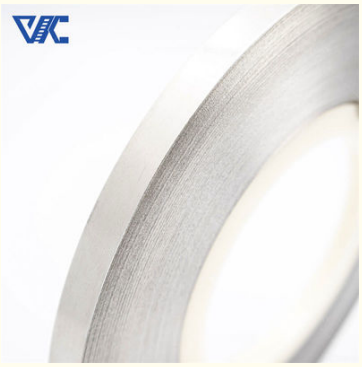
High Strength Superalloy Nickel Chrome Alloy Flat Tape W.Nr. 2.4816 Inconel 600 Sheet Strip

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: ISO9001 ROHS
- Model Number: Inconel 600
- Minimum Order Quantity: 30 Kg
- Price: Negotiable
- Packaging Details: Inconel 600 rod packed in Spool Carton box, Coil package with polybag,then in woodencase
- Delivery Time: 20~40 Days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 300 tons per month



Product Specification

- Name: High Strength Superalloy Nickel Chrome Alloy Flat Tape W.Nr. 2.4816 Inconel 600 Sheet Strip
- Material: Nickel Chromium Iron
- Ni (Min): 72%
- Density: 8.47 G/cm3
- Melting Point: 1,370-1,425°C
- Elongation (≥ %): 30 %
- Thermal Conductivity: 15.9 W/m·K
- Finishing: Bright,Oxided
- Application: Construction, Industry Oil, Piping Systems
- Yield Strength: 240 MPa
- Tensile Strength: 550 MPa
- Hardness: ≤ 160 HB
- Standard: ASTM, ASME
- Size: 6~500mm

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Product Description

What are the key properties that make Inconel 600 suitable for high-temperature applications?

There are several key properties that make Inconel 600 well-suited for high-temperature applications:

High-Temperature Strength:

Inconel 600 maintains excellent mechanical strength and resistance to creep and deformation at high temperatures, up to around 1100°C.

This allows Inconel 600 components to withstand high stresses and loads at elevated temperatures.
Oxidation Resistance:
Inconel 600 forms a tightly adherent, protective chromium oxide (Cr2O3) layer on the surface.
This oxide layer prevents further oxidation and degradation of the alloy at high temperatures, even in highly oxidizing environments.
Corrosion Resistance:
Inconel 600 exhibits excellent resistance to a wide range of corrosive media, including acids, alkalis, and salts, even at high temperatures.
This corrosion resistance helps maintain the integrity of Inconel 600 components in harsh, high-temperature environments.
Thermal Stability:
Inconel 600 maintains its microstructure and properties at high temperatures, without significant phase changes or recrystallization.
This thermal stability ensures consistent performance and reliability of Inconel 600 components over long periods of high-temperature service.
Thermal Expansion:
Inconel 600 has a relatively low coefficient of thermal expansion, which helps minimize issues like thermal stresses and distortion during high-temperature operation.

What are the common applications where Inconel 600 is used due to its high-temperature properties?

Inconel 600 is commonly used in a variety of high-temperature applications due to its excellent high-temperature properties, including:
Power Generation:
Turbine components (blades, vanes, discs) in gas turbine engines
Combustion chamber components in gas turbines
Heat exchanger tubing in nuclear power plants
Aerospace:
Jet engine components (afterburner parts, combustion liners, exhaust systems)
Rocket engine components (nozzles, thrust chambers, valve parts)
Airframe components exposed to high temperatures
Chemical Processing:
Reaction vessels, heat exchangers, and piping in the production of corrosive chemicals
Components in sulfuric acid, phosphoric acid, and other aggressive chemical environments

The production process of inconel 600 strip

The production process for Inconel 600 strip typically involves the following key steps:
Melting and Casting:
Inconel 600 is produced by melting the raw materials, which include nickel, chromium, and other alloying elements, in an electric arc furnace or induction furnace.
The molten metal is then cast into ingots or billets for further processing.
Homogenization:
The cast ingots or billets are subjected to a homogenization heat treatment to ensure a uniform chemical composition and microstructure throughout the material.
Hot Rolling:
The homogenized billets are heated to the appropriate temperature and then passed through a series of rolling stands to reduce the thickness and shape the material into a strip or sheet form.
The rolling process helps refine the grain structure and improve the mechanical properties of the Inconel 600.
Annealing:
After hot rolling, the Inconel 600 strip is subjected to an annealing heat treatment to recrystallize the microstructure and relieve any internal stresses introduced during the rolling process.
The annealing temperature and duration are carefully controlled to achieve the desired mechanical and physical properties.
Cold Rolling:
Depending on the final thickness requirements, the annealed Inconel 600 strip may undergo additional cold rolling passes to further reduce the thickness and improve the surface finish.
Cold rolling can also enhance the strength and hardness of the material.
Final Annealing:
After the final cold rolling pass, the Inconel 600 strip undergoes a final annealing treatment to stabilize the microstructure and optimize the mechanical properties.
Inspection and Finishing:
The processed Inconel 600 strip is inspected for compliance with quality standards, and any necessary surface finishing operations, such as pickling or passivation, are performed.

