

Nickel 200/201 is a commercially pure nickel with excellent resistance to many corrosive environments. Its outstanding corrosion property is resistant to hot concentrated alkalis (except ammonium hydroxide). Nickel 200/201 possesses good resistance to corrosive environments containing dry chlorine, fluorine, hydrogen chloride and hydrogen fluoride up to moderately elevated temperatures. It is useful for maintaining product purity in the handling of substances ranging from foods, synthetic fibers and alkalis to fatty acids and soaps. Nickel 200/201 is ferromagnetic. Nickel 200/201 is not recommended for service above 600°F. The low carbon grade 201, is preferred for higher temperature applications.

### Specifications

**UNS:** N02200, N02201 **W. Nr.:** 2.4066, 2.4068 **ASTM:** B 162, B 160, B 161, B 163, B 725, B 730, B 366  
**ASME:** SB-162, SB-160, SB-161, SB-163, SB-725, SB-730, SB-366

### Chemical Composition, %

	Ni	Mn	Cu	Si	C	S	Fe
<b>MIN 200 (201)</b>	99.0	—	—	—	—	—	—
<b>MAX 200 (201)</b>	—	0.35	0.25	0.35	0.15 (0.02)	0.01	0.4

### Features

- Excellent resistance to many corrosive environments
- Preferred to resist dry chlorine, fluorine, hydrogen chloride or hydrogen fluoride gases at elevated temperatures
- Good thermal and electrical conductivity
- Good general corrosion resistance
- Large magnetostrictive effect

### Applications

- Caustic manufacture and storage
- Chemical shipping containers
- Synthetic fiber production
- Fluorine electrolysis
- Food processing equipment
- Magnetostrictive devices

### Physical Properties

**Density:** 0.321 lb/in<sup>3</sup> **Melting Range:** 2615 - 2635°F **Curie Point:** 680°F **Specific Heat at 70°F:** 0.109 Btu/lb °F

Temperature, °F	200	400	600	800	1000	1200
<b>Coefficient* of Thermal Expansion, in/in°F x 10<sup>-6</sup></b>	7.4	7.7	8.0	8.3	8.5	8.7
<b>Thermal Conductivity, Btu • ft/ft<sup>2</sup> • hr • °F</b>	38.8	35.4	32.5	32.5	33.8	35
<b>Modulus of Elasticity Dynamic, psi x 10<sup>6</sup></b>	75	113	164	204	228	248

\* 70°F to indicated temperature.

## Mechanical Properties

## Minimum Specified Properties

	Nickel 200	Nickel 201
Ultimate Tensile Strength, ksi	55	50
0.2% Yield Strength, ksi	15	12
Elongation, %	40	40
Hardness MAX, Brinell	90	–

 **INTERNATIONAL  
TRADE WINDS** LLC  
Exclusive Representative of Rolled Alloys®, Inc.

**CLAUDIO CZARNOBAI**

COMMERCIAL MANAGER  
ClaudioCzarnobai@intwinds.com

**F** +55 11 3825 2966

**C** +55 11 99112 2703

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