INCONEL alloy 600

A nickel-chromium alloy with good oxidation resistance at high temperatures and resistance to chloride-ion stress-corrosion cracking, corrosion by high-purity water, and caustic corrosion. Used for furnace components, in chemical and food processing, in nuclear engineering and for sparking electrodes. Standard product forms are round, hexagon, extruded section, flats, forging stock, pipe, tube, plate, sheet, strip and wire.

Specifications and Designations

UNS N06600
BS 3072–3076 (NA14)
ASTM B163, B166, B167, B168, B516, B517, B564 B751
ASME SB-163, SB-166–SB-168, SB-564 Boiler Code Sections I, III, VIII, IX
SAE AMS 5540, 5580, 5665, 5687, 7232
DIN 17742, 17750–17754
Werkstoff Nr. 2.4816
VdTÜV 305
NACE MR-01-75
MIL-T-23227, MIL-N-23228, MIL-N-23229
AFNOR NC 15 Fe

Limiting Chemical Composition, %

Ni[a] . . . . . 72.0 min.	C . . . . . 0.15 max.	Si . . . . . .0.5 max.
Cr 14.0–17.0	Mn . . . . . 1.0 max.	Cu . . . . . .0.5 max.
Fe 6.0–10.0	S . . . . . 0.015 max.	

[a]Plus Co.

Typical Mechanical Properties (Annealed)

Tensile Strength,	psi	93 000
	MPa	640
Yield Strength (0.2% Offset),	psi	37 000
	MPa	255
Elongation, %		45

Physical Constants and Thermal Properties

Density,	lb/in³	0.304
	Mg/m³	8.42
Melting Range,	°F	2470–2575
	°C	1354–1413