Antioxidant Properties GH4145 Nickel Alloy Wire Inconel X-750 Wire

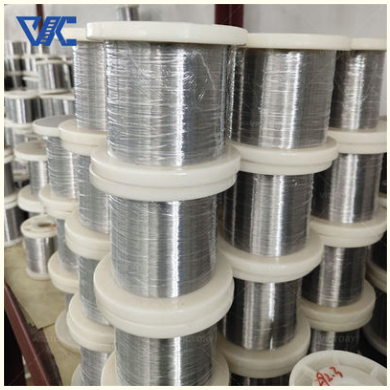
Our Product Introduction

Basic Information

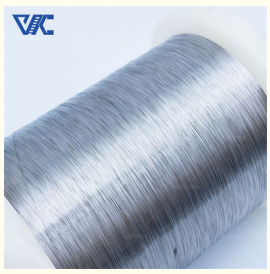
- Place of Origin: China
- Brand Name: Victory
- Certification: CE,ROHS,ISO 9001
- Model Number: GH4145/Inconel X-750
- Minimum Order Quantity: 5 Kg
- Price: Negotiable
- Packaging Details: Spool package with Carton box, Coil package with polybag
- Delivery Time: 5-21 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 300 tons per month

Product Specification

- Product Name: GH4145/Inconel X-750 Wire
- Material: Nickel Chromium
- Nickel(Min): 50%
- Density: 8.25 G/cm³
- Melting Point: 1395 1425℃
- Tensile Strength: 965 MPa
- Yield Strength: 550 MPa
- Application: Aerospace, Petrochemical, Nuclear Industry
- Highlight: **Antioxidant Properties X-750 Wire**, **Inconel X-750 Wire**, **GH4145 Nickel Alloy Wire**



More Images



Product Description

Our Product Introduction

for more products please visit us on victory-alloy.com

Introduction:

GH4145 wire, also known as Inconel X-750, is a nickel-based high-temperature alloy wire. The material is known for its excellent high-temperature strength, corrosion resistance and heat resistance.

The chemical composition of GH4145 wire mainly includes elements such as nickel (Ni), chromium (Cr), iron (Fe), and cobalt (Co). It has excellent high temperature stability and can maintain excellent mechanical properties and corrosion resistance in high temperature environments. The material also exhibits excellent heat resistance and has good oxidation resistance and creep resistance.

GH4145 wire is widely used in aerospace, energy, chemical and other fields. In the aerospace field, it is often used to manufacture aircraft engine components, combustion chambers, turbine blades and high-temperature structural parts. In the energy field, GH4145 wire can be used to manufacture oil and gas extraction equipment, nuclear power plant components, and turbine and generator components. In addition, it is also used in high-temperature reactors, catalysts and steam generators in the chemical industry.

GH4145 wire has good processability and can be processed and formed through heat treatment, cold working and welding. Its high-temperature strength, corrosion resistance and heat resistance make it an ideal material choice for high temperatures and extreme environments. Whether in the fields of aerospace, energy or chemical industry, GH4145 wire has demonstrated excellent performance and reliability.

Parameter:

Chemical composition:
Nickel (Ni): about 50-55%
Chromium (Cr): about 17-21%
Molybdenum (Mo): about 2.8-3.3%
Iron (Fe): about 18.5-20%
Physical parameters
Density: approximately 8.25 g/cm3
Melting point: approximately 1395 1425 degrees Celsius
Tensile strength: At room temperature, the tensile strength is approximately 965 MPa
Yield strength: At room temperature, the yield strength is approximately 550 MPa (MPa)
Thermal expansion coefficient: Linear thermal expansion coefficient is approximately 13.3 x 10^-6 degrees Celsius^-1 (range 20-1000 degrees Celsius)
Thermal Conductivity: Approximately 6.3 Watts/meter-Kelvin (20 degrees Celsius)
Creep resistance: GH4145 alloy has good creep resistance at high temperatures.

The structure of the alloy in the standard heat treatment state is composed of γ matrix, Ti (C, N), Nb (C, N), M23C6 carbide and γ' [Ni3 (Al, Ti, Nb)] phase, and the γ' content is approximately 14.5% , is the main strengthening phase of the alloy.

