FeCrAl Alloy Heating Resistance 0Cr21Al6 Wire For Furnace Heater

Our Product Introduction

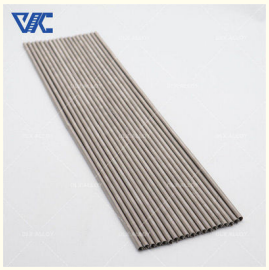
Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: ISO/ROHS
- Model Number: 0Cr21Al6
- Minimum Order Quantity: 3kgs
- Price: Negotiable
- Packaging Details: Put wire into cartons, then put cartons onto pallet
- Delivery Time: 10-25 days
- Payment Terms: L/C, T/T, Paypal, Western Union
- Supply Ability: 80 Tons Per Month

Product Specification

- Material: FeCrAl
- Chemical Composition: Fe Cr Al,Ferro Chrome Aluminium,Cr,Ni,Iron-chromium-aluminum
- Density: 7.10 G/cm3
- Melting Point: 1500°C
- Thermal Conductivity: 13-15 W/m Kelvin
- Tensile Strength: 600-800 MPa
- Yield Strength: 280-450 MPa
- Elongation: 10-25%
- Specification: 0.025-10mm
- Application: High Temperature Heater
- Shape: Strip,wire,ribbon,plate,Wire Strip Round Ribbon
- Highlight: **0Cr21Al6 FeCrAl Alloy**, **Furnace Heater FeCrAl Alloy**, **0Cr21Al6 FeCrAl Alloy Wire**

More Images



Product Description

Our Product Introduction

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Introduction:

0Cr21Al6 furnace wire is a high-temperature alloy material, mainly composed of chromium (Cr) and aluminum (Al), with a chromium content of approximately 21% and an aluminum content of approximately 6%. This alloy has excellent oxidation resistance and high temperature resistance, and is often widely used in fields such as electric furnace heating elements and thermocouples.

0Cr21Al6 furnace wire has good chemical stability and is not prone to oxidation, corrosion and deformation in high temperature environments. It has a high melting point (about 1500 degrees Celsius) and can withstand long-term use under high temperature conditions. In addition, the grate bar has a low coefficient of linear expansion, allowing it to maintain good stability during thermal cycling.

The alloy material has high thermal conductivity, which helps to conduct heat quickly and improve heating efficiency. It also has high tensile strength and yield strength, and can withstand large mechanical stress at high temperatures. At the same time, the grate bar has a certain elongation rate, making it more flexible and easier to operate during processing and installation.

Parameter:

Chemical composition:
Chromium (Cr): approximately 21% by mass
Aluminum (Al): approximately 6% by mass
Other elements: mainly iron (Fe) and impurity elements, such as manganese (Mn), silicon (Si), etc.
Physical properties:
Density: approximately 7.10 g/cm3
Melting point: approximately 1500 degrees Celsius
Thermal Conductivity: Approximately 13-15 Watts/meter Kelvin (around room temperature)
Linear expansion coefficient: approximately 13×10^-6/degrees Celsius (within room temperature range)
Mechanical behavior:
Tensile strength: about 600-800 MPa
Yield strength: about 280-450 MPa
Elongation: approximately 10-25% (at room temperature)

item	value
Place of Origin	Jiangsu,China
Type	Fe-Cr-Aluminum Ribbon
Application	Industry Furnace
Conductor Material	ferro alloy
Certificate	ISO9001
Thermal conductivity:	15 W/(m.K) (20ºC)
Executive standard	GB/T1234-2012
Dimensions	User's Demand
Size	0.56-5mm
shape	shaped strip
width	6-50mm
Packing	Pallet
highest temperature	1400ºC
melting point	1520ºC

