Oil And Gas Industry Copper-Nickel Alloy Monel K500 Wire With Corrosion Resistance

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: CE,ROHS,ISO 9001
- Model Number: Monel 400
- Minimum Order Quantity: 5 Kg
- Price: Negotiable
- Packaging Details: Special packaging requirements can also be accommodated. OEM is also acceptable.
- Delivery Time: 5-21 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 300 tons per month

Product Specification

- Product Name: Monel 400 Wire
- Material: Nickel Base Alloy
- Nickel(Min): 63%
- Melting Point: 1288-1343 °C
- Density: 8.05 G/cm3
- Application: Oil And Gas Industry
- Thermal Conductivity: 17.2 Watts/meter-Kelvin
- Linear Expansion Coefficient: 13.9 X 10^-6 Degrees
- Yield Strength: 790 MPa
- Tensile Strength: 1100 MPa
- Elongation (≥ %): 20%
- Sureface: Bright,Oxided
- Highlight: **Monel Nickel Alloy Wire**, **Nickel Based Monel Wire**, **Corrosion Resistant Monel Wire**

More Images

Product Description

Our Product Introduction

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Introduction:

Monel K500 wire is an alloy material widely used in the chemical industry. It is a nickel-copper alloy that has excellent corrosion resistance and high temperature resistance, so it is widely used in various applications in the chemical industry.
First, Monel K500 wire has excellent corrosion resistance. In the chemical industry, various corrosive media and chemicals are often used. Monel K500 wire can resist corrosion from chemicals such as acids, alkalis, salt water, and organic solvents, maintaining its stable performance and extending its service life. For some highly corrosive media, Monel K500 wire exhibits high corrosion resistance, making it an ideal choice in the chemical industry.
Secondly, Monel K500 wire has good high temperature resistance. High temperature conditions are common in some processes in the chemical industry. Monel K500 wire can maintain its stable performance in high temperature environments and is not easily deformed or failed, ensuring the reliability and safety of the equipment. It can withstand chemical reactions and thermal cycles at high temperatures and is suitable for critical equipment such as high-temperature reactors, steam generators and heat exchangers.
In addition, Monel K500 wire also has excellent mechanical properties. It has high strength and good plasticity and can withstand the stress and pressure in the chemical industry. This makes it an ideal material for manufacturing chemical equipment and pipes, such as storage tanks, pump bodies, valves and pipe connections.
Finally, Monel K500 wire also has low magnetic properties and good electrical conductivity. In some special chemical industry applications, such as electronic chemical processes and magnetic resonance imaging equipment, the requirements for the magnetic properties and conductivity of materials are relatively high. Monel K500 wire can meet these requirements and maintain its stable magnetic and conductive properties.

Parameter:

Chemical composition:
Nickel (Ni): about 63%
Copper (Cu): about 29.5%
Aluminum (Al): about 2.7%
Titanium (Ti): about 0.6%
Iron (Fe): about 2%
Manganese (Mn): about 1.5%
Silicon (Si): about 0.5%
Carbon (C): up to 0.25%

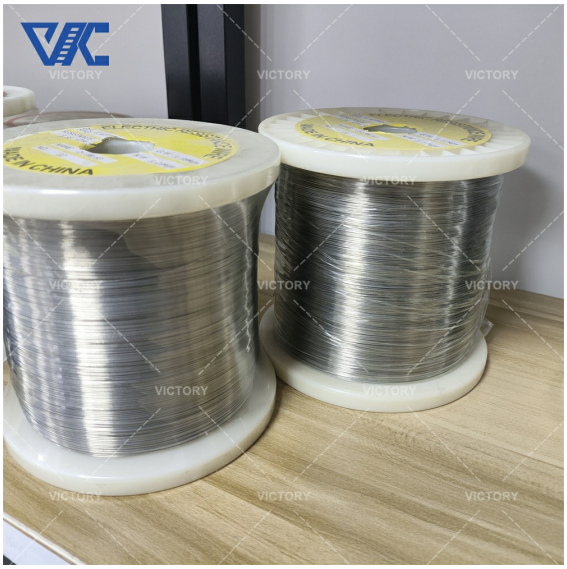
Physical properties:
Density: about 8.05g/cubic centimeter
Melting point: about 1288-1343 degrees Celsius
Thermal Conductivity: Approximately 17.2 Watts/meter-Kelvin
Linear expansion coefficient: approximately 13.9 x 10^-6 degrees Celsius^-1 (room temperature to 100 degrees Celsius)

Mechanical behavior:
Yield Strength (Tensile Strength): Minimum approximately 790 MPa (80,000 psi)
Tensile Strength: Minimum approximately 1100 MPa (110,000 psi)
Elongation: minimum value is about 20%

Item	Ni	Cu	Fe	Mn	C	Si	S
Monel 400	≥63	28-34	≤2.5	≤2	≤0.3	≤0.5	≤0.025

Item	Density	Melting point	Tensile Strength	Yield Strength	Elongation	HB
Monel 400	8.83 g/cm3	1300-1390°C	480	170	35%	≥331

Monel 400	Bar/Rod	Forging	Pipe	Sheet/Strip	Welding Wire
Standard	ASTM B164	ASTM B564	ASTM B165	ASTM B127	ErNiCu-7



Shape	Size(mm)
Wire	0.15-7.5
Rod/Bar	8.0-200
Strip	(0.5-2.5)*(5-180)
Plate	custom made

Advantage:

Corrosion resistance: Monel K500 alloy wire shows excellent corrosion resistance against corrosive media in the oil and gas industry. It is resistant to corrosive media such as acids, alkalis, salt solutions and sulfides and therefore provides a long and reliable service life in the oil and gas industry.
High temperature performance: Monel K500 alloy wire can still maintain good mechanical properties and corrosion resistance in high temperature environments. It can withstand high temperature and high pressure working conditions and is suitable for high temperature pipelines, furnace tubes and valves in the oil and gas industry.

Resistance to stress corrosion cracking: Monel K500 alloy wire has good resistance to stress corrosion cracking. In the oil and gas industry, metal materials are prone to stress corrosion cracking due to the chemical properties of the medium and the existence of stress. Monel K500 alloy wire can effectively alleviate this phenomenon and improve the reliability and safety of equipment.
High Strength: With proper heat treatment and cold working, Monel K500 alloy wire can achieve a high strength level, allowing it to withstand high stress and harsh working conditions in the oil and gas industry.

Application:

In the oil and gas industry, specific applications of Monel K500 alloy wire include but are not limited to the following:
Oil extraction and production equipment: Used to manufacture oil extraction and production equipment with corrosion resistance and high temperature resistance, such as oil well casings, oil and gas separators, and oil well valves.
Oil and gas pipelines: Used to manufacture corrosion-resistant and high-pressure-resistant oil and gas pipeline systems, including transmission pipelines, distribution pipelines, and oil pipelines.
Natural gas liquefaction equipment: used to manufacture key components in natural gas liquefaction equipment, such as condensers, evaporators, and heaters.
Oil and gas processing equipment: Used to manufacture corrosion-resistant components for oil and gas processing equipment, such as gas separators, desulfurization units, and catalytic reactors.

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

Q&A:

Q: Can Monel 400 wire be customized?
A: Yes, we can customize Monel 400 wire according to customer requirements.

Q: What customization options are available for Monel 400 wire?
A: We offer customization in terms of wire diameter, length, and surface finish to meet specific project needs.

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