

Typical Applications

- Furnace components
- Steam / hydrocarbon reforming components
- Petrochemical furnace cracker tubes
- Electrical heating elements
- Heat exchangers
- Power generation
- Pressure Vessels
- Hydrocarbon plants

Product Description

Alloy 800 is a nickel chromium iron alloy which is typically used in high temperature service applications where resistance is required from the effects of high temperature corrosion such as oxidation and carburization. Common applications include power generation, heat-treatment furnaces and hydrocarbon processing plants. With good creep and stress rupture properties the material retains good metallurgical stability at high temperature. Three alloys are available - Alloy 800, 800H & 800HT.

Key features

- Excellent high temperature strength
- Oxidation, carburization and sulfidation resistance
- Good creep-rupture properties
- Metallurgical stability in long-term applications at high temperatures

Related material specifications

- ASTM B407, B514, B366, B408, B564
- ASME SB407, SB514, SB366, SB408, SB564

Availability

Bar, tube, strip, plate, sheet

Weldability

Good.

Chemical Composition (weight %)

Alloy 800	Ni	Cr	Fe	C	Al	Ti	Al+Ti	Mn	S	Si	Cu
min	30.0	19.0	39.5		0.15	0.15	0.30				
max	35.0	23.0		0.10	0.60	0.60	1.20	1.50	0.015	1.0	0.75
Alloy 800HT	Ni	Cr	Fe	C	Al	Ti	Al+Ti	Mn	S	Si	Cu
min	30.0	19.0	39.5	0.06	0.15	0.15	0.30				
max	35.0	23.0		0.10	0.60	0.60	1.20	1.50	0.015	1.0	0.75

Mechanical Properties

Tensile Strength (ksi)	72.5
Yield Strength (ksi)	25.0

Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

UK Service Centres:

Smiths Belfast **02895 908 897**
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Quality & Testing:



www.smithmetal.com info@smithmetal.com