

Alloy 800 - BARS

Applications

INDUSTRIAL

Power Plants, Chemical Industry, Mineral Oil Distillation Plants, Offshore Platforms

Chemical Composition (Nominal) %

Element	Percentage (%)
Ni (Nickel)	30.0 - 35.0
Cr (Chromium)	19.0 - 23.0
Fe (Iron)	Balance
Mn (Manganese)	1.5 max
Cu (Copper)	0.75 max
Si (Silicon)	1.0 max
Ti (Titanium)	0.15 - 0.60
Al (Aluminum)	0.15 - 0.60
C (Carbon)	0.10 max
S (Sulfur)	0.015 max

Features

- Excellent corrosion resistance and heat resistance
- Excellent mechanical properties at both low temperatures and up to 800°C high temperatures
- Resistant to oxidation, reduction and elevated conditions
- Excellent processing performance

Physical Properties

Density
8.0 g/cm³ at 20°C

Standard

ASTM B408

Material

INCOLOY 800 / UNS N08800 / 1.4876

Mechanical Properties

Condition	Tensile Strength min, psi (MPa)	Yield Strength min, (0.2% offset) psi (MPa)	Elongation in 2 in. or 50 mm (or 4 D), min, %
Hot worked, as-hot-worked	80,000 (550)	35,000 (240)	25
Cold-worked and hot-worked, annealed	75,000 (515)	30,000 (205)	30

Surface

Bright annealed / annealed

Package

Plywood case / Wooden case

Heat Treatment

Annealed

The soft annealing should be performed at temperatures of 920 to 980°C (1,688 to 1,796°F), preferably at about 950°C (1,742°F).

Alloy 800 - TUBES

Applications

INDUSTRIAL

Power Plants, Chemical Industry, Mineral Oil Distillation Plants, Offshore Platforms

Chemical Composition (Nominal) %

Element	Percentage (%)
Ni (Nickel)	30.0 - 35.0
Cr (Chromium)	19.0 - 23.0
Fe (Iron)	Balance
Mn (Manganese)	1.5 max
Cu (Copper)	0.75 max
Si (Silicon)	1.0 max
Ti (Titanium)	0.15 - 0.60
Al (Aluminum)	0.15 - 0.60
C (Carbon)	0.10 max
S (Sulfur)	0.015 max

Features

- Excellent corrosion resistance and heat resistance
- Excellent mechanical properties at both low temperatures and up to 800°C high temperatures
- Resistant to oxidation, reduction and elevated conditions
- Excellent processing performance

Physical Properties

Density
8.0 g/cm³ at 20°C

Standard

ASTM B407 for seamless pipe and tube

Material

INCOLOY 800 / UNS N08800 / 1.4876

Mechanical Properties

Condition (Temper)	Tensile Strength min, psi (MPa)	Yield Strength min, (0.2% offset) psi (MPa)	Elongation in 2 in. or 50 mm (or 4 D), min, %
Cold-worked annealed	75,000 (520)	30,000 (205)	30
Hot-finished annealed or hot-finished	65,000 (450)	25,000 (170)	30

Surface

Bright annealed / annealed

Package

Plywood case / Wooden case

Heat Treatment

Annealed

The soft annealing should be performed at temperatures of 920 to 980°C (1,688 to 1,796°F), preferably at about 950°C (1,742°F).

Alloy 800 - PLATES

Applications

INDUSTRIAL

Power Plants, Chemical Industry, Mineral Oil Distillation Plants, Offshore Platforms

Chemical Composition (Nominal) %

Element	Percentage (%)
Ni (Nickel)	30.0 - 35.0
Cr (Chromium)	19.0 - 23.0
Fe (Iron)	Balance
Mn (Manganese)	1.5 max
Cu (Copper)	0.75 max
Si (Silicon)	1.0 max
Ti (Titanium)	0.15 - 0.60
Al (Aluminum)	0.15 - 0.60
C (Carbon)	0.10 max
S (Sulfur)	0.015 max

Features

- Excellent corrosion resistance and heat resistance
- Excellent mechanical properties at both low temperatures and up to 800°C high temperatures
- Resistant to oxidation, reduction and elevated conditions
- Excellent processing performance

Physical Properties

Density 8.0 g/cm³ at 20°C

Standard

ASTM B409

Material

INCOLOY 800 / UNS N08800 / 1.4876

Mechanical Properties

Condition	Tensile Strength min, psi (MPa)	Yield Strength min, (0.2% offset) psi (MPa)	Elongation in 2 in. or 50 mm (or 4 D), min, %
Hot-Rolled Plate: Annealed	75,000 (520)	30,000 (205)	30
Hot-Rolled Plate: As-rolled	80,000 (550)	35,000 (240)	25
Hot-Rolled Sheet: Annealed	75,000 (520)	30,000 (205)	30
Cold-Rolled Sheet: Annealed	75,000 (520)	30,000 (205)	30

Surface

Bright annealed / annealed

Package

Plywood case / Wooden case

Heat Treatment

Annealed

The soft annealing should be performed at temperatures of 920 to 980°C (1,688 to 1,796°F), preferably at about 950°C (1,742°F).