

# UNS C71500 Copper Nickel Bar (70/30)

Smiths Advanced Metals

Rev: SAM/datasheets/copper-nickel-alloys/uns-c71500/aug-2023

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## Improved strength

UNS C71500 copper nickel bars (also called cupronickel) include 30% nickel, providing greater strength.

The alloy is a direct equivalent of copper-nickel 70/30, including traces of iron and manganese in the alloying me to increase corrosion resistance. UNS C71500 offers medium to high strength and excellent corrosion resistance, making the product highly suitable for various commercial engineering applications. The alloy is similar to UNS 70600 but with improved strength characteristics.

## Engineering Benefits

The material promotes good creep resistance at elevated temperatures and is straightforward to machine, weld and form. However, the main benefit of UNS C71500 is the alloy's resistance to corrosion in marine atmospheres. The product is suitable for various applications throughout the above-sea and subsea engineering sectors for condenser tubes, pipework, flanges, valves and pump components.

We stock UNS C71500 copper nickel in solid round bars to ASTM B151 and offer in-house processing where we cut your bars to specific lengths before shipping.

## Benefits

- Medium to high tensile strength
- Easily welded, machined and formed
- Excellent anti-microbial capabilities

### \* Chemical Composition (weight %)

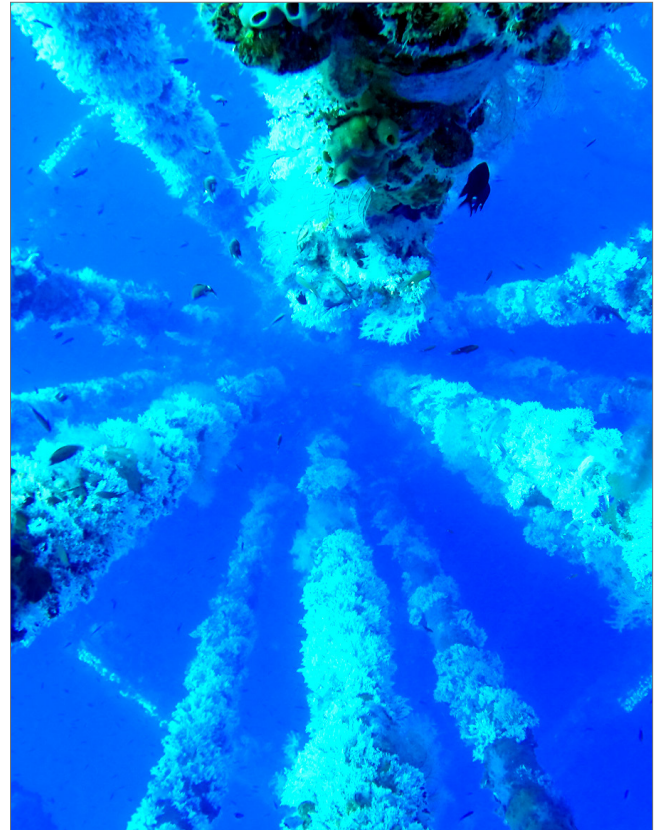
	Cu	Ni	Mn	Fe	Pb	Zn
min.	Bal	29.00		0.40		
max.	Bal	33.00	1.00	1.00	0.05	1.00

\*As per ASTM B151

### \*Physical & Mechanical Properties

Density	8.94 g/cm3
Melting Point	1170-1240°C
Elastic modulus	150 GPa
Tensile Strength	310 MPa min
0.5% Proof	105 MPa min
Elongation	30% min

\*As per ASTM B151 (Temper HO60)



## Key Applications

- Saltwater condensers
- Flange, valve and pump component
- Water boxes

## Performance

Like similar products in this range, UNS C71500 offers superior corrosion and biofouling resistance in saltwater environments. The alloy also promotes resistance to chloride stress corrosion cracking.

An additional benefit is the alloy's anti-microbial characteristics, making the product ideal for sanitised operating environments, such as hospitals, clean rooms and food preparation areas.

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