Cu And Ni Alloy Flat Wire Strip

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Victory
- Model Number: 6J12
- Minimum Order Quantity: 5
- 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

- Highlight: **cu and ni alloy Wire**, **cu and ni alloy Strip**, **6J12 alloy of cu and ni**

Our Product Introductio

Product Description

6J12 Manganin Copper Manganese Precision Alloy Round / Flat Wire / Strip

Manganin is a type of alloy that is trademarked and composed of approximately 86% copper, 12% manganese, and 2% nickel. This alloy has a moderate resistivity and low temperature coefficient, although its resistance/temperature curve is not as flat as the constantans and its corrosion resistance properties are not as good. Despite these drawbacks, Manganin is still highly sought-after for its virtually zero temperature coefficient of resistance value and long-term stability.

The foil and wire made from Manganin are commonly used in the production of resistors, particularly ammeter shunts. Furthermore, several Manganin resistors served as the legal standard for the ohm in the United States from 1901 to 1990. Manganin wire is also utilized as an electrical conductor in cryogenic systems to minimize heat transfer between points that require electrical connections.

In addition, Manganin has proven to be highly effective in gauges designed for studying high-pressure shock waves generated from the detonation of explosives. This is due to the fact that Manganin has low strain

sensitivity but high hydrostatic pressure sensitivity.

If you are interested in obtaining Manganin, it is available in various forms, including Manganin shunts, strips, wire, and foil. It is worth noting that the resistance of wires made from Manganin at 20 degrees Celsius varies depending on their gauge size: for example, a 10-gauge wire has a resistance of 0.000836 ohms per cm or 0.0255 ohms per ft, whereas a 40-gauge wire has a resistance of 0.878 ohms per cm or 26.8 ohms per ft.Finally, if you are looking for the CAS number for Manganin alloy, it is CAS# 12606-19-8.

Product Description

Cu-Ni Alloy: CuNi1, CuNi2, CuNi6, CuNi8, CuNi10, CuNi14, CuNi19, CuNi23, CuNi30, CuNi34, CuNi44

NC003, NC005, NC010, NC012, NC015, NC020, NC025, NC030, NC035, NC040, NC050

We can supply type of : wire, ribbon, strip, customized furnace spring wire/strip

Cold Drawing Wire: DIA 0.03m-8.0mm

Hot Rolled Rod / Bar: DIA 8.0mm-50.0mm

Cold Rolled Ribbon/Strip: (0.05mm-0.35mm) *(0.5-6.0)mm

Hot Rolled Strip: (0.5mm-2.5mm) *(5-180.0)mm

Properties/ Material	Resistivity (200C μΩ.m)	Max. Working Temperature(C)	Tensile Strength (Mpa)	Melting Point	D
NC003(CuNi1)	0.03	200	210	1085	8
NC005(CuNi2)	0.05	200	220	1090	8
NC010(CuNi6)	0.1	220	250	1095	8
NC012(CuNi8)	0.12	250	270	1097	8
NC015(CuNi10)	0.15	250	290	1100	8
NC020(CuNi14)	0.2	300	310	1115	8
NC025(CuNi19)	0.25	300	340	1135	8
NC030(CuNi23)	0.3	300	350	1150	8
NC035(CuNi30)	0.35	350	400	1170	8
NC040(CuNi34)	0.4	350	400	1180	8
NC050(CuNi44)	0.5	400	420	1200	8

Shape	Size(mm)
Wire	0.08-7.5
Bar	8.0-50
Ribbon	(0.05-0.35)*(0.5-6.0)
Strip	(0.5-2.5)*(5-180)

Characteristic

Pure copper plus nickel can significantly improve strength, corrosion resistance, hardness, electrical resistance and pyroelectricity, and reduce the temperature coefficient of resistivity. Therefore, the mechanical and physical properties of white copper are exceptionally better than other copper alloys.

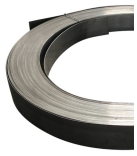
Good ductility, high hardness, beautiful color, corrosion resistance and deep drawing performance, are widely used in shipbuilding, petrochemical, electrical appliances, instruments, medical machinery, daily necessities, handicrafts and other fields, and are also important resistance and thermocouple alloys. The disadvantage of cupronickel is the main added element - nickel is a scarce strategic material, and the price is relatively expensive.

Copper Nickel alloy performance tables

Properties/ Material	Resistivity (200C μΩ.m)	Max.working temperature (0C)	Tensile strength (Mpa)	Melting point (0C)	Density (g/cm3)	TCR x10-6 / 0C (20~600 0C)	E (μ (0
NC003 (CuNi1)	0.03	200	210	1085	8.9	<100	-8
NC005 (CuNi2)	0.05	200	220	1090	8.9	<120	-1
NC010 (CuNi6)	0.1	220	250	1095	8.9	<60	-1
NC012 (CuNi8)	0.12	250	270	1097	8.9	<57	-2
NC015 (CuNi10)	0.15	250	290	1100	8.9	<50	-2
NC020							

(CuNi14) NC025 (CuNi19) NC030 (CuNi23) NC035 (CuNi30) NC040 (CuNi34) NC050 (CuNi44)	0.2	300	310	1115	8.9	<30	-2
	0.25	300	340	1135	8.9	<25	-3
	0.3	300	350	1150	8.9	<16	-3
	0.35	350	400	1170	8.9	<10	-3
	0.4	350	400	1180	8.9	0	-3
	0.5	400	420	1200	8.9	<6	-4

The Form we could offer

Size Range		Image
Wire	dia 0.03-7.5mm	
	dia 8.0-12.0mm	
Ribbon	(0.05-0.35)*(0.5-6.0)mm	
Strip	(0.50-2.5)*(5-180)mm	
Rod	8-50mm	

Changzhou DLX Alloy Co., Ltd was established in 2002 and has got ISO9001 International Quality Management System Certificate and SGS Certificate. Our factory is becoming a high-tech company, We are professional in researching and producing special alloy material. The production process includes melting, drawing, heat treatment, finishing, and testing.

We offer super alloy, welding wire, corrosion resistance alloy, precision alloy, FeCrAl alloy, NiCr alloy, CuNi alloy, in the form of wire, strip, ribbon, bar, tube, plate and etc.

The administrative principle of our company is "intensifying inner supervision, complying with technical process and quality control, continuously adopting new technology to ensure the product quality".

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