



TG Steels

Alloy 600
ROUND BAR



Applications

INDUSTRIAL

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

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

Standard

ASTM B166

Material

Alloy 600 / UNS N06600 / 2.4816

Surface

Bright annealed / annealed

Package

Wooden case

Chemical composition (Nominal) %

Grade	Ni	Cr	Fe	Mn	C	Cu	Si	S
Alloy 600	72.0 min	14.0-17.0	6.0-10.0	1.0 max	0.15 max	0.5 max	0.5 max	0.015 max

Physical properties

Density

8.5 g/cm³ at 20°C

Mechanical properties

Heat Treatment	Tensile Strength, min, psi (MPa)	Yield Strength, min. (0.2% offset), min, 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
Hot-worked (as-worked): Rounds: over 3	85 000 (585)	35 000 (240)	30
Hot-worked (Annealed) or Cold-worked (Annealed): Rod and Bar, all sizes	80 000 (550)	35 000 (240)	30

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)