Tensile Brass.

## CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	56.00	61.00
Pb	0.50	1.50
Sn	0.20	0.80
Fe	0.30	1.25
Mn	0.50	2.00
Al	0.30	2.00
Total Oth	-	0.50
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	460	180	12	-	-
Round (Dia)	3	70	460	180	12	-	-
Square (A/F)	3	60	460	180	12	-	-
Rectangle (Thickness)	3	50	460	180	12	-	-

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## PHYSICAL PROPERTIES

Melting Point	865° C
Density	8.63g/cm3
Electrical Conductivity	0.09 x 10 <sup>-6</sup> Ω.m
Thermal Conductivity	88.3W/m.K
Modulus of Elasticity	96.5 GPa

## FABRICATION PROPERTIES

Capacity for being Cold formed	Poor
Capacity for being Hot worked	Good
Machinability Ration	30%
Resistance to Corrosion	Excellent
Suitability for soldering	Excellent

## TYPICAL USES

- Gas valves and fittings
- Fasteners
- Pump trim
- Gears
- Locks
- Heavy-duty electrical connectors
- Transmission components
- Marine hardware
- Safety tools and decorative metalwork