ALLOY 201

AMS 5553 / UNS N02200 / UNS N02201

Nickel Alloy 201 (UNS N02201) is a high-purity, commercially pure nickel alloy containing at least 99.5% nickel and engineered for excellent performance in corrosive and high-temperature environments. Its extremely low carbon content (0.02% max) prevents embrittlement at elevated temperatures, making it suitable for service above 600°F (316°C) where Alloy 200 is not recommended. With outstanding ductility, toughness, and corrosion resistance in reducing, neutral, and mildly oxidizing environments, Nickel 201 is widely used in chemical processing, aerospace, marine systems, electrical components, caustic production, and high-purity equipment. Its exceptional thermal and electrical conductivity further enhances its usefulness in demanding industrial applications.

Products & Sizes
Precision Reroll Strip
0.0008" - 0.015"

	Element	Min	Max
Ni	Nickel	99.0	-
Fe	Iron	-	0.40
Mn	Manganese	-	0.35
Cu	Copper	-	0.25
Si	Silicon	-	0.25
Mg	Magnesium	-	0.15
Ti	Titanium	-	0.10
C	Carbon	-	0.02
S	Sulfur	-	0.005

Industry Standards

Industry Applications

- Battery components
- Heat exchangers
- Lead wires
- Electrodes
- Welding applications
- Food processing

Related Industries

Physical Properties

Property	Value
Melting Temperature Range	1450–1445°C
Density	8900 kg · m^{-3}
Modulus of Elasticity	196 GPa
Specific Heat	440 J · kg^{-1} · K^{-1}
Thermal Conductivity	76 W · m^{-1} · K^{-1}
Coefficient of Thermal Expansion	14.5 x 10-6 K^{-1}
Specific Electrical Resistivity	0.085 Ω · mm^2 · m^{-1}

Mechanical Properties

Semi-Finished Product Form	Sheet ≤ 50 mm thickness Bar ≤ 250 mm Ø Forging ≤ 150 mm Ø thickness
Rp 0.2 min [MPa]	80
Rp 1.0 min [MPa]	105
Rm [MPa]	340-540
A min [%]	40