



Cr30Ni70 Alloy Wire Superior Resistance And Stability In Extreme Thermal Environments

Our Product Introduction

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Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: CE
- Model Number: Cr30Ni70
- 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

- Max. Continuous Service Temp. Of Element(°C): 1100
- Melting Point: 1390
- Resistivity: 1.04 ± 0.05
- Density(g/cm³): 7.9
- Thermal Conductivity (KJ/m·h·°C): 43.8
- Coefficient Of Lines Expansion($\alpha \times 10^{-6}/^{\circ}\text{C}$): 19
- Melting Point Approx.(°C): 1390
- Elongation At Rupture(%): >20
- Highlight: Cr30Ni70 Alloy Wire,
Superior Resistance Alloy Wire,
Extreme Thermal Environments Alloy Wire



More Images



Product Description

Cr30Ni70 Alloy Wire: Superior Resistance and Stability in Extreme Thermal Environments

NiCr Series


Cr30Ni70 alloy wire is a high-performance nickel-chromium alloy resistance heating material, mainly composed of 70% nickel and 30% chromium, with excellent high temperature stability and corrosion resistance. Its melting point is about 1370-1410°C, the maximum continuous working temperature can reach 1250°C, and the density is 8.1-8.2 g/cm³. The resistivity of this alloy wire is about 1.08-1.12 $\mu\Omega\cdot\text{m}$ at 20°C, the tensile strength is 650-900 MPa, and the elongation is greater than 25%, showing good mechanical properties.

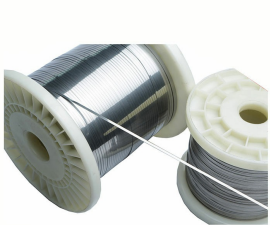
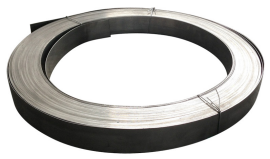

This alloy wire is widely used in industrial furnaces, electric heating elements, vacuum furnaces, high-temperature heat treatment equipment and other fields, especially suitable for manufacturing high-power and high-temperature heating elements. Its excellent performance makes it an ideal material for high-end applications such as aerospace, metallurgy, energy and laboratory equipment.

Our Product Introduction

Performance material		Cr10Ni90	Cr20Ni80	Cr30Ni70	Cr15Ni60	Cr20Ni35	C
Composition	Ni	90	Rest	Rest	55.0~61.0	34.0~37.0	30
	Cr	10	20.0~23.0	28.0~31.0	15.0~18.0	18.0~21.0	18
	Fe		≤1.0	≤1.0	Rest	Rest	Rest
Maximum temperature °C		1300	1200	1250	1150	1100	1100
Melting point °C		1400	1400	1380	1390	1390	1390
Density g/cm3		8.7	8.4	8.1	8.2	7.9	7.9
Resistivity at 20°C(μΩ·m)			1.09±0.05	1.18±0.05	1.12±0.05	1.00±0.05	1.00
Elongation at rupture		≥20	≥20	≥20	≥20	≥20	≥20
Specific heat			0.44	0.461	0.494	0.5	0.5
J/g.°C							
Thermal conductivity			60.3	45.2	45.2	43.8	43.8
KJ/m.h°C							
Coefficient of lines expansion							
α×10-6/			18	17	17	19	19
(20~1000°C)							
Micrographic structure			Austenite	Austenite	Austenite	Austenite	Austenite
Magnetic properties			Non-magnetic	Non-magnetic	Non-magnetic	Weak magnetic	Weak magnetic
Micrographic structure		Ferrite	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite
Magnetic properties		Magnetic	Magnetic	Magnetic	Magnetic	Magnetic	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

Size Range		
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	

Application

Aerospace: Cr30Ni70 alloy is widely used in the manufacture of turbine blades and combustion chamber components of aircraft engines due to its excellent high-temperature oxidation resistance and strength.

Energy: In high-temperature and high-pressure equipment such as nuclear power plants and gas turbines, Cr30Ni70 alloy can be used to manufacture heat exchangers, heating elements and high-temperature pipes.

High-temperature resistance elements: Cr30Ni70 alloy has stable resistivity and good thermal stability, and is suitable for the manufacture of high-temperature resistance elements such as electric heaters, thermocouples, and resistance wires.

Precision instruments and sensors: Due to its small and stable resistivity change, Cr30Ni70 alloy is used to manufacture precision measuring equipment such as temperature sensors and pressure sensors.

Metallurgy and chemical industry: In high-temperature environments such as metallurgical furnaces and chemical furnaces, Cr30Ni70 alloy can be used to manufacture heat-resistant structural parts such as furnace shafts and burner racks.

Q&A

What material is Cr30Ni70 wire?

Cr30Ni70 wire is a nickel-chromium alloy heating wire containing 70% nickel and 30% chromium.

What is its main use?

It is mainly used for high-temperature electric heating elements such as electric furnaces, heat treatment equipment, etc.

What are its advantages?

It has high-temperature oxidation resistance, high resistivity and good mechanical properties.

What is its maximum operating temperature?

The maximum operating temperature can reach 1200°C.



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