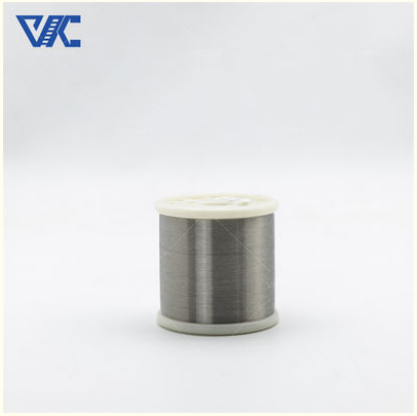
Low Electric Resistance Copper Nickel Alloy CuNi44 Resistance Wire For Resistors

Our Product Introduction

Basic Information

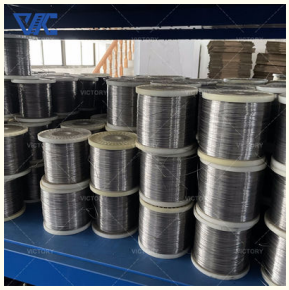
- Place of Origin: China
- Brand Name: Victory
- Certification: ROHS,ISO 9001
- Model Number: CuNi44
- Minimum Order Quantity: 5
- Price: Negotiable
- Packaging Details: Wooden box/pallet, spool wire with carton box, coil with polybag
- Delivery Time: 5-21 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 300 tons per month



Product Specification

- Product Name: Low Electric Resistance Copper Nickel Alloy CuNi44 Resistance Wire For Resistors
- 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



Product Description

Introduction:

Cuni 44 wire, also known as Constantan wire, is a type of copper-nickel alloy with a specific composition of approximately 55% copper and 45% nickel. This alloy is known for its excellent electrical conductivity, low thermal electromotive force (EMF), high resistivity, and stability over a wide range of temperatures.
Cuni 44 wire is commonly used in applications where precise measurements of temperature, strain, or resistance are required. Its low thermal EMF makes it ideal for use in thermocouples and resistance temperature detectors (RTDs) for accurate temperature sensing. The high resistivity of Cuni 44 wire makes it suitable for use in precision resistors and strain gauges.

Application:

Temperature sensing: Cuni 44 wire is often used in thermocouples and resistance temperature detectors (RTDs) for accurate temperature measurement in industrial processes, HVAC systems, and scientific research.
Precision resistors: Its high resistivity and stable resistance over a wide temperature range make Cuni 44 wire suitable for precision resistor applications in electronic circuits, sensors, and measurement devices.
Strain gauges: Cuni 44 wire is used in strain gauges to measure mechanical strain or deformation in structures, materials testing, and load cells.
Heating elements: Due to its good electrical conductivity and resistance to high temperatures, Cuni 44 wire is used in heating elements for applications such as electric furnaces, ovens, and heating appliances.
Electrical contacts: Cuni 44 wire is utilized in electrical contacts and connectors where stable resistance and low thermal EMF are required for reliable electrical connections.
Electromagnetic shielding: The properties of Cuni 44 wire make it suitable for electromagnetic shielding applications in electronic devices to prevent interference and ensure signal integrity.
Overall, Cuni 44 wire plays a crucial role in various electrical and electronic applications where accuracy, stability, and reliability are essential requirements.

Advantage:

Low thermal electromotive force (EMF): Cuni 44 wire has a low thermal EMF, making it suitable for applications where temperature changes need to be accurately measured or controlled.
High resistivity: It has a relatively high resistivity compared to other common metals, which makes it useful for applications where specific resistance values are required.
Stable resistance: Cuni 44 wire offers stable resistance over a wide range of temperatures, which is important for precision measurement and control systems.
Corrosion resistance: It has good corrosion resistance, making it suitable for use in various environments without deteriorating quickly.
Ductility: Cuni 44 wire is ductile and can be easily formed into different shapes and sizes, allowing for flexibility in design and installation.
Overall, Cuni 44 wire is a reliable and versatile material suitable for various electrical and electronic applications due to its unique combination of properties.

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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