

High Tensile Manganese Bronze

C67600 High Tensile Manganese Bronze Hollow Rod

The alloy possess excellent hot and cold workability; good forge ability. Fabricated by bending, coining, coppersmith, drawing and upsetting, hot forging and pressing, knurling, roll threading, shearing, spinning, swaging, and stamping.

Typical Uses :

- **Industrial:** Gate Valve Stems, Welding Rod, Valve Balls



Chemical Composition:

	Cu	Fe	Pb	Mn	Sn	Zn
Min/Max	57.0 - 60.0	0.40 - 1.3	0.50 - 1.0	0.05 - 0.50	0.50 - 1.5	Rem
Nominals	58.5	0.8	0.7	0.27	1	38.7

Specifications:

End Product	Specification
Brazing Filler Metal	AWS A5.8
Forgings, Die	ASTM B283

Fabrication:

Joining Technique	Suitability
Brazing	Excellent
Capacity for Being Cold Worked	Poor
Capacity for Being Hot Formed	Excellent
Forgeability	80
Gas Shielded Arc Welding	Fair

Machinability Rating	60
Oxyacetylene Welding	Good
Soldering	Excellent
Spot Weld	Good

Physical Properties:

Product Property	US Customary	Metric
Coefficient of Thermal Expansion	11.8 $\times 10^{-6}$ per $^{\circ}$ F (68-572 F)	20.4 $\times 10^{-6}$ per $^{\circ}$ C (20-300 C)
Density	0.302 lb/in ³ at 68 F	8.36 gm/cm ³ @ 20 C
Electrical Conductivity	24 %IACS @ 68 F	0.139 MegaSiemens/cm @ 20 C
Melting Point - Liquidus	1630 F	890 C
Melting Point - Solidus	1590 F	865 C
Modulus of Elasticity in Tension	15000 ksi	103400 MPa
Modulus of Rigidity	5600 ksi	38600 MPa
Thermal Conductivity	61.0.0 Btu \cdot ft/(hr \cdot ft ² \cdot $^{\circ}$ F)at 68F	105.7 W/m \cdot $^{\circ}$ K at 20 C

Sizes Available

ROUND RODS/BARS	8mm To 70 mm
HEX	10mm To 60mm
SQUARE	10mm To 60mm
FLAT	10mm Min Thickness and max Width 120mm
BILLETS	Up to 200 mm
INGOTS	As per Specification

Regd. Office & Plant

Plot No. 6 & 7, Village: Lakhabaval, Post: Khodiyar Colony, Jamnagar - 361006.

Tel.: +91-288-2889251 / 52, Fax: +91-288-2889223, Cell: +91-9924443396

Email: info@metalalloyscorp.com • web: www.metalalloyscorp.com

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