Similar brands
Inconel X-750 (USA), NiCr15Fe7TiAl (Germany), NC15FeTNbA (France), NCF750 (Japan)

Chemical Composition (%)														
Brand	C	Si	Mn	S	P	Cr	Co	W	Mo	Ti	Al	Fe	Ni	other
	Less than													
GH4145	0.08	0.5	1	0.01	0.015	14~17	≤1	—	—	2.25~2.75	0.4 1	5 9	≥70	Nb:0.7-1.2

The minimum mechanical properties of the alloy at room temperature						
Brand	heat treatment	tensile strength RmN/mm²	Yield strength Rp0.2N/mm2	Elongation As%	Brinell hardness HB	Rockwell hardness HRC
GH4145	solid solution + aging	1205	725	15	≥310	

Characteristic:

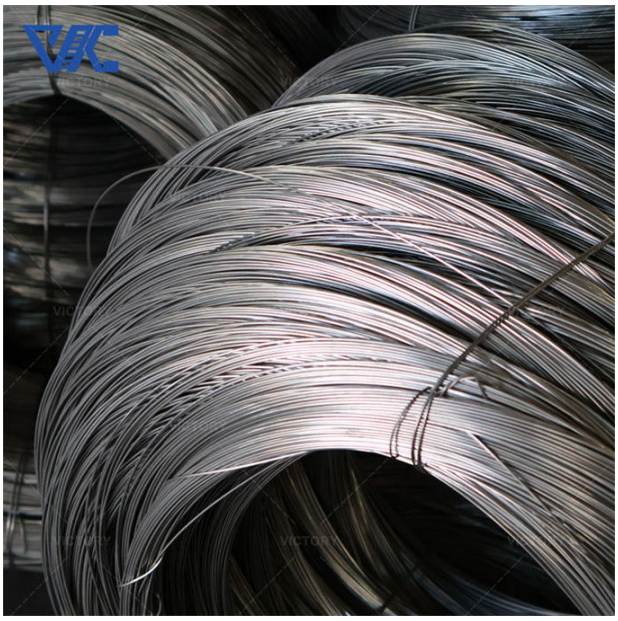
High temperature strength: GH4145 wire has excellent high temperature strength and can maintain high mechanical properties in high temperature environments.
Antioxidant properties: It exhibits good antioxidant properties and can resist oxidation and corrosion at high temperatures.
Creep resistance: GH4145 wire has good creep resistance and can withstand long-term continuous loading at high temperatures without deformation.
Anti-corrosion performance: It has good anti-corrosion performance in a variety of corrosive media, including acidic, alkaline and chloride environments.

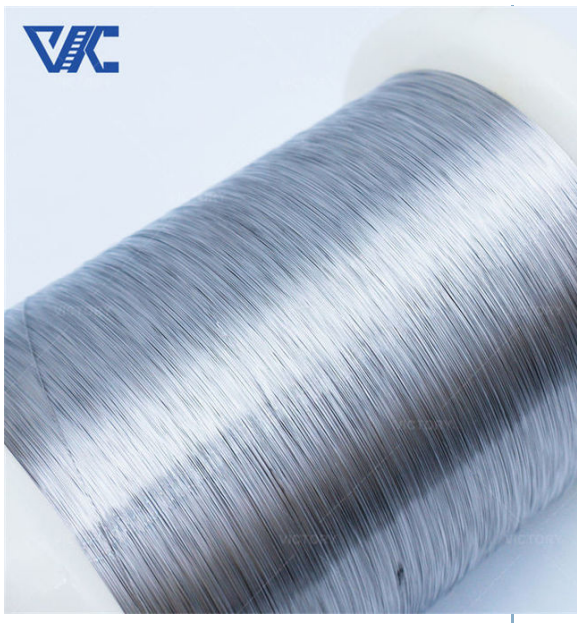
Advantage:

High temperature adaptability: GH4145 wire can work stably for a long time in extreme high temperature environments and has good high temperature resistance.
Balance of strength and toughness: It can maintain high strength and toughness under high temperature conditions and has good resistance to deformation.
Long life and reliability: Due to its excellent high temperature performance and oxidation resistance, GH4145 wire can extend the service life of equipment and improve system reliability.

Specific application areas:

Aerospace field: used to manufacture high-temperature components such as combustion chambers, turbine blades, and turbine disks of aerospace engines.
Petrochemical industry: used in high-temperature furnace tubes, reactors, catalyst supports, steam converters and other equipment.
Nuclear industry: fuel elements, control rods, fuel pipelines and other components used in nuclear equipment.
Heat treatment industry: used to manufacture high-temperature stoves, furnace radiant tubes, heating elements and other equipment.





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

Process performance requirements:

1. The alloy is easy to form when the forging temperature is between 1220 and 950°C. The alloy is solution treated after a vigorous forming process.
2. The average grain size of the alloy is closely related to the deformation degree and final forging temperature of the forging.
3. The alloy has good welding performance and can be used for various weldings. Aging treatment after welding can achieve strength close to the fully heat-treated state.
4. The heat treatment of parts should be carried out in a sulfur-free neutral or reducing atmosphere to avoid vulcanization.

Changzhou Victory Technology Co., Ltd

+8619906119641 victory@dlx-alloy.com victory-alloy.com

NO.32 West Taihu Road, Xinbei District, Changzhou, Jiangsu