

ALLOY 600 - BARS



Applications

INDUSTRIAL

Industrial Furnaces, Reaction Vessels and Heat Exchanger, High Temperature Sensors, ect.

Chemical Composition (Nominal) %

Element	Percentage (%)
Ni (Nickel)	72.0 min
Cr (Chromium)	14.0 - 17.0
Fe (Iron)	6.0 - 10.0
Mn (Manganese)	1.0 max
C (Carbon)	0.15 max
Cu (Copper)	0.5 max
Si (Silicon)	0.5 max
S (Sulfur)	0.015 max

Features

- Good resistance against oxidation, carbonization and nitriding
- Good resistance to stress corrosion in room and increased temperatures
- Good resistance against dry chlorine and hydrogen chloride
- Good mechanical properties at both low and high temperatures

Physical Properties

Density
8.5 g/cm³ at 20°C

Standard

ASTM B166

Material

INCONEL 600 / UNS N06600 / 2.4816

Mechanical Properties

Heat Treatment	Tensile Strength min, psi (MPa)	Yield Strength min, (0.2% offset) psi (MPa)	Elongation in 2 in. or 50 mm (or 4 D), min, %
Cold-worked (as-worked): Rounds: Under 1/2	120,000 (825)	90,000 (620)	7
Cold-worked (as-worked): Rounds: 1/2 to 1	110,000 (760)	85,000 (585)	10
Cold-worked (as-worked): Rounds: over 1 to 2 1/2	105,000 (725)	80,000 (550)	12
Hot-worked (as-worked): Rounds: 1/4 to 1/2	95,000 (655)	45,000 (310)	20
Hot-worked (as-worked): Rounds: over 1/2 to 3	90,000 (620)	40,000 (275)	25

Surface

Bright annealed / annealed

Package

Wooden case

Heat Treatment

Soft Annealing / Solution Annealing

Soft annealing of Alloy 600 should take place in the temperature range between 920 and 1,000°C (1,688 and 1,832°F).

Solution annealing of Alloy 600 H should take place at temperatures between 1,080 and 1,150°C (1,976 and 2,102°F).

ALLOY 600 - TUBES

Applications

INDUSTRIAL

Industrial Furnaces, Reaction Vessels and Heat Exchanger, High Temperature Sensors, ect.

Chemical Composition (Nominal) %

Element	Percentage (%)
Ni (Nickel)	72.0 min
Cr (Chromium)	14.0 - 17.0
Fe (Iron)	6.0 - 10.0
Mn (Manganese)	1.0 max
C (Carbon)	0.15 max
Cu (Copper)	0.5 max
Si (Silicon)	0.5 max
S (Sulfur)	0.015 max

Features

- Good resistance against oxidation, carbonization and nitriding
- Good resistance to stress corrosion in room and increased temperatures
- Good resistance against dry chlorine and hydrogen chloride
- Good mechanical properties at both low and high temperatures

Physical Properties

Density 8.5 g/cm³ at 20°C

Standard

ASTM B167 for seamless pipe and tube

Material

INCONEL 600 / UNS N06600 / 2.4816

Mechanical Properties

Heat Treatment	Tensile Strength min, psi (MPa)	Yield Strength min, (0.2% offset) psi (MPa)	Elongation in 2 in. or 50 mm (or 4 D), min, %
Hot-worked or hot worked annealed: 5 in. (127 mm) in outside diameter and under	80,000 (550)	30,000 (205)	35
Hot-worked or hot worked annealed: Over 5 in. (127 mm) in outside diameter	75,000 (515)	25,000 (170)	35
Cold-worked annealed: 5 in. (127 mm) in outside diameter and under	80,000 (550)	35,000 (240)	30
Cold-worked annealed: Over 5 in. (127 mm) in outside diameter	80,000 (550)	30,000 (205)	35

Surface

Bright annealed / annealed

Package

Wooden case

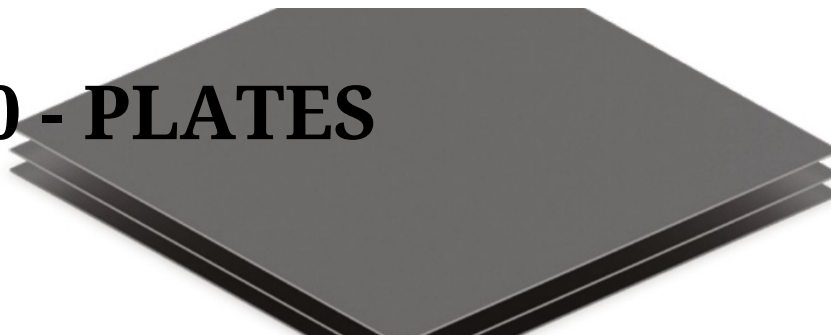
Heat Treatment

Soft Annealing / Solution Annealing

Soft annealing of Alloy 600 should take place in the temperature range between 920 and 1,000°C (1,688 and 1,832°F).

Solution annealing of Alloy 600 H should take place at temperatures between 1,080 and 1,150°C (1,976 and 2,102°F).

ALLOY 600 - PLATES



Applications

INDUSTRIAL

Industrial Furnaces, Reaction Vessels and Heat Exchanger, High Temperature Sensors, ect.

Chemical Composition (Nominal) %

Element	Percentage (%)
Ni (Nickel)	72.0 min
Cr (Chromium)	14.0 - 17.0
Fe (Iron)	6.0 - 10.0
Mn (Manganese)	1.0 max
C (Carbon)	0.15 max
Cu (Copper)	0.5 max
Si (Silicon)	0.5 max
S (Sulfur)	0.015 max

Features

- Good resistance against oxidation, carbonization and nitriding
- Good resistance to stress corrosion in room and increased temperatures
- Good resistance against dry chlorine and hydrogen chloride
- Good mechanical properties at both low and high temperatures

Physical Properties

Density
8.5 g/cm³ at 20°C

Standard

ASTM B168

Material

INCONEL 600 / UNS N06600 / 2.4816

Mechanical Properties

Heat Treatment	Tensile Strength min, psi (MPa)	Yield Strength min, (0.2% offset) psi (MPa)	Elongation in 2 in. or 50 mm (or 4 D), min, %
Hot-Rolled Plate: Annealed	80,000 (550)	35,000 (240)	30
Hot-Rolled Plate: As-rolled	85,000 (586)	35,000 (240)	30
Hot-Rolled Sheet: Annealed	80,000 (550)	35,000 (240)	30
Cold-Rolled Sheet: Annealed	80,000 (550)	35,000 (240)	30

Surface

Bright annealed / annealed

Package

Wooden case

Heat Treatment

Soft Annealing / Solution Annealing

Soft annealing of Alloy 600 should take place in the temperature range between 920 and 1,000°C (1,688 and 1,832°F).

Solution annealing of Alloy 600 H should take place at temperatures between 1,080 and 1,150°C (1,976 and 2,102°F).