

NICKEL ALUMINUM BRONZE (C95520)

TYPICAL USES

AMS 4881 is offered in solid and hollow bars. The additional heat treating process improves mechanical properties and the strength to weight ratio exceeding the range of typical aluminum bronzes. AMS 4881 is commonly used in applications involving heavy loads abrasion, friction, and deformation at high temperatures. In many cases AMS 4881 can replace AMS 4590/C63020 with the advantage of this material being available in tube form, which provides economic cost savings to you the customer.



CONTACT US

360 Sheldon Drive
Cambridge, ON N1T 1A9
519-622-7900
barstock@bearingbronze.com

GET A QUOTE

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TYPICAL USES

Product Category	Product	Reason
Builders Hardware	Window Hardware	Appearance, Corrosion Resistance (Excellent), Excellent Machinability, High Strength
Consumer	Musical Instruments	Appearance, Corrosion Resistance (Excellent), Resonant Frequency, Damping Capacity, Wear Resistance, Excellent Machinability, High Strength
	Piano Keys	Appearance, Corrosion Resistance (Excellent), Wear Resistance, Excellent Machinability, High Strength
Electrical	Electrical Hardware	Electrical Conductivity, Thermal Conductivity, Corrosion Resistance (Excellent), High Strength
Fasteners	Stuffing Box Nuts	Corrosion Resistance (Excellent), Wear Resistance, High Strength
Industrial	Air Craft Components	Corrosion Resistance (Excellent), Wear Resistance, High Strength, Retains Strength at Elevated Temperatures, Toughness
	Bearings	Corrosion Resistance (Excellent), Wear Resistance, High Strength, Corrosion Resistance (Excellent), Wear Resistance, High Strength
	Gears	Corrosion Resistance (Excellent), Wear Resistance, High Strength
	Glands	Corrosion Resistance (Excellent), Wear Resistance, High Strength
	Glass Molds	Corrosion Resistance (Excellent), Wear Resistance, High Strength, Retains Strength at Elevated Temperatures
	Hand Gun Recoil Mechanisms	Corrosion Resistance (Excellent), High Strength, Toughness
	Hot Mill Guides	Corrosion Resistance (Excellent), High Strength, Retains Strength at Elevated Temperatures, Toughness
	Landing Gear Parts	Corrosion Resistance, Wear Resistance, Fatigue Properties, Fatigue Strength, High Strength, Retains Strength at Elevated Temperatures
	Machine Parts	Thermal Conductivity, Corrosion Resistance (Excellent), Wear Resistance, Excellent Machinability, High Strength
	Pickling Equipment	Corrosion Resistance (Excellent), High Strength
	Piston Guides	Corrosion Resistance (Excellent), Wear Resistance, High Strength
	Pump Fluid Ends	Corrosion Resistance (Excellent), High Strength
	Sewage Treatment Applications	Corrosion Resistance (Excellent), Wear Resistance, High Strength
	Valve Bodies	Corrosion Resistance (Excellent), Excellent Machinability, High Strength
	Valve Components	Corrosion Resistance (Excellent), Wear Resistance, High Strength
	Valve Guides	Corrosion Resistance (Excellent), Wear Resistance, High Strength
	Valve Seats	Corrosion Resistance (Excellent), Wear Resistance, High Strength
	Wear Plates	Corrosion Resistance (Excellent), Wear Resistance, Toughness
	Welding Jaws	Thermal Conductivity, Corrosion Resistance (Excellent), High Strength, Retains Strength at Elevated Temperatures, Toughness
	Worms	Corrosion Resistance (Excellent), Wear Resistance, Machinability, Good, High Strength
Worms Wheels	Corrosion Resistance (Excellent), Wear Resistance, High Strength	
Marine	Covers for Marine Hardware	Appearance, Corrosion Resistance (Excellent), High Strength
	Marine Applications	Corrosion Resistance (Excellent), Wear Resistance, High Strength
	Marine Hardware	Appearance, Corrosion Resistance (Excellent), High Strength
	Ship Building	Corrosion Resistance (Excellent), Wear Resistance, Machinability, Good, High Strength
Ordnance	Government Fittings	Corrosion Resistance (Excellent), High Strength, Toughness

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MECHANICAL PROPERTIES

Form	Temper Code	Tensile Strength (ksi)	Elongation (%)	Brinell Hardness, 3000 kg load
As Centrifugal Cast	M02	125 Min for Standard	2 Min for Standard	262 Min for Standard
As Continuous Cast	TH04	125 Min for Standard	2 Min for Standard	262 Min for Standard
As Sand Cast	M01	125 Min for Standard	2 Min for Standard	255 Min for Standard

* Measured at room temperature, 68°F (20°C).

CHEMICAL PROPERTIES

Elements											
	Cu(1)	Pb	Sn	Zn	Fe	Ni(2)	Al	Co	Cr	Mn	Si
Min (%)	74.5				4.0	4.2	10.5				
Max (%)		0.03	0.25	0.30	5.5	6.0	11.5	0.20	0.05	1.5	0.15

(1) Cu + Sum of Named Elements 99.5% min.
 (2) Cu value includes Ag.

FABRICATION PROPERTIES

Technique	Suitability
Soldering	Good
Brazing	Fair
Oxyacetylene Welding	Not Recommended
Gas Shielded Arc Welding	Good
Coated Metal Arc Welding	Good
Machinability Rating	50

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