Parameter:

Chemical Properties of Inconel 600

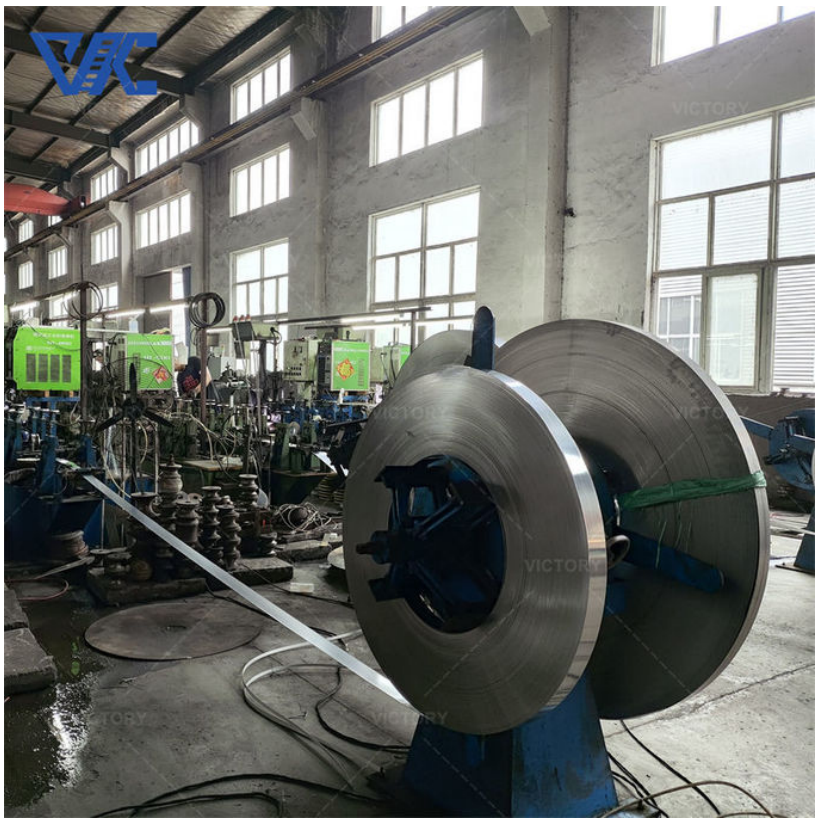
C	Cr	Ni+Co	Al	Ti	Fe	Nb+Ta	Mn	Si	P	S
≤0.15	14.0 17.0	≥72	≤0.35	≤0.50	6.0 10.0	≤1.0	≤1.0	≤0.5	≤0.04	≤0.015

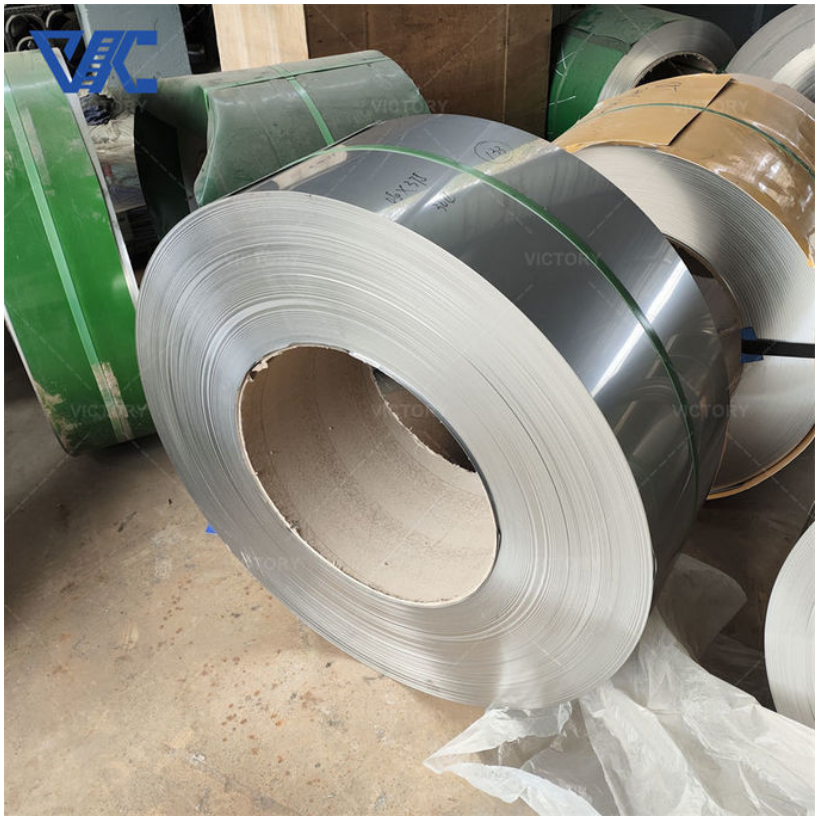
ITEM	θ/℃	TENSIE STRENGTH				HBS
		σb/MPa	σP0.2/MPa	δ5/%	φ/%	
BAR/ROD	20	≥585	≥240	≥30	-	134 217
RING	20	≥520	≥205	≥35	-	≥187
HOT ROLL PLATE	20	≥550	≥240	≥35	≥40	-
	900	≥95	≥45	≥40	≥50	-
COLD ROLLED SHEET	20	≥550	≥240	≥30	-	-
	900	≥90	≥40	≥60	-	-
COLD ROLLED SHEET	20	≥550	≥200	≥30	-	-
STRIP	20	≥550	≥240	≥30	-	-
WIRE	20				-	HV≤151

Shape	Size(mm)
Wlre	0.5-7.5
Rod/Bar	8.0-200
Strip	(0.5-2.5)*(5-180)

Tube	custom made
Plate	custom made

contact us
email:victory@dlx-alloy.com
Oem service:
Welcome customized size
We are experience factory for OEM&ODM service





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