

Inconel® alloy 600

UNS N06600
W.Nr 2.4816

Inconel® 600 is a Nickel-Chromium-Iron alloy with good corrosion resistance, oxidation resistance, and high strength at high temperatures. Inconel® 600 is highly resistant to chloride-ion stress-corrosion cracking due to the high nickel content. Age-hardening treatments are not required, as Inconel 600® is hardened and strengthened through cold work only. Inconel® 600 can operate from cryogenic temperatures to 700°F.

Applications include reactor vessels, furnace seals fans and fixtures and process equipment.

Industries supplied include: Chemical Processing, Heat Treating, Nuclear, and Aerospace.

Nominal Composition

	C	Mn	Si	P	S	Cr	Ni	Fe	Co	Nb	Ti	Al	Cu
min						14.00	72.00	6.00					
max	0.15	1.00	0.50	0.040	0.015	17.00		10.00	1.00	1.00	0.50	0.35	0.50

Physical Properties

	At 70°F	At 20°C
Density	0.306 lb/in ³	8.47 g/cm ³
Modulus of Elasticity (E)	31.1 x 10 ³ ksi	214 GPa
Modulus of Rigidity (G)	11.7 x 10 ³ ksi	81.0 GPa
Coefficient of Expansion	7.9 microinches/in.-°F (70-600°F)	14.2 µm/m-°C (20-538°C)
Electrical Resistivity	40.6 µ ohm.in	103 µ ohm.cm
Thermal Conductivity	103 Btu-in./ft. ² hr.-°F	14.9 W/m-K

Applicable Specifications

Strip and Foil	ASTM B168, AMS 5540
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Typical Mechanical Properties

Condition	Heat Treatment	Tensile Strength	Suggested Operating Conditions
Annealed	1975°F (1079°C)	80 - 110 ksi (552-758 MPa)	-300°F to 700°F (-184°C to 370°C)
Spring Temper		125 - 185 ksi (862-1275 MPa)	-300°F to 700°F (-184°C to 370°C)

INCONEL® is a registered trademark of the Special Metals Corporation group of companies.

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Elgiloy Specialty Metals - Strip
Products

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