

Incoloy 800

Incoloy 800 is an austenitic, high-strength solid-solution nickel-iron-chromium alloy with controlled levels of carbon, aluminium, titanium, silicon and manganese. It is characterized by:

- good corrosion and heat resistance
- good mechanical properties at sub-zero, room and elevated temperature up to 600°C
- good resistance to oxidizing, reducing and nitriding conditions
- good workability

Chemical Composition, %

element	Cr	Ni	Fe	Cu	Al	Ti	C	Mn	Si	S
min.	19.0	30.0	39.50		0.15	0.15				
max.	23.0	35.0		0.75	0.60	0.60	0.10	1.50	1.0	0.015

Chemical Composition according to ASTM. Some compositional limits of other specifications may vary slightly.

Designation and standards

National Standards	Material designation	Chemical composition	Forgings	Rod and bar	Plate and sheet	Strip	Seamless tube
ASTM ASME SAE	UNS N08800		B564 SB564	B408 SB408 AMS5766	B409 SB409 AMS5871	B409 SB409 AMS5871	B407 SB407
DIN	1.4876 X10NiCrAlTi32-21	DIN 10088-1 DIN 10095					
GB/T	NS1101, NS111	GB/T 15007	YB/T 5264	GB/T 15008	GB/T 15009 GB/T 15010		GB/T 15011 GB/T 30059

Density 8.00g/cm³

Corrosion resistance

- good resistance in aqueous corrosive conditions
- good resistance to stress-corrosion cracking
- better resistance to pitting and crevice corrosion
- good resistance to nitric and organic acids, but only limited resistance to sulphuric and hydrochloric acids

Applications

For service up to about 600°C, the alloy is supplied in the annealed condition. For service at higher temperatures the alloy in the solution-annealed condition is recommended.

Typical applications are:

- nitric acid coolers
- steam super-heater tubing
- heat element sheathing
- acetic anhydride cracking tubes

You could send email to sales@huishih.com for more information.

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