

Nickel 200/201 alloys

UNS N02200 & N02201
 W. Nr 2.4060/2.4066 & 2.4061/2.4068

Applicable Specifications

Strip and Foil AMS 5553, ASTM B162, DIN 17740, DIN 17750

Description: Nickel 200 is a solid solution strengthened, commercially pure material with good mechanical properties over a wide range of temperatures. It has excellent resistance to many corrosives, particularly hydroxides. Nickel 200 has high electrical and thermal conductivity and is ferromagnetic. It offers very good weldability and formability.

Applications include: Burst disks, evaporators, combustion boats, electronic components, chemical drums, reactors, vessels, missile components

Industries supplied include: Chemical processing and manufacturing, Electronics, Aerospace & Defense

Nominal Composition

	C	Mn	Si	S	Ni	Cu	Fe
min	-	-	-	-	Bal	-	-
max	0.15/0.02	0.35	0.35	0.01		0.25	0.40

Physical Properties

	At 70°F	At 20°C
Density	0.321 lb/in ³	8.9 g/cm ³
Modulus of Elasticity (E)	29.7 x 10 ³ ksi	205 GPa
Modulus of Rigidity (G)	11.55 x 10 ³ ksi	79.6 GPa
Coefficient of Expansion	8.44 microinches/in.-°F (70-932°F)	15.2 μm/m-°C (20-500°C)
Electrical Resistivity	3.15 μ ohm.in	8.5 μ ohm.cm
Thermal Conductivity	487 Btu-in./ft. ² hr.-°F	70.2 W/m-K

Typical Mechanical Properties

Condition	Heat Treatment	Tensile Strength	Suggested Operating Conditions
Annealed	1300-1700 °F (705-925 °C)	55-75 ksi (380-520 MPa)	-300°F to 1000°F (-184°C to 540°C)
Spring Temper	(Stress relieve as needed)	90 ksi min	-300°F to 1000°F (-184°C to 540°C)

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