

Incoloy 800 / UNS N08800 / DIN 1.4876

Oxidation Resistance Ni Cr Fe Alloy 800

Alloy 800 Data Sheet

Introduction

Incoloy 800 is nickel-chromium-iron alloy with good strength and excellent resistance to oxidation and carburization in high-temperature exposure. Incoloy 800 is primarily used in applications with temperatures up to 1100° F.

Chemical Composition (ASTM B409)

Element	Limits	
	min	max
Nickel	30.0000	35.0000
Chromium	19.0000	23.0000
Iron	39.5000	...
Manganese	...	1.5000
Carbon	...	0.1000
Copper, max	...	0.7500
Silicon, max	...	1.0000
Sulfur, max	...	0.0150
Aluminum	0.1500	0.6000
Titanium	0.1500	0.6000

Mechanical Properties (ASTM B409)

Parameter	Value
Yield 0.2 % (Mpa/Nmm ²), Min	205
Tensile (Mpa/Nmm ²), Min	520
Elongation (% in 50MM), Min	30
Reduction Area(%), Min	...
Hardness (BHN), Max	...

Physical Properties

Parameter	Value
Density (Kg/m ³)	7950
Elastic Modulus (Gpa)	196
*Co-eff of Expansion ($\mu\text{m}/\text{m}/^\circ\text{K}$)	16.2
*Thermal Condc. (W/m.K)	16.6
*Electric Resistivity (n Ω .m)	1130

*Note : @500°C

Corrosion Data

The nickel content makes the alloys highly resistant to both chloride stress-corrosion cracking and to embrittlement from precipitation of sigma phase. Incoloy 800 exhibits excellent general corrosion resistance as well against many aqueous solutions.

Equivalent Grade Designation

Incoloy® 800
Alloy 800
UNS N08800
Werkstoff Number 1.4876
DIN 1.4876
EN X10NiCrAlTi32-20
BS 3072-3076(NA15)
JIS NCF 800

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Available Product Forms

Seamless Pipes, Tubes
Welded Pipes, Tubes
Hot Rolled Sheet, Plates
Cold Rolled Sheet, Plates
Hot Rolled Bars, Rounds, Square, Hexagon, Flats
Cold Drawn Bars
Pipe Fittings, Butt-Welding, Socket-Welding, Screws, Forged
Flanges
Forgings
Castings
Fasteners
Valves

Common Manufacturing Specifications

ASTM A182, ASTM A240, ASTM A276, ASTM A479, ASTM B408, ASTM B409, ASTM B564

Alternate to Alloy

Incoloy 800h & Incoloy 800ht

Applications & Industries

Chemical Processing
Petrochemical Processing
Nuclear Power Generation
Paper and Pulp Processing

Excellence Inherent

With 3 decade long experience inherited, we aim at providing better solutions for Industrial Piping Sector. Skilled Team, passion drives our *will* to be better with resolute for continous customer & vendor concurrence. We also perceive our duty towards planet for its unconditional support & try to minimise any harm caused due to our activity. For Instance, *We Stay Paperless*

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