

# NICKEL ALUMINUM BRONZE (C95510)

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## TYPICAL USES

C95510 is a continuous cast heat treated alloy. It is often used as a substitution for the wrought Nickel Aluminum Bronze alloy C630000. This is possible due to the high mechanical strength properties of C95510 AMS 4880. The advantage of C95510 is that it is available in cored bar form. This provided excellent savings in cost due to scrap reduction.



### CONTACT US

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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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## CHEMICAL PROPERTIES

| Elements                                  |       |     |     |     |       |      |     |
|---|-------|-----|-----|-----|-------|------|-----|
|   | Cu(1) | Sn  | Zn  | Fe  | Ni(2) | Al   | Mn  |
| Min (%)                                   | 78    |     |     | 2   | 4.5   | 9.7  |     |
| Max (%)                                   |       | 0.2 | 0.3 | 3.5 | 5.5   | 10.9 | 1.5 |
| (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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