

C95500 Nickel Aluminum Bronze 9D Hollow Rods

ASTM B505

C95500 Nickel Aluminum Bronze 9D is available with salt water corrosion resistance. It also is resistant to cavitation and erosion. Along with the advantage of pressure tightness, this high strength alloy is excellent for welding and is available in many forms at a lower cost to you.



Typical Uses :

- **Builders Hardware:** Window Hardware
- **Consumer:** Piano Keys, Musical Instruments
- **Electrical:** Electrical Hardware
- **Fasteners:** Stuffing Box Nuts
- **Industrial:** Pickling Equipment, Valve Guides, Piston Guides, Valve Seats, Pump Fluid Ends, Glands, Worms, Worms Wheels, Hot Mill Guides, Hand Gun Recoil Mechanisms, Landing Gear Parts, Air Craft Components, Wear Plates, Welding Jaws, Landing Gear Parts, Glass Molds, Machine Parts, Sewage Treatment Applications, Valve Components, Bearings, Bushings, Valve Bodies, Gears
- **Oil & Gas:** Piping for Vertical Pump Columns, Firefighting and Fire Suppression Systems, Seawater Lift Pumps, Piping Layout, Flanges and Fittings, Discharge Elbows, Cooling Loops for Power Plants, Bronze Valve Bodies, Piping Systems, Desalination Equipment, Tube Sheets, Circulating Pumps and Pump Shafts, Fasteners and Hardware for Cooling towers.
- **Marine:** Marine Applications, Covers for Marine Hardware, Ship Building, Marine Hardware
- **Ordinance:** Government Fittings

Chemical Composition:

	Al	Cu	Fe	Mn	Ni
Min/Max	10.0-11.5	78.0 min	3.0-5.0	3.5	3.0-5.5
Nominals	11.0000	80.0000	4.0000	-	4.3000

Specifications:

End Product	Specification
Centrifugal	ASTM B271, SAE J462, J461
Continuous	ASTM B505, SAE J462, J461
Ingot	ASTM B30
Precision	ASTM B806

Sand

ASTM B148, B763, SAE J461, J462

Fabrication

Joining Technique	Suitability
Brazing	Good
Coated Metal Arc Welding	Not Recommended
Gas Shielded Arc Welding	Not Recommended
Machinability Rating	40
Oxyacetylene Welding	Not Recommended
Soldering	Excellent

Physical Properties

Product Property	US Customary	Metric
Coefficient of Thermal Expansion	9.0 $\times 10^{-6}$ per oF (68-572 F)	16.2 $\times 10^{-6}$ per oC (20-300 C)
Density	0.272 lb/in ³ at 68 F	7.53 gm/cm ³ @ 20 C
Electrical Conductivity	8 %IACS @ 68 F	0.049 MegaSiemens/cm @ 20 C
Electrical Resistivity	122.8 ohms-cmil/ft @ 68 F	20.41 microhm-cm @ 20 C
Magnetic Permeability (As Cast)	1.32	1.32
Magnetic Permeability (TQ50 temper)	1.2	1.2
Melting Point - Liquidus	1930 F	1054 C
Melting Point - Solidus	1900 F	1038 C
Modulus of Elasticity in Tension	16000 ksi	110000 MPa
Poisson's Ratio	0.32	0.32
Specific Gravity	7.53	7.53

Specific Heat Capacity	0.1 Btu/lb/oF at 68 F	419.0 J/kg Â· oK at 293 K
Thermal Conductivity	24.2 Btu Â· ft/(hr Â· ftÂ·oF)at 68F	41.9 W/m Â· oK at 20 C

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

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