

C63600 Silicon Aluminum Bronze Hollow Rods

The C63600 Silicon Aluminum Bronze possess good hot and cold workability, forging ability. The alloy is fabricated by bending, coining, drawing and upsetting, hot forging and pressing, knurling, roll threading, shearing, spinning, swaging, and stamping.

Typical Uses :

- **Electrical** : Cold Headed Nuts, Cable Connectors, Components for Pole Line Hardware
- **Fasteners** : Screw Machine Products, Bolts
- **Industrial** : Valve Components, Nuclear Power Service



Chemical Composition:

	Al	As	Cu	Fe	Pb	Ni	Si	Sn	Zn
Min/Max	3.0 - 4.0	0.15	Rem	0.15	0.05	0.15	0.7 - 1.3	0.2	0.5
Nominals	3.5	-	95.5	-	-	-	1	-	-

Physical Properties:

Product Property	US Customary	Metric
Coefficient of Thermal Expansion	9.4 $\times 10^{-6}$ per oF (68-572 F)	16.9 $\times 10^{-6}$ per oC (20-300 C)
Density	0.301 lb/in ³ at 68 F	8.33 gm/cm ³ @ 20 C
Electrical Conductivity	12 %IACS @ 68 F	0.07 MegaSiemens/cm @ 20 C
Electrical Resistivity	86.4 ohms-cmil/ft @ 68 F	14.36 microhm-cm @ 20 C
Melting Point - Liquidus	1890 F	1032 C
Modulus of Elasticity in Tension	16000 ksi	110000 MPa
Specific Gravity	8.33	8.33
Thermal Conductivity	33.0 Btu \hat{A} ft/(hr \hat{A} ft ² \hat{A} oF)at 68F	57.1 W/m \hat{A} oK at 20 C

Fabrication:

Joining Technique	Suitability
Brazing	Not Recommended
Butt Weld	Fair
Capacity for Being Cold Worked	Excellent
Capacity for Being Hot Formed	Fair
Coated Metal Arc Welding	Fair
Gas Shielded Arc Welding	Fair
Machinability Rating	40
Oxyacetylene Welding	Not Recommended
Seam Weld	Fair
Soldering	Not Recommended
Spot Weld	Fair

Sizes Available

ROUND RODS	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

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