

INCONEL® (nickel-chromium-iron) alloy 600 (UNS N06600/W.Nr. 2.4816) is a standard engineering material for applications which require resistance to corrosion and heat. The alloy also has excellent mechanical properties and presents the desirable combination of high strength and good workability. The high nickel content gives the alloy resistance to corrosion by many organic and inorganic compounds and also makes it virtually immune to chloride-ion stress-corrosion cracking. Chromium confers resistance to sulfur compounds and also provides resistance to oxidizing conditions at high temperatures or in corrosive solutions. The alloy is not precipitation hardenable; it is hardened and strengthened only by cold work.

The versatility of INCONEL alloy 600 has led to its use in a variety of applications involving temperatures from cryogenic to above 2000°F (1095°C).

## FEATURES

- High resistance to a wide range of corrosive environments
- Virtually immune to stress corrosion cracking caused by chloride ion
- Non magnetic
- Excellent mechanical properties
- High strength and well soldability under a wide range of temperatures

## APPLICATIONS

- Heat treating muffles and retorts
- Heat treating baskets
- Nuclear reactor components
- Chlorination equipment to 540°C
- Pulp mill alkaline digesters
- Heaters, stills, bubble towers, condensers for processing fatty acids, evaporator tubes, tube sheets and flaking trays for sodium sulphite manufacture, springs primary water pumping.

## TECHNICAL INFORMATION

### Chemistry

El. Químico		% Máx.
C	C Carbon	0.15
Mn	Manganese	1.00
S	Sulphur	0.015
Si	Silicon	0.50
Ni	Nickel	72.0 (min.)
Cr	Chromium	14.0-17.0
Cu	Copper	0.50
Fe	Iron	6.0-10.00

### Mechanical properties according standards

Norm ASTM	Cond.	Rm min.	Rp 0,2% min.	E4d min.%	Condition info
B-443	a.1	80 (550)	30 (205)	35	a= Hot worked and annealed b= Cold annealed c= Hot rolled plate d= Cold rolled plate g= Cold worked h= Hot worked i= Hot world and annealed 1= <127 mm out. diam. 2= >127 mm out. diam. 3= Annealed 4= Rolled 5= Hard #1= <12.7 mm #2= 12.7 mm to 25.4 mm #3= 25.4 mm to 63.5 mm #4= 6.4 mm to 12.7 mm #5= 12.7 mm to 76.2 mm #6= > 76.2 mm (*) Not applicable to thickness <0.25 mm (**)Not applicable to thickness or sections <2.4 mm
	a.2	75 (515)	25 (170)	35	
	b.1	80 (550)	35 (240)	30	
	b.2	80 (550)	30 (205)	35	
B-163		80 (552)	35 (241)	30	
B-516		80 (550)	35 (240)	30	
B-517		80 (550)	35 (240)	30	
B-168	c.3	80 (550)	35 (240)	30	
	c.4	85 (586)	35 (240)	30	
	c.3	80 (550)	35 (340)	30	
	d.3	80 (550)*	35 (240)	30 *	
	d.5	125 (860)*	90 (620)	2 *	
B-166	c.3	80 (550)*	35 (240)	30 *	
	c.5	125 (860)*	90 (620)	2 *	
	g#1	120 (825)	90 (620)	7 **	
	g#2	110 (760)	85 (585)	10	
	g#3	105 (725)	80 (550)	12	
	h.1	95 (655)	45 (310)	20	
	h.2	90 (620)	40 (275)	25	
h.3	85 (585)	35 (240)	30		
i	80 (550)	35 (240)	30 **		



**ROUND BAR**  
Diam. 10 to 400 mm  
ASTM B-446



**DIN / ASA FLANGES**  
1/2" to 24" 150lbs - 3000lbs  
ASTM B-443



**SEAMLESS PIPE**  
1/2" to 8" SCH10 to SCH80S  
ASTM B-444 / B-704 / B-705



**PLATE - FLAT PRODUCT**  
Thickness 0.5 to 40 mm  
ASTM B-564



**WELDED PIPE**  
Diam. 10 to 400 mm  
ASTM B-444 / B-704 / B-705



**BW, SW, High pressure FITTINGS**  
1/2" to 24" SCH10 to SCH80S  
ASTM B-366

