

Inconel X-750

Inconel X-750 is a precipitation hardenable nickel-chromium-iron alloy containing titanium, niobium and aluminium, exhibiting good corrosion resistance at high and low temperature and high strength up to 820°C.

Inconel X-750 can be delivered in the solution-treated or precipitation-hardened condition. It is characterized by:

- high tensile strength up to 600°C
- high creep and rupture strength up to 820°C
- high oxidation resistance up to 980°C
- excellent mechanical properties in cryogenic environments
- good corrosion resistance at high and low temperatures and high resistance to stress corrosion cracking
- good weldability by resistance and fusion processes

Chemical Composition, %

element	Cr	Ni	Fe	Nb	Co	Cu	Al	Ti	C	Mn	Si	P	S
min.	14.0	70.0	5.0	0.7			0.4	2.25					
max.	17.0		9.0	1.2	1.0	0.5	1.0	2.75	0.08	1.0	0.5	0.015	0.010

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	Wire	Seamless tube
ASTM ASME SAE NACE	UNS N07750	B637 SB637 MR 0175	B637 SB637 AMS5667 AMS5668 AMS5670 AMS5671 AMS5747 AMS5749	B637 SB637 AMS5667 AMS5668 AMS5669 AMS5670 AMS5671 AMS5741 AMS5749	AMS5542 AMS5598	AMS5542 AMS5598	AMS5698 AMS5699	AMS5582
DIN	2.4669 NiCr15FeTiAl	DIN 10269						
GB/T	GH4145, GH145	GB/T 14992 DLT 439			GB/T 14996			

Density 8.28g/cm³

Corrosion resistance

- excellent general corrosion resistance at high and low temperatures
- high resistance to stress-corrosion cracking

Applications

Due to its high temperature strength up to 820°C and its excellent corrosion resistance, Inconel X-750 finds a wide range of applications. Typical applications are:

- industrial and aircraft turbines
- cryogenic purposes
- pressure vessels
- extrusion and forming tools
- nuclear reactors
- Springs, bellows and bolts

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

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