



Customizable Cr20Ni80 Alloy Wire For Different Cross Sectional Areas And Lengths

Our Product Introduction

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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

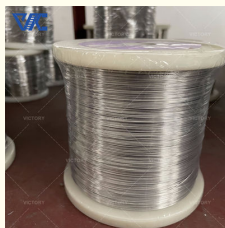


Product Specification

- Applications: Heating Elements, Furnaces, Electrical Components
- Nickel(Min): 77%
- Elongation: $\geq 20\%$
- Melting Point: 1400-1450°C
- Electrical Resistivity: 1.1-1.2 $\mu\Omega\text{m}$
- Resistivity: 1.09+/-0.05
- Tensile Strength: 637MPa
- Hardness: HV400-500
- Thermal Conductivity: 15-20 W/mK
- Name: NiCr Alloy
- Highlight: Cr20Ni80 Alloy Wire, Customized Cr20Ni80 Alloy Wire, 77% Nickel Nichrome Alloy



More Images



Product Description

Customizable Cr20Ni80 Alloy Wire For Different Cross-Sectional Areas And Lengths Introduction:

Cr20Ni80 alloy wire is a high-resistance alloy wire composed of 20% chromium and 80% nickel. It has high resistivity and low temperature coefficient, making it suitable for circuits and equipment that require stable resistance. This alloy wire is often used in resistors, electric heaters, electric furnace heating elements and other

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fields.



Mechanical behavior:

The mechanical properties of Cr20Ni80 alloy wire can be adjusted through heat treatment. Heat treatment refers to the process of heating and cooling alloy wire to change its structure and properties. Common heat treatment methods include annealing, solution treatment and aging treatment.

1. Annealing: By heating the alloy wire to a high temperature and then cooling it slowly, the stress and grain boundary deformation during cold working can be eliminated, allowing it to return to its original softened state. Annealing can increase the ductility and toughness of the alloy wire, but will reduce its hardness and strength.

2. Solid solution treatment: heating the alloy wire to a certain temperature to uniformly dissolve the elements in the solid solution, and then cooling it quickly to form a uniform solid solution structure. Solution treatment can improve the strength and hardness of alloy wire.

3. Aging treatment: After solid solution treatment, the alloy wire is heated to a lower temperature and kept for a period of time to cause recrystallization and precipitation hardening of the alloy wire structure. Aging treatment can further improve the strength and hardness of 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 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

Corrosion resistance:

Cr20Ni80 alloy wire has good corrosion resistance under normal circumstances. This is mainly due to the 20% chromium in its composition. Chromium has excellent corrosion resistance and can form a dense chromium oxide film (chromium oxide) on the surface of the alloy, effectively preventing further oxidation and corrosion. This chromium oxide film has high stability and adhesion, and can protect the alloy wire from corrosive media to a certain extent.

However, it should be noted that the corrosion resistance of Cr20Ni80 alloy wire is still affected by the specific working environment. In some extreme corrosive environments, such as strong acid, strong alkali, high chloride ion concentration, etc., the corrosion resistance of alloy wire may be challenged. In these cases, additional protective measures or the selection of other more corrosion-resistant materials may be necessary.

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 maximum operating temperature of Cr20Ni80 alloy wire?

Cr20Ni80 alloy wire can typically be used at temperatures up to 1000 degrees Celsius, depending on the application and environmental conditions.

What is the corrosion resistance of Cr20Ni80 alloy wire?

Cr20Ni80 alloy wire has good corrosion resistance and shows good corrosion resistance in most common acidic and alkaline environments.

What is the thermal conductivity of Cr20Ni80 alloy wire?

Cr20Ni80 alloy wire has relatively high thermal conductivity and can be used in some applications that require high-temperature heat transfer or heating.



Changzhou Victory Technology Co., Ltd

+8619906119641

victory@dlx-alloy.com

victory-alloy.com

NO.32 West Taihu Road, Xinbei District, Changzhou, Jiangsu