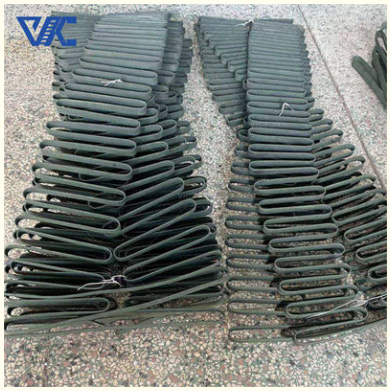
Fecral Alloy Metallic Heating Elements Wire 0Cr21Al6Nb Heating Coil For Industry Furnace

Our Product Introduction

Basic Information

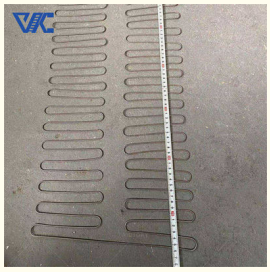
- Place of Origin: China
- Brand Name: Victory
- Certification: ISO/ROHS
- Model Number: 0Cr21Al6Nb
- Minimum Order Quantity: 3kgs
- Price: Negotiable
- Packaging Details: Put wire into cartons, then put cartons onto pallet
- Delivery Time: 10-25 days
- Payment Terms: L/C, T/T, Paypal, Western Union
- Supply Ability: 80 Tons Per Month

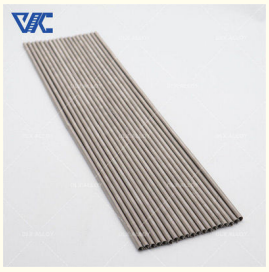


Product Specification

- 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: **Industry Furnace Heating Coil**, **Metallic Heating Elements Wire**, **0Cr21Al6Nb Heating Coil**

More Images





Product Description

for more products please visit us on victory-alloy.com

Our Product Introduction

for more products please visit us on victory-alloy.com

Introduction:

0Cr21Al6Nb furnace wire is a high-temperature alloy material commonly used in electric furnace heating elements, thermocouples and resistance wires. The alloy is known for its excellent oxidation resistance and high temperature resistance. The chemical composition of 0Cr21Al6Nb furnace wire mainly includes chromium (Cr), aluminum (Al) and niobium (Nb). Among them, the content of chromium accounts for about 21% by mass, the content of aluminum accounts for about 6% by mass, and the content of niobium is relatively small, usually 0.5-1.5% by mass. The reasonable ratio of these elements gives the furnace wire excellent high temperature resistance.

The alloy has a high melting point (about 1500 degrees Celsius) and can operate stably for a long time in high temperature environments. It has excellent antioxidant capacity and can resist oxidation, corrosion and deformation at high temperatures, extending its service life. In addition, 0Cr21Al6Nb furnace wire also has a low linear expansion coefficient, allowing it to maintain good stability during thermal cycles.

The furnace wire has a high thermal conductivity, which helps to conduct heat quickly and improve heating efficiency. At the same time, it also has high tensile strength and yield strength, and can withstand mechanical stress in high temperature environments. In addition, 0Cr21Al6Nb furnace wire has a certain elongation at room temperature, 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
Niobium (Nb): relatively small content, usually 0.5-1.5% mass ratio
Other elements: mainly iron (Fe) and impurity elements, such as manganese (Mn), silicon (Si), etc.

Physical properties:

Density: approximately 7.10g/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

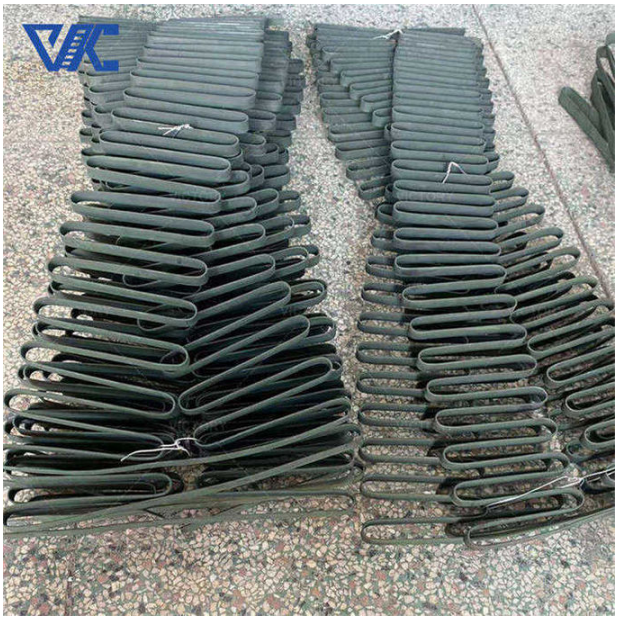
Characteristic:

High temperature stability: 0Cr21Al6Nb furnace wire can maintain excellent stability in high temperature environments, with a maximum operating temperature of 1350°C.
Antioxidant performance: Under high temperature conditions, it forms a dense oxide protective film, which effectively prevents further oxidation reactions and improves service life.
Excellent resistance characteristics: 0Cr21Al6Nb furnace wire has moderate resistivity, which can provide stable resistance value to meet different heating needs.
Corrosion resistance: This furnace wire has good corrosion resistance to common corrosive media and can be used for a long time in harsh environments.
High mechanical strength: 0Cr21Al6Nb furnace wire has high mechanical strength and tensile properties, making it easy to process and install.

Specific applications:

Industrial heating equipment: used for heating elements such as various industrial electric furnaces, hot air stoves and ovens to provide uniform high-temperature heating effects.
Home appliance field: used as heating elements in electric water heaters, electric stoves and other household appliances to provide fast and efficient heating functions.
Heat treatment industry: Used as heating elements in metal heat treatment equipment to ensure precise heating temperature and treatment effects of metal materials.
Laboratory equipment: Heating equipment, test furnaces, etc. used in laboratories to provide reliable heating control and stability.

In general, 0Cr21Al6Nb furnace wire is a high-resistance alloy with high temperature stability, oxidation resistance and corrosion resistance. It is widely used in industrial heating equipment, home appliances, heat treatment industry and laboratory equipment to meet heating needs in different scenarios. At the same time, the furnace wire has good mechanical strength and processing performance, and is easy to produce and install.



Changzhou Victory Technology Co., Ltd

+8619906119641 victory@dlx-alloy.com victory-alloy.com

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