

## Nickel Alloys

## Alloy 800

Datasheet Updated  
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### SPECIFICATIONS

Commercial

Alloy 800

A nickel-iron-chromium alloy that is metallurgically stable in long term applications at high temperatures.

### CHEMICAL COMPOSITION

#### Alloy 800

Element	% Present
Carbon (C)	0.00 - 0.10
Chromium (Cr)	19.00 - 23.00
Manganese (Mn)	0.00 - 1.50
Silicon (Si)	0.00 - 1.00
Sulphur (S)	0.00 - 0.02
Nickel (Ni)	30.00 - 35.00
Aluminium (Al)	0.06 - 1.15
Copper (Cu)	0.00 - 0.75
Titanium (Ti)	0.06 - 1.15
Iron (Fe)	Balance

### ALLOY DESIGNATIONS

- UNS N08800 : ASTM B564

### SUPPLIED FORMS

- Bar
- Forgings
- Pipe
- Tube
- Sheet
- Rod
- Plate

### APPLICATIONS

- Super-heaters and re-heater tubing
- Power generation
- Heat exchangers
- Pressure vessels
- Dampers
- Industrial furnaces
- Hydrocarbon plants

### CHARACTERISTICS

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

### MECHANICAL PROPERTIES

Property	Value
Elongation A50 mm	30 %
Tensile Strength	517 N/mm <sup>2</sup>
0.2% Proof Stress	207 N/mm <sup>2</sup>

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