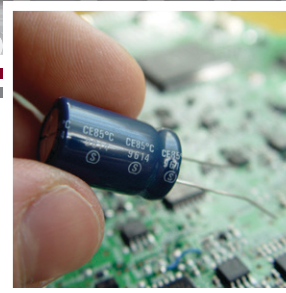
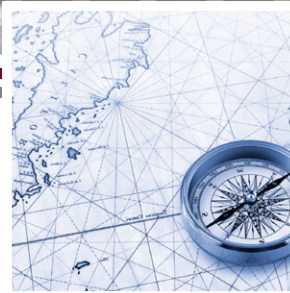


# CUPRO NICKEL 70/30



Nickel copper alloys, or cupro nickel, are a part of the electronic grade alloy family. The earliest discovery of nickel copper was around 235 BC in Bactria.

Cupro Nickel 70/30, CDA 715 Alloy per ASTM B 122 is comprised of 70% Copper, 30% Nickel and other trace elements such as Iron and Magnesium. Nickel has a significant effect on the physical properties of the pairing. The color becomes lighter when nickel is added and the purity increases as well. Cupro nickel is often used in the marine industry due to its high electric resistance ability and corrosion while in sea water. Nickel copper falls into the moderate to poor machining ability category due to its durability. This bond forms long, hard chips that cause irreparable surface damage when machined down.

This alloy has been used in auto components, tools for marine exploration and in power plants; additionally, it is applied in coinage. Another application of nickel copper is in the electrical engineering space where it can be used in the production of heating cables, anodes for TV tubes and electric resistors. This alloy can be easily worked while experiencing cold and hot temperatures. Nickel copper is among the corrosion resistant copper alloys, protecting against moisture, acids, alkalis and salt solutions, organic acids and gases such as oxygen, chlorine and carbon dioxide.

CHEMICAL COMPOSITION %	
Chemical Element	Cupro Nickel
Copper	69.4
Nickel	30
Iron	0.6
MECHANICAL PROPERTIES	
Property	Cupro Nickel
Density	(lbs. per cu. in): .323
Module of Elasticity	(x 10 <sup>-6</sup> PSI, tension): 22
Electrical Conductivity	(% IACS at 68°F (20°C) as annealed): 4.6
Thermal Conductivity	(BTU per sq.ft.per ft.per hr.per F at 68°F,(20°C): 17
PHYSICAL PROPERTIES	
Property	Cupro Nickel
<b>Tensile Strength</b>	
<b>Yield Strength (0.2% Offset)</b> [x 1000 PSI (MPa = KSI x 6.8948)]	
<b>Annealed: 52 Min.</b>	
1/2 Hard: 66 – 80	60 – 78
Full Hard: 75 – 88	73 – 84
Spring: 84 – 94	81 – 90
<b>Elongation</b> [% in 2 Inches (= % In 50mm)]	
<b>Annealed: 30 Min.</b>	
1/2 Hard: 3 – 10	
Full Hard: 2 – 4	
Spring: 1 – 2	
<b>Rockwell B Hardness</b>	
1/2 Hard: 67 – 72	
Full Hard: 71 – 75	
Spring: 73 – 76	
Linear coefficient of thermal expansion cm. per cm. per °C x 10 <sup>-6</sup>	
Temp. range – °C	Cupro Nickel
20-300	9

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# CUPRO NICKEL 70/30

## CUPRO NICKEL 70/30 CDA 715

ASTM B 122 – TENSION LEVELED COIL

Thick.		Width		
.005"	x	12"	x	Coil
.010"	x	12"	x	Coil
.013"	x	12"	x	Coil
.015"	x	12"	x	Coil
.020"	x	12"	x	Coil

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- 49 Alloy
- 52 Alloy
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- Magnetic Shielding Alloys
- OFHC Copper 101/102
- 1010 Carbon Steel
- 301 Stainless Steel
- 302/304 Stainless Steel
- 316/316L Stainless Steel
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