Furnace Heater Wire Fecral Coil 1Cr13Al4 Heating Elements Resistance Wire For Heating Element

Our Product Introduction

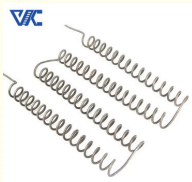
Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: ISO/ROHS
- Model Number: 1Cr13Al4
- 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: 7.45 G/cm3
- Melting Point: 1450°C
- Thermal Conductivity: 14.2 W/m Kelvin
- Tensile Strength: 450-600 MPa
- Yield Strength: 250-400 MPa
- Elongation: ≥15%
- Specification: 0.025-10mm
- Application: High Temperature Heater
- Shape: Strip,wire,ribbon,plate,Wire Strip Round Ribbon
- Highlight: **Resistance Wire Fecral Coil**, **Furnace Heater Wire Fecral Coil**, **1Cr13Al4 Wire Fecral Coil**

More Images





Our Product Introduction

Product Description

Introduction:

1Cr13Al4 is an iron-chromium-aluminum heater wire mainly used in high-temperature heater applications. It has a high density, about 7.45 g/cm3, and a high melting point, about 1450°C. Its thermal conductivity is 14.2 W/m·Kelvin, which can effectively conduct heat energy. In terms of mechanical properties, 1Cr13Al4 has good strength characteristics, with a tensile strength of 450-600 MPa, a yield strength of 250-400 MPa, and an elongation of at least 15%. The specification range of this heater wire is 0.025-10 mm.

Due to its excellent high temperature performance and corrosion resistance, 1Cr13Al4 is widely used in the field of high temperature heaters. It can provide stable and long-lasting heating effect in high-temperature environments, and is suitable for high-temperature heating equipment such as industrial furnaces, heat treatment furnaces, glass melting furnaces, and petrochemical furnaces. The reliability and durability of 1Cr13Al4 heater wire make it one of the important materials in the high temperature heater industry.

Parameter:

Chemical composition:
Carbon (C) content: about 0.08-0.15%
Silicon (Si) content: ≤1.00%
Manganese (Mn) content: ≤1.00%
Phosphorus (P) content: ≤0.040%
Sulfur (S) content: ≤0.030%
Chromium (Cr) content: about 12.00-14.00%
Aluminum (Al) content: about 3.00-4.50%
Physical properties:
Density: about 7.45 g/cubic centimeter

Melting point: about 1450 degrees Celsius
Thermal Conductivity: Approximately 14.2 W/m Kelvin (at 20 degrees Celsius)
Mechanical behavior:
Tensile Strength: Approximately 450-600 MPa (Watts)
Yield Strength: Approximately 250-400 MPa (Watts)
Elongation: ≥15%

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 resistance: 1Cr13Al4 can maintain stability in high temperature environments and can withstand high temperature heating without being prone to deformation and creep.
Resistance heating characteristics: It has good resistance heating characteristics, can generate heat efficiently and provide constant heating effect.
Corrosion resistance: It shows good corrosion resistance and can be used for a long time in harsh environments.

Advantage:

High-temperature stability: Able to maintain stability and durability in high-temperature environments, suitable for high-temperature heating equipment that operates for a long time.
Efficient heating performance: It has excellent resistance heating characteristics, can efficiently generate heat and quickly transfer heat energy to the heated object or environment.
Corrosion resistance: It shows good corrosion resistance and can be used for a long time in harsh environments without being easily damaged.

Specific applications:

Industrial furnaces and ovens: used in high-temperature heating equipment in various industrial fields, such as furnaces, drying

equipment, etc.
Heat treatment equipment: used for heating and insulation during metal heat treatment, such as quenching furnaces, annealing furnaces, etc.
Electric furnaces and electric heaters: Electric furnaces and electric heating equipment used in the power industry, such as electric furnaces, electric heating tubes, etc.

Q&A:

What are the main advantages of 1Cr13Al4 heater wire?
The main advantages of 1Cr13Al4 heater wire include high temperature stability, efficient heating performance and good corrosion resistance.

What application areas are 1Cr13Al4 heater wire suitable for?
1Cr13Al4 heater wire is suitable for industrial furnaces and ovens, heat treatment equipment, electric furnaces and electric heaters and other applications.

What are the advantages of 1Cr13Al4 heater wire compared with other materials?
Compared with other materials, 1Cr13Al4 heater wire has better high-temperature stability, efficient heating performance and good corrosion resistance, and is suitable for the requirements of various high-temperature heating equipment.

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