

## STAINLESS STEEL

# ALLOYS 800/800H/800HT

(UNS N08800/N08810/N08811)

### TUBING APPLICATIONS

Alloys 800, 800H and 800HT are nickel-iron-chromium alloys with good strength and excellent resistance to oxidation, carburization and sulfidation in high temperature exposure.

Alloy 800 is primarily used in applications with temperatures up to 1100° F, where alloys 800H and 800HT are normally used in temperatures above 1100° F where resistance to creep and rupture is required.

### AVAILABLE TUBE PRODUCT FORMS

STRAIGHT  
SEAMLESS

### TYPICAL MANUFACTURING SPECIFICATIONS

ASTM B163  
ASTM B407  
ASTM B515

Also individual customer specifications.

### TYPICAL APPLICATIONS

Chemical & Petrochemical Processing Equipment  
Power Generation  
Thermal Processing Fixtures

### INDUSTRIES PREDOMINANTLY USING THIS GRADE

OIL AND GAS  
CHEMICAL PROCESSES  
NUCLEAR AND POWER

### TECHNICAL DATA

#### MECHANICAL PROPERTIES

Temper	800		800H/HT	
Tensile Rm	77.8	ksi (min)	65	ksi (min)
Tensile Rm	536	MPa (min)	448	MPa (min)
R.p. 0.2% Yield	22	ksi (min)	25	ksi (min)
R.p. 0.2% Yield	150	MPa (min)	172	MPa (min)
Elongation (2" or 4D gl)	20	% (min)	20	% (min)

#### PHYSICAL PROPERTIES (Room Temperature)

Specific Heat (0-100°C)	460	J.kg <sup>-1</sup> .°K <sup>-1</sup>
Thermal Conductivity	11.5	W.m <sup>-1</sup> .°K <sup>-1</sup>
Thermal Expansion	14.4	mm / m / °C
Modulus Elasticity	208	GPa
Electrical Resistivity	9.89	μohm / cm
Density	7.94	g / cm <sup>3</sup>

#### CHEMICAL COMPOSITION (% by weight)

Element	800		800H/HT	
	Min	Max	Min	Max
Ni	30	35	30	35
Fe	-	39.5	-	39.5
Cr	19	23	19	23
Cu	-	0.75	-	0.75
Ti	0.15	0.6	0.25	0.6
Al	0.15	0.6	0.25	0.6
C	-	0.1	0.06	0.1
Mn	-	1.5	-	1.5
S	-	0.015	-	0.015
Si	-	1.0	-	1.0

Disclaimer: The information contained within this data sheet is for guidance only and is not intended for warranty of individual application - express or implied.

**TUBACEX  
AMERICA**

**TUBACEX  
GROUP**