Alloy Nomenclature Performance		1Cr13AL4	0Cr25Al5	0Cr21AL6	0Cr23Al5	0Cr21Al4	0Cr21Al6Nb	0Cr27Al7Mo2
Main Chemical composition	Cr	12.0-15.0	23.0-26.0	19.0-22.0	20.5-23.5	18.0-21.0	21.0-23.0	26.5-27.8
	Al	4.0-6.0	4.5-6.5	5.0-7.0	4.2-5.3	3.0-4.2	5.0-7.0	6.0-7.0
	Re	opportune	opportune	opportune	opportune	opportune	opportune	opportune
	Fe	Rest	Rest	Rest	Rest	Rest	Rest	Rest
							Nb0.5	Mo1.8-2.2
Max. continuous service temp. of element(°C)		950	1250	1250	1250	1100	1350	1400
Resistivity at 20ºC(μΩ·m)		1.25	1.42	1.42	1.35	1.23	1.45	1.53
Density(g/cm3)		7.4	7.1	7.16	7.25	7.35	7.1	7.1
Thermal conductivity(KJ/m·h·ºC)		52.7	46.1	63.2	60.2	46.9	46.1	--

Coefficient of lines expansion(α×10-6/ºC)	15.4	16	14.7	15	13.5	16	16
Melting point approx.(ºC)	1450	1500	1500	1500	1500	1510	1520
Tensile strength(N/mm2)	580-680	630-780	630-780	630-780	600-700	650-800	680-830
Elongation at rupture(%)	>16	>12	>12	>12	>12	>12	>10
Variation of area(%)	65-75	60-75	65-75	65-75	65-75	65-75	65-75
Repeat Bending frequency(F/R)	>5	>5	>5	>5	>5	>5	>5
Hardness(H.B.)	200-260	200-260	200-260	200-260	200-260	200-260	200-260
continuous service time(Hours/ ºC)	--	≥80/1300	≥80/1300	≥80/1300	≥80/1250	≥50/1350	≥50/1350
Micrographic structure	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite
Magnetic properties	Magnetic	Magnetic	Magnetic	Magnetic	Magnetic	Magnetic	Magnetic

Characteristic:

High resistance performance: 0Cr21Al6 heater wire has high resistivity, providing stable resistance characteristics.
Excellent anti-oxidation performance: In high temperature environments, 0Cr21Al6heater wire can form a dense oxide protective film to effectively prevent further oxidation reactions.
Corrosion resistance: 0Cr21Al6 heater wire has good corrosion resistance to many common corrosive media.
Mechanical properties: 0Cr21Al6 heater wire has certain elasticity and plasticity, and is easy to process and shape.
Long life: Due to its excellent high temperature resistance and anti-oxidation properties, 0Cr21Al6heater wire has a long service life.

Specific applications:

Industrial heating equipment: 0Cr21Al6 heater wires are widely used in various industrial heating equipment, such as electric furnaces, hot air furnaces, ovens, etc., to provide stable heating effects.
Heat treatment industry: During the metal heat treatment process, 0Cr21Al6heater wires are used as heating elements to ensure the precise heating temperature and treatment effect of metal materials.
Home appliance field: 0Cr21Al6 heater wires are used as heating elements in household appliances, such as electric water heaters, electric furnaces, etc., to provide fast and uniform heating effects.
Laboratory equipment: Heating equipment and heat treatment equipment used in laboratories, such as experimental furnaces, ovens, etc.

Customization:

Diameter: The common diameter range of 0Cr21Al6heater wire is from 0.5mm to 10mm.
Width and thickness: The common width range of rectangularheater wire is from 0.1mm to 10mm, and the thickness is determined according to needs.
Length: The length of the heater wire can be customized according to the customer's specific needs.

Q&A:

What is the maximum operating temperature of 0Cr21Al6 furnace wire?
The maximum working temperature of 0Cr21Al6 furnace wire can reach 1350°C, which has excellent high temperature

resistance.

What is the difference between 0Cr21Al6 furnace wire and 0Cr21Al4 furnace wire?
Compared with 0Cr21Al4 furnace wire, 0Cr21Al6 furnace wire has a higher aluminum content, so it has better oxidation resistance and high temperature resistance.

What are the common specifications of 0Cr21Al6 furnace wire?
Commonly used specifications for 0Cr21Al6 furnace wire include circular furnace wire with a diameter of 0.5mm-10mm and rectangular furnace wire with a width of 0.1mm-10mm. The length can be customized according to needs

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