



## Corrosion Resistance Nickel Based Alloy Monel K500 Strip For Oil And Gas Industry

Our Product Introduction

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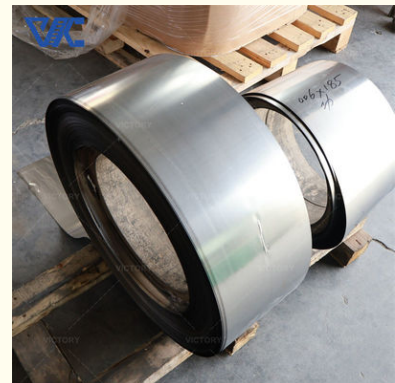
### Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: CE,ROHS,ISO 9001
- Model Number: Monel K500
- 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

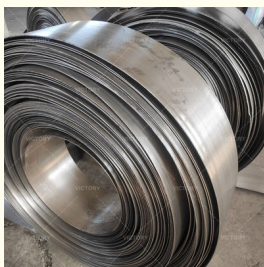


### Product Specification

- Product Name: Monel K500 Strip
- Material: Nickle Alloy Material
- Ni (Min): 63%
- Density: 8.44 G/cm<sup>3</sup>
- Melting Point: 1315-1350°C
- Thermal Conductivity: 17.2 W/(m·K)
- Elongation (≥ %): 20%
- Yield Strength: 345 MPa
- Tensile Strength: 760 MPa
- Hardness: HB 150-250
- Application: Oil Pipelines, Oil Well Equipment
- Surface: Bright,Oxided
- Highlight: Gas Industry Monel K500 Strip,  
Corrosion Resistance Monel K500 Strip,  
Oil Industry Monel K500 Strip



### More Images



### Product Description

## Introduction:

Monel K500 Strip is a nickel alloy material with excellent performance characteristics. It contains no less than 63% nickel, has a density of 8.44 g/cm<sup>3</sup>, and a melting point between 1315-1350°C. The material has an elongation of 20% and a thermal conductivity of 17.2 W/(m·K).

Monel K500 Strip is mainly used in the oil and gas industry, especially for oil and gas pipelines and oil well equipment. It has excellent mechanical properties, including a yield strength of 345 MPa, a tensile strength of 760 MPa and a hardness of HB 150-250. This allows it to withstand the high pressure and high stress environments found in the oil and gas industry, ensuring equipment reliability and durability.

Monel K500 Strip has good corrosion resistance and can withstand corrosive media in oil and gas, including chlorides and sulfides. Its surface treatment can be bright or oxidized, depending on specific needs.

## 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  $13.9 \times 10^{-6}$  degrees Celsius<sup>-1</sup> (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%

## Chemical Properties of Monel K500

| Ni     | Cu    | Al       | Ti        | C        | Mn      | Fe      | S        | Si       |
|--------|-------|----------|-----------|----------|---------|---------|----------|----------|
| 63 Max | 27-33 | 2.3-3.15 | 0.35-0.85 | 0.25 max | 1.5 max | 2.0 max | 0.01 max | 0.50 max |

| Item       | Density                | Melting point | Tensile Strength | Yield Strength | Elongation |
|------------|------------------------|---------------|------------------|----------------|------------|
| Monel K500 | 8.05 g/cm <sup>3</sup> | 1288-1343°C   | 1100             | 790            | 20%        |

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

## Typical Room Temperature Tensile Properties of Annealed Material

| Product Form | Condition                  | Tensile (ksi) | .2% Yield (ksi) | Elongation % | Hardness   |
|--------------|----------------------------|---------------|-----------------|--------------|------------|
| Rod & Bar    | Hot-Finished/Aged          | 140-190       | 100-150         | 30-20        | 27-38 HRC  |
| Rod & Bar    | Hot Finished/Annealed      | 90-110        | 40-60           | 45-25        | 75-90 HRB  |
| Rod & Bar    | Hot Finished/Annealed/Aged | 130-165       | 85-120          | 35-20        | 24-35 HRC  |
| Rod & Bar    | Cold-Drawn/Aged            | 135-185       | 95-160          | 30-15        | 25-41 HRC  |
| Rod & Bar    | Cold-Drawn/Annealed/Aged   | 130-190       | 85-120          | 30-20        | 24-35 HRC  |
| Plate        | ot-Finished/Aged           | 140-180       | 100-135         | 30-20        | 27-37 HRC  |
| Sheet        | Cold-Rolled/Annealed       | 90-105        | 40-65           | 45-25        | 85 HRB Max |

## Advantage:

High strength: Monel K500 strip has excellent strength and hardness, can withstand high stress and extrusion force, and is suitable for harsh industrial environments.

Corrosion resistance: Monel K500 strip has excellent corrosion resistance and can withstand corrosive media in the oil and gas industry, including acids, alkalis and salts.

Wear resistance: Monel K500 strip has good wear resistance and can resist damage to the material by abrasion and abrasive particles.

### Application:

Oil pipelines: Monel K500 strip can be used to manufacture key components of oil pipelines, such as valves, joints and connections, etc., with excellent corrosion resistance and wear resistance.

Oil well equipment: Monel K500 tape can be used to manufacture oil well equipment, such as pump components, valves and casing, etc., which can maintain stability and durability in harsh underground environments.

Offshore platforms: Monel K500 strips can be used in the construction and maintenance of offshore platforms, such as anti-corrosion coatings and structural supports to cope with the corrosive effects of seawater and sea air.

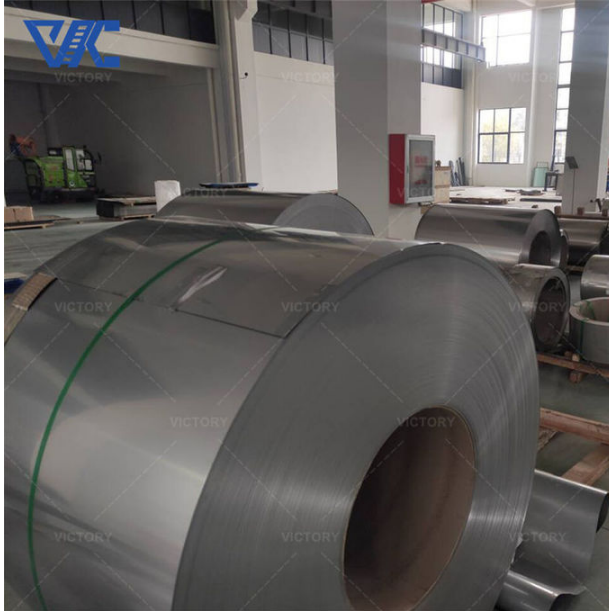
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