

# Alloy N200

### Alloy Designation: (UNS N02200)

Specifications: ASTM B161

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

## Available Product Forms:

Annealed to Full Hard, in Coiled or Straight form

## General Description and Applications:

N200 is an alloy consisting completely or almost entirely of nickel. It is known for its ductility, ability to be easily cold worked, and great resistance to caustic alkaline compounds. Tubing comprised of N200 often sees use in the electronics and chemical processing industries.

## Commitment to Quality:



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## Alloy N200

#### Chemical Properties as per Specs:

CHEMICAL COMPOSITION BY WEIGHT PERCENT															
Ni	Cr	Fe	Мо	AI	Ti	Nb	Co	Та	Mn	Cu	N	с	s	Si	Ρ
99.0 Min	-	0.25 Max	-	-	-	-	-	-	0.35 Max	0.4 Max	-	0.15 Max	0.01 Max	0.35 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	55 ksi Minimum (380 MPa)
Yield Strength	15 ksi Minimum (105 MPa)
% Elongation to Failure	35% Minimum
Hardness	100 HRB Max
Young's Modulus	28.0x10^6 ksi (193 GPa)

#### PHYSICAL PROPERTIES

Density	0.321 lb/in <sup>3</sup> or 8.89 g/cm <sup>3</sup>
Melting Point	2615 - 2635°F / 1435 - 1446°C
Coefficient of Thermal Expansion	7.39 (μin/in-°F)
Specific Heat	0.109 BTU/lb-°F
Thermal Conductivity	70.2 (W/m.K)
Electrical Resisitivity	9.6 μΩcm

#### **ANNEALING SUGGESTION:**

• N200 is best annealed between the temperatures of 1300-1600 degrees Fahrenheit or 704-871 degrees Celsius.

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