



## COPPER NICKEL "70/30"

### EQUIVALENT SPECIFICATIONS

SPECIFICATIONS	DESIGNATION
ISO	CuNi30Mn1Fe
European	CuNi30Mn1Fe
BS	CN 107
JIS	C 7150
Russian	MNZMo30-1-1

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.

#### TYPICAL USES for C71500 Copper Nickel "70/30":

**INDUSTRIAL:** Pump Impellers, Heat Exchanger Tubes, Evaporator Tubes, Distiller Tubes, Condenser Plates, Refrigerators, Process Equipment, Condenser Components, Ferrules, Welding Backing Rings, Flexible Metal Hose, Weld Wire, Boiler Parts, Condensers, Propeller Sleeves, Heat Exchanger Components **MARINE:** Salt Water Flanges, Salt Water Piping, Valve Bodies, Sea Water Service, Fittings, Sea Water Condensers, Salt Water Pipe Fittings, Water Boxes - Salt Water Applications, Pump Bodies and Internal Parts-Sea Water

#### CHEMICAL COMPOSITION

	Cu	Fe	Pb	Mn	Ni	Zn
Min/Max	Rem	0.40 - 1.0	0.05	1	29.0 - 33.0	1
Nominals	69.5000	0.5000	-	-	30.0000	-

#### PHYSICAL PROPERTIES

Product Property	US Customary
Coefficient of Thermal Expansion	9.0 $\times 10^{-6}$ per oF (68-572 F)
Density	0.323 lb/in <sup>3</sup> at 68 F
Electrical Conductivity	4 %IACS @ 68 F
Electrical Resistivity	225.0 ohms-cmil/ft @ 68 F
Melting Point - Liquidus	2260 F
Melting Point - Solidus	2140 F
Modulus of Elasticity in Tension	22000 ksi
Modulus of Rigidity	8300 ksi
Specific Gravity	8.94
Specific Heat Capacity	0.09 Btu/lb/oF at 68 F
Thermal Conductivity	17.0 Btu $\hat{A}$ • ft/(hr $\hat{A}$ • ft <sup>2</sup> $\hat{A}$ • oF)at 68F

#### SIZES AVAILABLE :

HOLLOW RODS  
 ROUND RODS/BARS  
 HEX  
 SQUARE  
 FLAT  
 BILLETS  
 INGOTS

Min Bore Size 20 mm and Max OD 100 mm  
 8mm To 100 mm  
 10mm To 60mm  
 10mm To 60mm  
 10mm Min Thickness and max Width 120mm  
 Up to 200 mm  
 As per Specification

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