



Nickel 200 and Nickel 201 are solid solution strengthened, commercially pure wrought materials. Typically, the elemental restrictions of both alloys are combined into one, dual-certified chemistry resulting in a single alloy with the desired characteristics of both alloys. Nickel 200 can be used in chemical processing and storage, synthetic fiber production, and processes where sodium hydroxide and fluorine is used. Other applications include aerospace and defense.

Nickel 200 provides corrosion resistance in reducing and neutral media as well as in oxidizing atmospheres provided that the oxidizing media allows the formation of a passive oxide film. This oxide film accounts for the materials excellent resistance in caustic environments.

## CHEMICAL COMPOSITION

	C	Mn	S	Si	Cu	Ni+Co	Fe
MIN/MAX	0.15 max	0.35 max	0.01 max	0.35 max	0.25 max	99.0 min	0.40 max

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## APPLICABLE SPECIFICATIONS

Bar	Wire	Sheet/Plate	Tube	Pipe	Fitting	Forging
ASTM B160	-	ASTM B162	ASTM B622 ASTM B161 ASTM B163	ASTM B622 ASTM B161	ASTM B366	ASTM B564

## APPLICATIONS

Lead in wires for heating elements	Injection Well Piping Systems	Aerospace components	Manufacture and handling of sodium hydroxide
Battery connections & terminals	Chemical processing	Synthetic fibre processing	Manufacture of vinyl chlorolide monome

## PHYSICAL PROPERTIES

Density	Electrical Resistivity	Coefficient of Thermal Expansion	Thermal Conductivity	Modulus of Elasticity	Specific Heat Capacity	Melting Point	Specific Gravity
0.321 lb/in <sup>3</sup>	58 ohm • circ mil/ft	7.4 x 10 <sup>-6</sup> in/in °F	487 btu • in/ft <sup>2</sup> • h • °F	29588 ksi	0.109 Btu/lb-°F	2635°F	8.90
8.89 g/cm <sup>3</sup>	9.6 μW • cm	13.3 μm/m °C	70.2 W/m • °C	204 kN/mm <sup>2</sup>	456 J/kg-°K	1446°C	8.90

### MAXIMUM PRESSURE WORK

P = Maximum work pressure (psi)  
 S = Minimum tensile strength of material for a specific temper (It is the value of the tensile strength in psi in Mechanica properties table)  
 D = Exterior diameter of tube  
 T = Wall thickness of tube  

$$P = \frac{2TS}{SD}$$

### NON DESTRUCTIVE TESTS

Eddy Current Testing  
 Hydrostatic Testing  
 Air Underwater Testing  
 Ultrasonic Testing  
 (PMI) Positive Material Identification

### DESTRUCTIVE TESTS

Microstructure Test  
 Tensile Test  
 Expansion Test  
 Optical Spectrometry Test