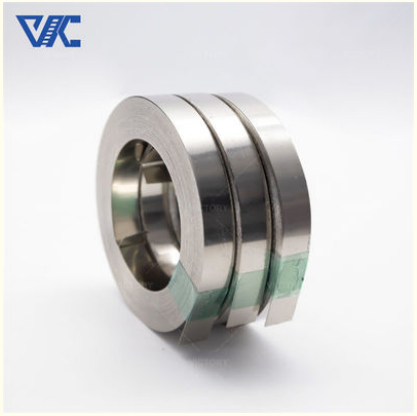
Customized Size Copper Nickel Alloy Constantan Tape Cuni CuNi44 Strip With Low Resistivity

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: ROHS,ISO 9001
- Model Number: CuNi44 constantan
- Minimum Order Quantity: 30
- Price: 25~35$/kg
- Packaging Details: Wooden box/pallet, spool wire with carton box, coil 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: Copper Nickel Alloy Constantan Tape Cuni CuNi44 Strip With Low Resistivity
- Material: Cu/Ni/Mn
- Nickel: 44%
- Resistivity: 0.5
- Tensile Strength: 420 MPA
- Density: 8.9 G/cm3
- Condition: Hard / Soft
- Sureface: Bright
- Delivery Time: 7-20 Days
- Maximum Temperature: 400℃
- Melting Point: 1200℃
- TCR: -6 X10-6/C
- EMF Vs Cu: -43 UV/C
- Elongation: 15~35%

More Images

Our Product Introduction

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

Product Description

Introduction:

A typical Constantan alloy composition is 55% copper, 45% nickel. According to different application requirements, a small amount of other elements such as iron and manganese can be added to improve its performance.
Constantan is widely used in manufacturing temperature sensors, thermocouples, precision resistors, and power supplies.

Application:

Temperature measurement sensor: Constantan tape is often used to manufacture thermocouples and thermal resistors due to its good temperature coefficient, which can accurately measure temperature changes.

Resistance and current measurement: Constantan tape has stable resistance value and can be used as a precision resistor for current and voltage measurement.

Power supply and electronic equipment: Constantan tape has good conductivity and can be used to manufacture power cords, batteries and other electronic components.

Heat exchanger: Constantan tape is corrosion-resistant and is often used in the manufacture of heat exchange equipment, such as heat exchange tubes in refrigeration systems.

Instrument manufacturing: Due to its good properties, constantan is also widely used in instrument manufacturing, such as pointers, measuring rings, etc.

Advantage:

Thermoelectric properties: Constantan has a high Seebeck coefficient, which is the ability to generate a thermoelectric voltage when subjected to a temperature difference. This property is utilized in thermocouples, where a constantan wire is paired with another metal, such as iron or chromel, to create a temperature-sensing device.

Corrosion resistance: Constantan exhibits good corrosion resistance, especially to oxidation, making it suitable for use in environments where the material may be exposed to moisture, chemicals, or other corrosive agents.

Mechanical properties: Constantan has relatively high strength and durability, making it suitable for applications where the material needs to withstand mechanical stress or vibration.

Electrical resistance: Constantan has a relatively high electrical resistance compared to pure metals like copper. This makes it useful for applications where a specific resistance value is required, such as in resistors or resistance temperature detectors (RTDs).

Temperature coefficient of resistance (TCR): Constantan has a very low TCR, meaning its electrical resistance changes only slightly with temperature variations. This makes it suitable for use in precision measurement and control applications where temperature stability is important.

Parameter:

Main Chemical composition (%)

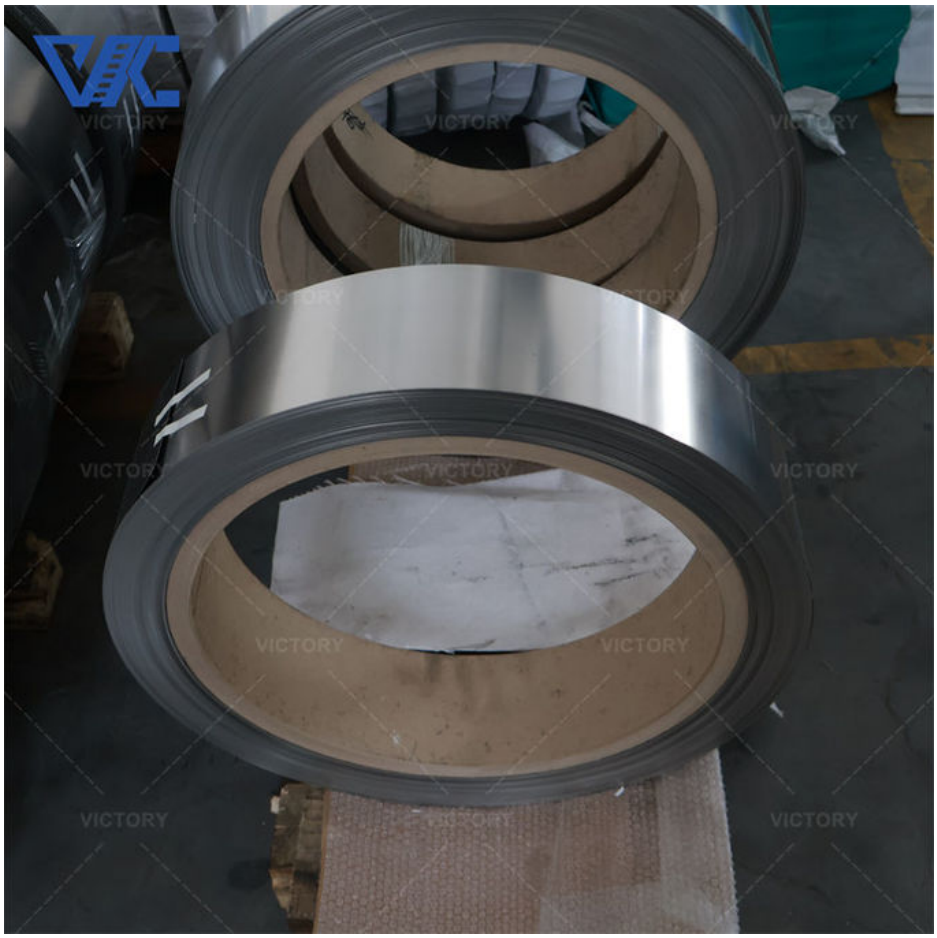
NC050 CuNi44	Copper	Nickel	Manganese
Chemical	balance	44%	1~1.5%

Physical Parameters:

Type	Resistivity (μΩ.m2 0°C)	Max working temperature (°C)	Tensile strength (Mpa)	Melting point (°C)	Density (g/cm)	TCR (x10-6/°C) (20~600°C)	EMF vs Cu uV/°C (0~100°C)	Elongation (%)
CuNi44	0.5	400	420	1200	8.9	-6	-43	25%

Type of product:

Type	Size(mm)		others
Round wire	0.1~8mm		Customized
Flat ribbon wire	W-0.5~5mm	T-0.1~3mm	
Strip/foil	W-6~250mm	T-0.1~3mm	
Rod	8~200mm		



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