



Alloy 800H - 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)	39.5 min
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)	0.05 - 0.10
S (Sulfur)	0.015 max

Features

- Good creep rupture strength at temperatures above 600°C (1,112°F)
- Good resistance in oxidizing, nitriding and carburizing conditions
- Metallurgical stability in long-term use at high temperatures

Physical Properties

Density
8.0 g/cm³ at 20°C

Standard

ASTM B408

Material

INCOLOY 800H / UNS N08810 / 1.4958

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, %
Cold-worked and hot-worked, annealed	65,000 (450)	25,000 (170)	30

Surface

Bright annealed / annealed

Package

Plywood case / Wooden case

Heat Treatment

Annealed

Solution heat treatment should be performed at temperatures of 1,150°C (2,102°F).

Alloy 800H - 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)	39.5 min
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)	0.05 - 0.10
S (Sulfur)	0.015 max

Features

- Good creep rupture strength at temperatures above 600°C (1,112°F)
- Good resistance in oxidizing, nitriding and carburizing conditions
- Metallurgical stability in long-term use at high temperatures

Physical Properties

Density
8.0 g/cm³ at 20°C

Standard

ASTM B407 for seamless pipe and tube

Material

INCOLOY 800H / UNS N08810 / 1.4958

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, %
Hot-finished annealed or cold-worked annealed	65,000 (450)	25,000 (170)	30

Surface

Bright annealed / annealed

Package

Plywood case / Wooden case

Heat Treatment

Annealed

Solution heat treatment should be performed at temperatures of 1,150°C (2,102°F).

Alloy 800H - 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)	39.5 min
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)	0.05 - 0.10
S (Sulfur)	0.015 max

Features

- Good creep rupture strength at temperatures above 600°C (1,112°F)
- Good resistance in oxidizing, nitriding and carburizing conditions
- Metallurgical stability in long-term use at high temperatures

Physical Properties

Density
8.0 g/cm³ at 20°C

Standard

ASTM B409

Material

INCOLOY 800H / UNS N08810 / 1.4958

Mechanical Properties

Condition	Tensile Strength	Yield Strength	Elongation
	min, psi (MPa)	min, (0.2% offset) psi (MPa)	in 2 in. or 50 mm (or 4 D), min, %
Hot-Rolled Plate: Annealed	65,000 (450)	25,000 (170)	30
Hot-Rolled Sheet: Annealed	65,000 (450)	25,000 (170)	30
Cold-Rolled Sheet: Annealed	65,000 (450)	25,000 (170)	30

Surface

Bright annealed / annealed

Package

Plywood case / Wooden case

Heat Treatment

Annealed

Solution heat treatment should be performed at temperatures of 1,150°C (2,102°F).