



# Copper Nickel Rod & Bar



## Standard Denomination: 706, C70600, 90 / 10

Cu-Ni alloys are widely used for marine applications due to their excellent resistance to sea-water corrosion, high inherent resistance to biofouling and good fabrication properties.

They have provided reliable service for several decades while offering effective solutions to today's technological challenges.

A Group Company



Experience



Environment



Added value



Export

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## FEASIBLE DIMENSION

Outside Diameter	0.750" to 2.250"	Over 2.250" to 3.500"	Over 3.500" to 6.125"
Length	6 to 20 ft.	8 to 12 ft.	8 to 10 ft.

## CHEMICAL COMPOSITION

Alloy	Cu (%)	Ni (%)	Pb (%)	Fe (%)	Zn (%)	Mn (%)	P (%)	C (%)	S (%)
C 70600	86.5 Min.	9.0 to 11.0	0.02 Max.	1.0 to 1.8	0.50 Max.	1.0 Max.	0.02 Max.	0.05 Max.	0.02 Max.

## MECHANICAL PROPERTIES

Alloy	Temper	Tensile Strength	Yield Strength	Grain size (mm)	Elongation %
C 70600	060	38 min	15 Min.	0.010 - 0.070	30 Min.

## PHYSICAL PROPERTIES

PROPERTIES	UNITS	C70600
MELTING POINT (LIQUIDUS)	°F (°C)	2100 (1150)
MELTING POINT (SOLIDUS)	°F (°C)	2010 (1100)
DENSITY (TO 20°C)	LB./CU. IN	0.323
COEFFICIENT OF THERMAL EXPANSION	PER °F FROM 68 TO 572	9.5 X 10 <sup>-6</sup>
THERMAL CONDUCTIVITY	BTU./SQ. FT./HR/°F TO 68°F	26
ELECTRICAL RESISTIVITY (ANNEALED)	OHMS (CIRC.MIL/FT) TO 68°F	115
ELECTRICAL CONDUCTIVITY (ANNEALED)	% IACS TO 68°F	9.0
THERMAL CAPACITY (SPECIFIC HEAT)	BTU/LB/°F TO 68°F	0.09
MODULUS OF ELASTICITY (TENSION)	KSI	18000
MODULUS OF RIGIDITY	KSI	6800
ANNEALED TEMPERATURE	°F (°C)	1100-1500 (600-825)

## SUITABILITY FOR BEING JOINED BY

Alloy	Soldering	Brazing	Oxyacetylene Welding	Carbon Arc Welding	Gas Shielded Arc Welding	Coated Metal Arc Welding	Resistance Welding		
							Spot	Seam	Butt
C70600	Excellent	Excellent	Fair	Not recommended	Excellent	Excellent	Good	Good	Excellent

## Applicable Standards

ASTM B-151 ASME SB - 151 MIL-C-15726F (1)

**SALES BRANCHES AND OFFICES:** We export to North, Central and South America, the Caribbean, Europe and Asia.

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