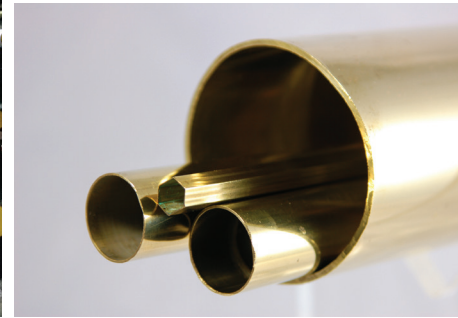
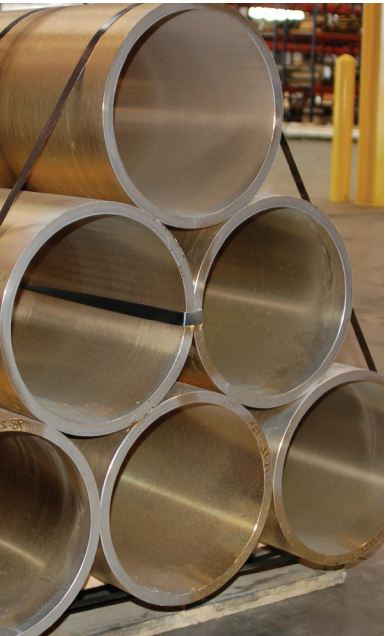
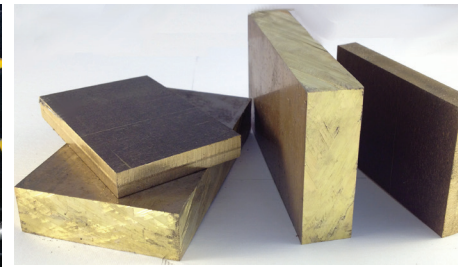
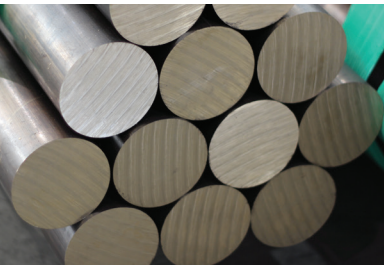


SPECIALTY COPPER ALLOYS FOR THE MARINE AND NAVAL INDUSTRIES



READY FOR IMMEDIATE SHIPMENT!

- **C44300** (ASTM B-111, EN CW706R, CuZn28Sn1As)
Admiralty Brass
- **C46400** (ASTM B-21, AMS 4611)
Naval Brass - Lead Free
- **C51000** (ASTM B139, QQ-B750, EN CW451K, CuSn5, NES 838 / DEF STAN 02-838)
Phosphor Bronze "5% A"
- **C63000** (CuAl10Ni5Fe4, AMS 4640, EN CW307G, NES 833 / DEF STAN 02-833, STF22-55/B004-2E, NFL 14 705)
Nickel Aluminum Bronze
- **C63200** (ASTM B150, QQ-C-465, MIL B 24059)
Nickel Aluminum Bronze
- **C64200** (AMS 4631, 4634, EN CW301G, CuAl6Si2Fe, NES 834 / DEF STAN 02 834)
Silicon Aluminum Bronze
- **C70600** (CuNi10 - cupronickel 90/10, EN CW352H, CuNi10Fe1Mn, DIN 2.1972)
Copper Nickel "90/10"
- **C71500** (CuNi30 - cupronickel 70/30, EN CW354H, CuNi30Fe1Mn, NES 780 / DEF STAN 02-780, STF22-55/B007EC)
Copper Nickel "70/30"
- **C92200** (ASTM B271, SAE J462, J461, EN CC498K, CuSn6Zn4Pb2)
Leaded Tin Bronze "Navy M"
- **C92500** (EN CC483K, CuSn12-C-GC)
Leaded Tin Bronze
- **C17200** (ASTM B196, AMS 4533, EN CW101C, DIN 2.1247, CuBe2)
Beryllium Copper
- **C95800** (ASTM B-505, B-271, EN CC333G, DIN 2.0975, CuAl10Ni5Fe5-C)
"Alpha" Nickel Aluminum Bronze
- **CuNi14Al2** (NFL 14 702, STF22-55/B005-E, NF 14 702)
"Navy Grade" Nickel Aluminum Bronze



SPECIALTY COPPER ALLOYS FOR THE MARINE AND NAVAL INDUSTRIES

C44300 (ASTM B-111, EN CW706R, CuZn28Sn1As)

Admiralty Brass

Available in tubes

Usually made to order to meet the engineering requirements of the Oil & Gas industry, this alloy's thermal conductivity and non-corrosive properties have been utilized in heat exchange applications. Other applications include artificial lift hydraulics, and pneumatic pump liners.

