



Cr10Ni90 Constantan Wire Resistance for Harsh Environments

Our Product Introduction

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Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: CE
- Model Number: Cr10Ni90
- Minimum Order Quantity: 5
- Packaging Details: Spool package with Carton box, Coil package with polybag for Resistance wire
- Delivery Time: 5-21 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 300 tons per month



Product Specification

- Material: Nickel, Chromium
- Nickel(Min): 89%
- Tensile Strength: 637MPA
- Magnetic Permeability: 0.78+/-0.05
- Elongation: ≥20%
- Application: Heating, Resistivity
- Condition: Hard / Soft
- Surface: Bright, Oxided, Acide
- Delivery Time: 7-20 Days
- Name: NiCr Alloy Wire
- Highlight: Cr10Ni90 Constantan Wire, 89% Nickel Constantan Wire, Cr10Ni90 Alloy Wire



More Images



Product Description

Product Description:

Cr10Ni90 alloy wire has good high-temperature strength and creep resistance, giving it broad application prospects in high-temperature applications. This alloy wire is often used in the manufacture of high-temperature structural components in gas turbines, aerospace engines and nuclear energy. Its high temperature stability and antioxidant properties allow it to withstand extreme working conditions.

Our Product Introduction



Application:

1. Heating elements: Cr10Ni90 alloy wire is often used as a material for heating elements, such as electric furnaces, heating wires, furnace wires and heaters. Due to its high temperature stability and good resistance characteristics, it can provide stable heating effect in high temperature environment.

2. Resistors: Because Cr10Ni90 alloy wire has high resistance and temperature coefficient, it is widely used in the manufacture of resistors. Resistors are commonly used in circuits for functions such as current limiting, voltage dividing, and resistance adjustment.

3. Thermocouple: Cr10Ni90 alloy wire, as the temperature-sensitive part of the thermocouple, can convert temperature changes into voltage signals for temperature measurement and control. Thermocouples are widely used in industrial control, heat treatment,

laboratory measurement and other fields.

4. Chemical industry: Because Cr10Ni90 alloy wire has good corrosion resistance, it is often used in corrosive media sensors, valves, pipelines and other equipment in the chemical industry. It maintains stability and reliability in harsh chemical environments.

5. Hot air drying: Cr10Ni90 alloy wire can be used as a heating element in hot air drying equipment to heat and dry materials, such as in food processing, textile and paper making industries.

Technical Parameters:

Performance material		Cr10Ni90	Cr20Ni80	Cr30Ni70	Cr15Ni60	Cr20Ni35
Composición	Ni	90	Rest	Rest	55.0 61.0	34.0 37.0
	Cr	10	20.0 23.0	28.0 31.0	15.0 18.0	18.0 21.0
	Fe		≤1.0	≤1.0	Rest	Rest
Temperatura máxima °C		1300	1200	1250	1150	1100
Punto de fusión °C		1400	1400	1380	1390	1390
Densidad g/cm3		8.7	8.4	8.1	8.2	7.9
Resistividad μΩ·m, 20°C		0.76±0.05	1.09±0.05	1.18±0.05	1.12±0.05	1.00±0.05
Alargamiento a la ruptura		≥20	≥20	≥20	≥20	≥20
Calor específico J/g.°C			0.44	0.461	0.494	0.5
Conductividad térmica KJ/m.h°C			60.3	45.2	45.2	43.8
Coeficiente de expansión de líneas α×10-6/(20 1000°C)			18	17	17	19
Estructura micrográfica			Austenite	Austenite	Austenite	Austenite
Propiedades magnéticas			Nonmagnetic	Nonmagnetic	Nonmagnetic	Weak magnetic

Form	Specification	
Wire	Diameter=0.025mm~8mm	
Flat wire	Width=0.40~6.0mm	Thick=0.03~0.50mm
Strip	width=8~250mm	Thick=0.05~3.0mm
Bar	Diameter=8~100mm	Long=50~1000

Service:

Our NiCr alloy heaters are fully customizable to meet your specific requirements. Whether you need them in different sizes, shapes, or power outputs, we can design and manufacture them accordingly to ensure optimal performance and effectiveness. Additionally, we offer comprehensive technical support and after-sales service to guarantee your satisfaction and the long-term reliability of our products.



contact us
email: victory@dlx-alloy.com

Oem service:
 Welcome customized size
 We are experience factory for OEM&ODM service

Size dimension range:

Wire: 0.01-10mm
 Ribbons: 0.05*0.2-2.0*6.0mm
 Strip: 0.05*5.0-5.0*250mm
 NiCr series: Cr20Ni80, Cr30Ni70, Cr15Ni60, Cr20Ni35, Cr20Ni30

Packaging:

Sturdy cardboard boxes are used for packaging NiCr Alloy.
 Each box has dimensions of approximately 26 cm (length) x 26 cm (width) x 30 cm (height).
 The boxes are designed to provide protection to the contents during transportation.
 A plastic wrap is used to seal the boxes, ensuring that the contents are shielded from dust and moisture.
 The boxes are labeled with important information, including the product name, quantity, and destination.

Shipping:

The shipping method for NiCr Alloy depends on the customer's requirements.
 Two options are mentioned: airmail and sea freight.
 Airmail is a faster but relatively more expensive shipping option, suitable for customers who require quick delivery.
 Sea freight is a cost-effective shipping option that is commonly used for transporting bulk quantities of goods over longer distances.
 It's important to note that specific packaging and shipping processes may vary depending on the manufacturer or supplier. The information provided here offers a general understanding of how NiCr Alloy is typically packaged and shipped.

FAQ :

What is the temperature control capability of NiCr alloy during heat treatment?

NiCr alloy has good temperature control capabilities and can provide precise heating and cooling processes. This is very important for heat treatment processes that require strict temperature control to ensure material quality and performance.

How stable is NiCr alloy in high temperature environment?

NiCr alloy has high temperature stability and can maintain structural stability and performance at high temperatures. This makes it a reliable material for working in high temperature environments.

How is the processability of Cr10Ni90 alloy wire?

Cr10Ni90 alloy wire has certain plasticity and bendability and can be processed and shaped as needed.



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