Cr20Ni80 Alloy Wire With High Nickel Content For High Temperature Resistance

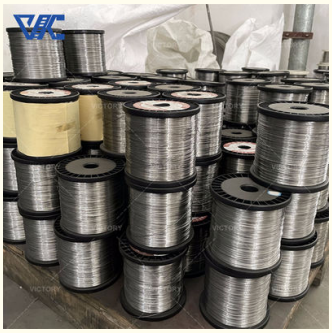
Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: CE
- Model Number: Cr20Ni80
- 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

- Applications: Heating Elements, Furnaces, Electrical Components
- Nickel(Min): 77%
- Elongation: ≥20%
- Melting Point: 1400-1450°C
- Electrical Resistivity: 1.1-1.2 μΩm
- Resistivity: 1.09+/-0.05
- Tensile Strength: 637MPA
- Hardness: HV400-500
- Thermal Conductivity: 15-20 W/mK
- Name: NiCr Alloy
- Highlight: **Cr20Ni80 Alloy Wire**, **Furnaces Cr20Ni80 Alloy Wire**, **High Nickel Nichrome Alloy**



More Images

Our Product Introduction

Product Description

Cr20Ni80 Alloy Wire With High Nickel Content For Excellent High Temperature Resistance

Introduction:

Cr20Ni80 alloy wire is a high-temperature alloy wire, mainly composed of 20% chromium and 80% nickel. It has good high temperature resistance and can provide stable resistance characteristics in high temperature environments. This alloy wire is widely used in electric furnace heating elements, resistance welding, heaters,

hot mist generators and other fields.

Mechanical behavior:

The mechanical properties of Cr20Ni80 alloy wire can be adjusted through cold working.

Cold working refers to the process of plastic deformation of alloy wire at room temperature. Common cold working methods include drawing, rolling and bending. Through cold working, the shape, size and mechanical properties of the alloy wire can be changed. Specifically:

1. Drawing: The process of drawing alloy wire through a die can reduce its cross-sectional area and increase its length. This causes the alloy wire to harden, increasing its strength and hardness but also reducing its ductility.

2. Calendering: The alloy wire is pressed through equipment such as a rolling mill to change its cross-sectional shape and size. During the calendering process, the alloy wire will undergo cold deformation, making it hard and improving strength and hardness.

3. Bending: By bending alloy wire, you can change its shape and increase its ductility. However, when bending at a large angle, it may cause breakage or surface cracks of the alloy wire.

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 fusion °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 especifico 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 a×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

Parameters:

Chemical composition (mass fraction):
Chromium (Cr): about 20%
Nickel (Ni): about 80%
Density: approximately 8.4 g/cm3.
Melting point: approximately 1400 degrees Celsius.
Resistivity: approximately 1.09-1.13×10^-6 Ω·m (at room temperature).
Temperature coefficient: approximately 0.0004-0.0005 1/degrees Celsius (within room temperature range).
Maximum operating temperature: Typically up to 1000 degrees Celsius, depending on specific application and environmental conditions.

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.

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

FAQ:

What is the resistivity of Cr20Ni80 alloy wire?
The resistivity of Cr20Ni80 alloy wire is about 1.09-1.13×10^-6 Ω·m (at room temperature).

What is the melting point of Cr20Ni80 alloy wire?
The melting point of Cr20Ni80 alloy wire is about 1400 degrees Celsius.

What is the tensile strength of Cr20Ni80 alloy wire?
The tensile strength of Cr20Ni80 alloy wire is usually between 400-600 MPa.

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