



# Alloy Monel 400

Alloy Designation: (UNS N04400 )

Specifications: ASTM B165

Typical Size Ranges: OD (.02"-1.00")

Available Product Forms:

Annealed to Full Hard, in Coiled or Straight form

General Description and Applications:

Monel 400 is a nickel-copper alloy known for its use in marine applications, pumps, valves, chemical processing equipment, heat exchangers, and process vessels. This alloy has poor resistance to pitting corrosion and should not be used in settings where it will encounter stagnant seawater.

Commitment to Quality:

ISO 9001-  
CERTIFIED



SHIPBUILDING  
CERTIFICATIONS



HIGH PRESSURE  
APPLICATIONS



AD-2000-Merkblatt-W0

**PED**  
2014 / 68 / EU

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## Chemical Properties as per Specs:

CHEMICAL COMPOSITION BY WEIGHT PERCENT															
Ni	Cr	Fe	Mo	Al	Ti	Nb	Co	Ta	Mn	Cu	N	C	S	Si	P
63.0 Min	-	2.5 Max	-	-	-	-	-	-	2.0 Max	28.0 - 34.0	-	.30 Max	0.024 Max	0.50 Max	-

### PREN CALCULATION AND NUMBER:

- $PREN = Cr + 3.3(Mo + 0.5W) + 16N$
- MIN PREN = 0
- MAX PREN = 0
- PREN Range: 0

MECHANICAL PROPERTIES	
Ultimate Tensile Strength	70 ksi Minimum (480 MPa)
Yield Strength	28 ksi Minimum (195 MPa)
% Elongation to Failure	35% Minimum
Hardness	80 HRB Max
Young's Modulus	26.0x10 <sup>6</sup> ksi (179 GPa)

PHYSICAL PROPERTIES	
Density	0.318 lb/in <sup>3</sup> or 8.80 g/cm <sup>3</sup>
Melting Point	2370 - 2460°F or 1300 - 1350°C
Coefficient of Thermal Expansion	7.72 (μin/in-°F)
Specific Heat	0.102 BTU/lb-°F
Thermal Conductivity	21.8 (W/m.K)
Electrical Resistivity	54.7 μΩcm

### ANNEALING SUGGESTION:

- Monel 400 is best annealed between the temperatures of 1650-1700 degrees Fahrenheit or 899-927 degrees Celsius.

Disclaimer: Always consult with design engineer, the information contained in this data sheet is for guidance only.