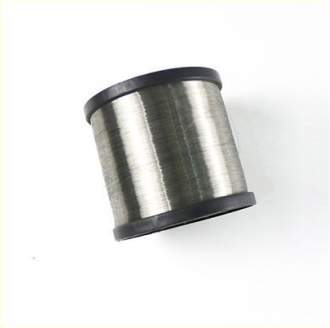
Cr15Ni60 Alloy 8.7 g/cm3 Excellent Resistance Characteristics High Temperature Oxidation Resistance

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: CE
- Model Number: Cr15Ni60
- 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

- Max. Continuous Service Temp. Of Element(ºC): 1300
- Melting Point: 1400
- Resistivity: --
- Density(g/cm3): 8.7
- Elongation At Rupture: ≥20
- T.S.(MPa): --
- Highlight: **8.7 g/cm3 Cr15Ni60 Alloy**, **High Temperature Cr15Ni60 Alloy**, **Excellent Resistance Cr15Ni60 Alloy**

More Images

Our Product Introduction

Product Description

Cr15Ni60 Alloy: 8.7 g/cm3 Excellent Resistance Characteristics And High Temperature Oxidation Resistance

NiCr Series

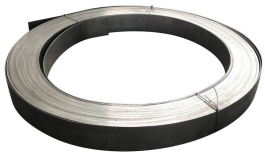
Cr15Ni60 nickel-chromium alloy is a high-performance resistance heating material with excellent high-temperature oxidation resistance and stability. It is widely used in aerospace and industrial electric furnaces. Its density is 8.7 g/cm³, its melting point is as high as 1400°C, and its maximum operating temperature can reach 1150°C. The resistivity of the alloy is 1.12±0.05μΩ·m at 20°C, its tensile strength is 600-700 MPa, and its elongation is ≥20%, showing good mechanical properties. Cr15Ni60 alloy can maintain a stable resistance value in high temperature environment, and the dense oxide film formed on the surface gives it excellent corrosion resistance. This alloy is suitable for the manufacture of electric heating elements, heating equipment and high-temperature sensors, especially in scenarios that require long-term stable operation.

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

Performance material		Cr10Ni90	Cr20Ni80	Cr30Ni70	Cr15Ni60	Cr20Ni35	C
Composition	Ni	90	Rest	Rest	55.0~61.0	34.0~37.0	3(
	Cr	10	20.0~23.0	28.0~31.0	15.0~18.0	18.0~21.0	1{
	Fe		≤1.0	≤1.0	Rest	Rest	R
Maximum temperature℃		1300	1200	1250	1150	1100	1
Meltiing point ℃		1400	1400	1380	1390	1390	1
Density g/cm3		8.7	8.4	8.1	8.2	7.9	7.
Resistivity at 20℃((μΩ·m)			1.09±0.05	1.18±0.05	1.12±0.05	1.00±0.05	1.
Elongation at rupture		≥20	≥20	≥20	≥20	≥20	≥
Specific heat J/g.℃			0.44	0.461	0.494	0.5	0.
Thermal conductivity KJ/m.h℃			60.3	45.2	45.2	43.8	4
Coefficient of lines expansion a×10-6/ (20~1000℃)			18	17	17	19	1
Micrographic structure			Austenite	Austenite	Austenite	Austenite	A
Magnetic properties			Non-magnetic	Non-magnetic	Non-magnetic	Weak magnetic	W
Micrographic structure		Ferrite	Ferrite	Ferrite	Ferrite	Ferrite	F
Magnetic properties		Magnetic	Magnetic	Magnetic	Magnetic	Magnetic	M

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

Size Range		
Wire	dia 0.03-7.5mm	
	dia 8.0-12.0mm	

Ribbon	(0.05-0.35)*(0.5-6.0)mm	
Strip	(0.50-2.5)*(5-180)mm	
Rod	8-50mm	

Feature

High temperature oxidation resistance:

The alloy can form a stable chromium oxide film at high temperature, which effectively prevents further oxidation and maintains good oxidation resistance even at high temperatures exceeding 1000℃.

Resistance stability:

The resistivity of Cr15Ni60 alloy is relatively high, about 1.12-1.25×10^{-6} Ω·m, and the resistivity increases linearly with the increase of temperature, showing a good temperature coefficient, which is suitable for high temperature electric heating elements.

Thermal stability:

The alloy can maintain stable physical properties at high temperatures of 700℃ to 1100℃, and is not prone to significant performance degradation, which is suitable for rapid heating and cooling conditions.

Mechanical properties:

It has high plasticity, cold stamping and welding properties at room temperature. After solution treatment, it has a single-phase austenite structure, stable organization, and a tensile strength of 600-650 MPa.

Q&A

Q: What is the oxidation resistance of Cr15Ni60 alloy wire?
A: Cr15Ni60 alloy wire has good oxidation resistance and can form a dense oxide film at high temperature to effectively prevent further oxidation.
Q: What are the main application areas of Cr15Ni60 alloy wire?
A: Cr15Ni60 alloy wire is mainly used for electric heating elements, high-grade electric heating tubes, household electric heaters, resistance belts in resistance boxes, etc.

Changzhou Victory Technology Co., Ltd

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

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