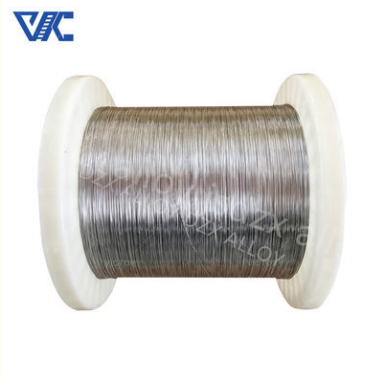
# Chemical Industry Nickel Based Alloy Monel K500 Wire With Preservative

Our Product Introduction

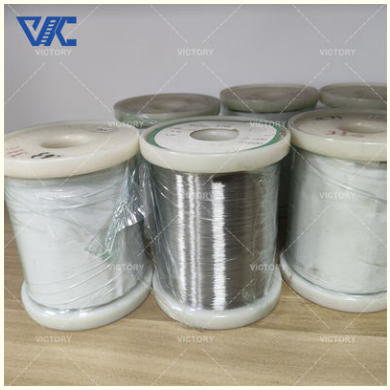
## Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: CE,ROHS,ISO 9001
- Model Number: Monel 400/K500
- 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 Wire
- Material: Nickel Base Alloy
- Nickel(Min): 63%
- Melting Point: 1288-1343 °C
- Density: 8.05 G/cm3
- Application: Chemical 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 | Al | Ti | Fe | Mn | S | C | Si |
|---|---|---|---|---|---|---|---|---|---|
| Monel K500 | ≥63 | 27-33 | 2.3-3.15 | 0.35-0.85 | ≤2 | ≤1.5 | ≤0.01 | ≤0.25 | ≤0.5 |

| Item | Density | Melting point | Tensile Strength | Yield Strength | Elongation |
|---|---|---|---|---|---|
| Monel K500 | 8.05 g/cm3 | 1288-1343℃ | 1100 | 790 | 20% |

| Monel K500 | Bar/Rod | Forging | Pipe | Sheet/Strip | Welding Wire |
|---|---|---|---|---|---|
| Standard | ASTM B864 | AMS4676 | ASTM B865 | ASTM B564 | ErNiCu-7 |

## Advantage:

Corrosion resistance: Monel K500 alloy wire shows excellent corrosion resistance to many chemical media and corrosive gases. It is resistant to corrosion by chemicals such as acids, alkalis, salt solutions, chlorides and sulfides, thus providing a long and reliable service life in the chemical industry.
High temperature performance: Monel K500 alloy wire can still maintain good mechanical properties and corrosion resistance in high temperature environments. It can withstand oxidation, thermal stress and thermal fatigue at high temperatures, and is suitable for high-temperature reactors, furnace tubes and heat exchange equipment in the chemical industry.
Resistance to stress corrosion cracking: Monel K500 alloy wire has good resistance to stress corrosion cracking. In the chemical industry, due to the chemical properties of the medium and the existence of stress, metal materials are prone to stress corrosion cracking, and Monel K500 alloy wire can effectively alleviate this phenomenon and improve the reliability and safety of equipment.
High strength: After proper heat treatment and cold working, Monel K500 alloy wire can obtain a high strength level, allowing it to withstand high stress and harsh working conditions in the chemical industry.

## Application:

In the chemical industry, specific applications of Monel K500 alloy wire include but are not limited to the following:
Chemical reactors and storage tanks: Used to manufacture corrosion-resistant and high-temperature-resistant chemical reactors and storage tanks, such as acid reactors, oxidizers, and distillation towers.
Chemical pipelines and valves: Used to manufacture corrosion-resistant and high-pressure chemical pipelines and valve systems, such as pipelines for transporting acid and alkali solutions and valves for regulating flow, etc.
Chemical equipment and auxiliary parts: used to manufacture various parts and components of chemical equipment, such as pumps, heat exchangers, filters, nozzles and mixers, etc.
Corrosive gas treatment: used to manufacture corrosion-resistant gas treatment equipment, such as gas purifiers and desulfurization devices.

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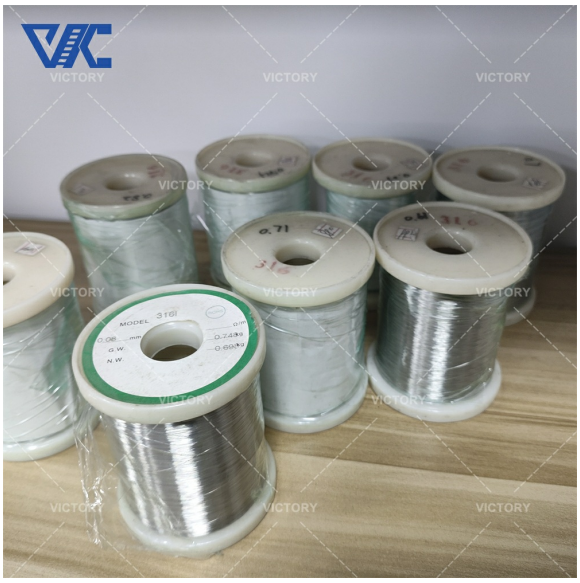

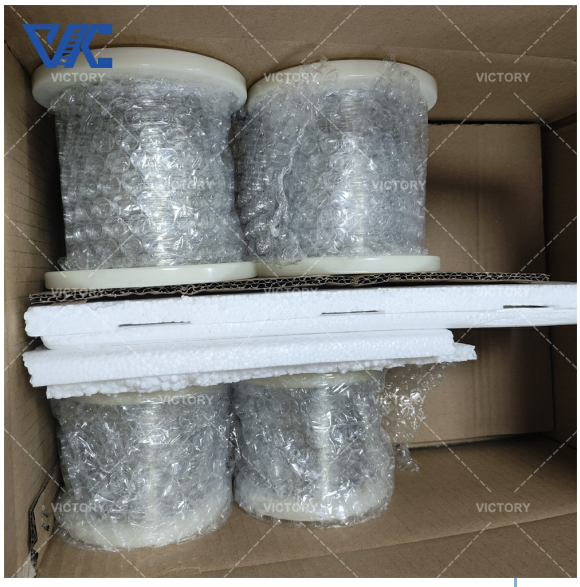

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