



## Electrical Resistance Heater Wire 0Cr21Al4 For Industrial Furnace Heating Elements

Our Product Introduction

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### Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: ISO/ROHS
- Model Number: 0Cr21Al4
- 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: 7.25 G/cm<sup>3</sup>
- Melting Point: 1500
- 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: Industrial Furnace Heating Elements, Industrial Furnace Heating Elements Wire



### More Images



### Product Description

**Introduction:**

0Cr21Al4 Heater Wire is a wire made of 0Cr21Al4 alloy, which has certain elasticity and plasticity. Its cross-sectional shape is usually circular or rectangular, and different sizes and lengths can be customized according to specific needs.

0Cr21Al4 Heater Wire is composed of iron (Fe), chromium (Cr), aluminum (Al) and other small amounts of elements. It has excellent high temperature resistance and resistance properties and is widely used in thermal equipment and electric furnace heating elements.

0Cr21Al4 Heater Wire has excellent oxidation resistance and can form a dense oxide protective film in high temperature environments, effectively preventing further oxidation reactions. At the same time, it also has good mechanical properties and weldability, making it popular in the manufacture and application of heating elements.

0Cr21Al4 Heater Wire is widely used in industrial heating fields, such as electric furnace heating coils, hot blast furnace heating elements, industrial ovens, electric heaters and heat treatment equipment. With its excellent antioxidant properties and resistance characteristics, 0Cr21Al4 Heater Wire is able to work stably in high temperature environments and provide uniform heating effects.

**Parameter:****Chemical composition:**

Chromium (Cr): approximately 21% by mass

Aluminum (Al): approximately 4% by mass

Other elements: mainly iron (Fe) and impurity elements, such as manganese (Mn), silicon (Si), etc.

**Physical properties:**

Density: approximately 7.25 g/cm<sup>3</sup>

Melting point: approximately 1500 degrees Celsius

Thermal Conductivity: Approximately 13-15 Watts/meter Kelvin (around room temperature)

Linear expansion coefficient: approximately  $13 \times 10^{-6}$ /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) (20°C)
Executive standard	GB/T1234-2012
Dimensions	User's Demand
Size	0.56-5mm
shape	shaped strip
width	6-50mm
Packing	Pallet
highest temperature	1400°C
melting point	1520°C

Alloy Nomenclature Performance		1Cr13A L4	0Cr25A l5	0Cr21AL 6	0Cr23Al5	0Cr2 1Al4	0Cr21 Al6Nb	0Cr27A l7Mo2
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 20°C(μΩ·m)		1.25	1.42	1.42	1.35	1.23	1.45	1.53
Density(g/cm <sup>3</sup> )		7.4	7.1	7.16	7.25	7.35	7.1	7.1

Thermal conductivity(KJ/m·h·°C)	52.7	46.1	63.2	60.2	46.9	46.1	--
Coefficient of lines expansion( $\alpha \times 10^{-6}/^{\circ}\text{C}$ )	15.4	16	14.7	15	13.5	16	16
Melting point approx.( $^{\circ}\text{C}$ )	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/ $^{\circ}\text{C}$ )	--	$\geq 80/1300$	$\geq 80/1300$	$\geq 80/1300$	$\geq 80/1250$	$\geq 50/1350$	$\geq 50/1350$
Micrographic structure	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite
Magnetic properties	Magnetic	Magnetic	Magnetic	Magnetic	Magnetic	Magnetic	Magnetic

### Characteristic:

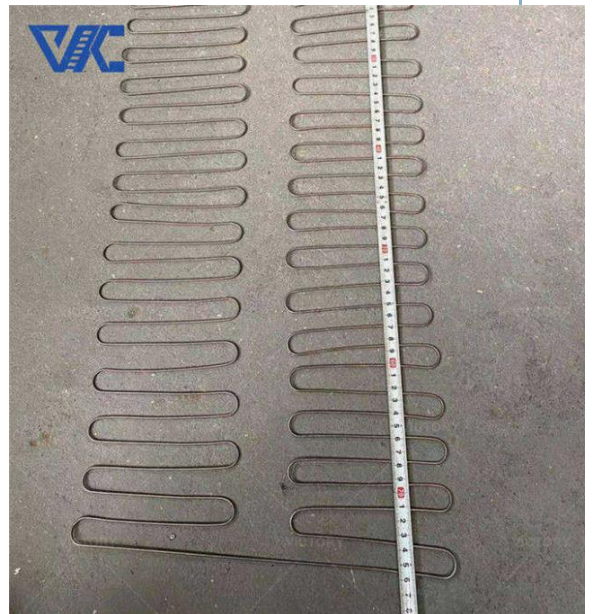
High temperature resistance: 0Cr21Al4 furnace bar can maintain stable performance in high temperature environments.  
 Antioxidant properties: Form a dense oxide protective film to effectively prevent further oxidation reactions.  
 Mechanical properties: Has certain elasticity and plasticity.  
 Resistance performance: Provide stable resistance characteristics.

### Advantage:

High stability: able to work stably for a long time in high temperature environments.  
 Good anti-oxidation performance: It can effectively resist the impact of oxidation on material properties.  
 Easy to process and weld: has good plasticity and weldability.

### Specific applications:

Furnace Heating Coil: The heating element in an industrial electric furnace.  
 Hot air stove heating element: The heating element in the hot air stove provides high-temperature air.  
 Industrial oven: used in industrial heating and baking equipment.  
 Electric heater: Heating element found in appliances and industrial equipment.  
 Heat treatment equipment: Heating elements during metal heat treatment.



### Q&A:

What is the maximum operating temperature of 0Cr21Al4 heater wire?  
 The maximum working temperature of 0Cr21Al4 heater wire is generally around 1300 .

What is the difference between 0Cr21Al4 heater wire and 0Cr19Al3 heater wire?  
 0Cr21Al4 heater wire has a higher chromium content than 0Cr19Al3 heater wire, so it is slightly better than 0Cr19Al3 heater wire.

wire in terms of anti-oxidation performance and high temperature resistance.

What are the processing methods of 0Cr21Al4heater wire?

0Cr21Al4 heater wire can be processed by cold drawing, cold rolling and hot rolling.



**Changzhou Victory Technology Co., Ltd**



+8619906119641



victory@dlx-alloy.com



victory-alloy.com

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