C46400 (ASTM B-21, AMS 4611)

Naval Brass - Lead Free

Available in solid bars, hex bars, flats, and plates

This lead free alloy maintains a machinability of 30% and possesses mechanical properties better than regular brass. Typical uses are in seal glands, nuts, valve stems & seats. Its name 'Naval Brass' stems from its marine application usage such as marine hardware, flanges, baffle plates, and end plates (Discs) for heat exchangers.

C63000 (CuAl10Ni5Fe4, AMS 4640, EN CW307G, NES 833 / DEF STAN 02-833, STF22-55/B004-2E, NFL 14 705)

Nickel Aluminum Bronze

Available in solid bars and plates

A high strength, tough nickel aluminum bronze used where high mechanical properties are required. This alloy is a heat treatable aluminum bronze containing 5% nickel, that provides excellent bearing properties with good corrosion resistance. It is used extensively for aircraft landing gear bushings, bearings, and other military and aircraft components.

C63200 (ASTM B150, QQ-C-465, MIL B 24059)

Nickel Aluminum Bronze

Available in solid bars

A special high strength, ductile, extra-tough alloy. It is corrosion resistant and cavitation resistant; able to withstand high pressures and readily welded. It has excellent corrosion resistance in sea water applications. The wrought equivalent to continuous cast C95800.

C64200 (AMS 4631, 4634, EN CW301G, CuAl6Si2Fe, NES 834 / DEF STAN 02 834)

Silicon Aluminum Bronze

Available in solid bars

This silicon aluminum bronze combines the self lubricity of the silicon with the higher mechanical properties of aluminum bronze and is sometimes used in place of C63000 where specifications permit a lower strength material offset by its lubricity. Typical applications involve valve stems, gears, marine and pole line hardware, wing pylons, bolts, nuts, bushings and valve body components.

C70600 (CuNi10 - cupronickel 90/10, EN CW352H, CuNi10Fe1Mn, DIN 2.1972)

Copper Nickel "90/10"

Available in solid bars, plate, & tubes

These alloys offer excellent corrosion resistance, especially in marine salt water environments. The main, wrought copper-nickel alloys chosen for sea water service contain 10 or 30 percent nickel. They also have important additions of iron and manganese which are necessary to maintain good corrosion resistance. Some common applications for copper nickel include: valves, pump components, fittings, flanges and various other marine hardware components.

C71500 (CuNi30 - cupronickel 70/30, EN CW354H, CuNi30Fe1Mn, NES 780 / DEF STAN 02-780, STF22-55/B007EC)

Copper Nickel "70/30"

C71500, Copper nickel offers excellent corrosion resistance, especially in marine salt water environments. The main, wrought copper-nickel alloys chosen for sea water service contain 10 or 30 percent nickel. They also have important additions of iron and manganese which are necessary to maintain good corrosion resistance. Some common applications for copper nickel include: valves, and pump components.

C92200 (ASTM B271, SAE J462, J461, EN CC498K, CuSn6Zn4Pb2)

Leaded Tin Bronze "Navy M"

Available in solid & hollow bars

This alloy is often used in Marine Castings. It does not respond to heat treating and casting shrinkage allowance is 1.5%. This alloy is used as valves, fittings up to 550F, gears, bushings, bearings, cryogenic valves and valves for water meters.

C92500 (EN CC483K, CuSn12-C-GC)

Leaded Tin Bronze

Available in solid & hollow bars

This alloy is typically used for bearings and bushings, seals, piston rings, steam fittings, and valve components. C92500 has good machining characteristics and works well in a seawater environment. It is not suitable for heat treatment.

C95800 (ASTM B-505, B-271, EN CC333G, DIN 2.0975, CuAl10Ni5Fe5-C)

"Alpha" Nickel Aluminum Bronze

Available in solid & hollow bars and wear plates. This alloy is typically used for parts that come in contact with sea water. Bars can be supplied in a stress relieved condition so as to prevent "stress corrosion cracking". Typical applications are for vertical turbine pumps, propeller hubs and blades, and other marine hardware and fittings.

GAM MM11 (CuAl9Ni5Fe4)

Nickel Aluminum Bronze

CuNi14Al2 (NFL 14 702, STF22-55/B005-E, NF 14 702)

"Navy Grade" Nickel Aluminum Bronze

This non-magnetic alloy has very high mechanical properties. CuNi14Al2 is also resistant to sea-water corrosion and to oxidation. This alloy also has excellent fatigue resistant properties.

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