

Cr15Ni60 Nickel Chromium Alloy 1400°C Key Applications In Aerospace And **Industrial Electric Furnaces**

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Basic Information	
Place of Origin:	China
 Brand Name: 	Victory
Certification:	CE
 Model Number: 	Cr15Ni60
Minimum Order Quantity:	5

- Packaging Details:
- Delivery Time:
- Payment Terms:
- Supply Ability:

- Spool package with Carton box, Coil package with polybag for Resistance wire 5-21 davs L/C, T/T, Western Union, MoneyGram

Aerospace Nickel-Chromium Alloy

300 tons per month



Product Specification

 Highlight: 	Industrial Electric Furnaces Nickel-Chromium Alloy . Cr15Ni60 Nickel-Chromium Alloy.
• T.S.(MPa):	
 Elongation At Rupture: 	≥20
 Density(g/cm3): 	8.7
 Resistivity: 	
 Melting Point: 	1400°C
 Max. Continuous Service Temp. Of Element(^eC): 	1300



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Product Description

Cr15Ni60 Nickel-Chromium Alloy: 1400°C Key Applications In Aerospace And Industrial Electric Furnaces

NiCr Series

Cr15Ni60 nickel-chromium alloy is a high-performance resistance heating material with excellent hightemperature stability and oxidation resistance. It is widely used in aerospace and industrial electric furnaces. The tensile strength of Cr15Ni60 alloy is 600-750 MPa, the yield strength is 250-450 MPa, and the elongation is ≥25%, showing good mechanical properties.

In the field of aerospace, Cr15Ni60 alloy is used to manufacture key components such as high-temperature sensors and turbine blades. Its high-temperature oxidation resistance and stability provide reliable guarantees for the operation of equipment in extreme environments. In industrial electric furnaces, the alloy is often used to manufacture heating elements such as electric heating tubes and electric heating wires, which can withstand long-term high-temperature work and have a long service life. Its excellent corrosion resistance makes it perform ion

well in complex environments such as chemical equipment and petrochemical industries. With its high resistivity, stable resistance performance and good processability, Cr15Ni60 alloy has become an ideal material for high-temperature electric heating elements and precision instruments.

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

Bar

Performance mat	erial	Cr10Ni	90	Cr20Ni80	Cr30Ni70	Cr15Ni60	Cr20Ni35	С
	Ni	90		Rest	Rest	55.0~61.0	34.0~37.0	30
Composition	Cr	10		20.0~23.0	28.0~31.0	15.0~18.0	18.0~21.0	18
	Fe			≤1.0	≤1.0	Rest	Rest	R
laximum temper	ature°C	1300		1200	1250	1150	1100	1
Aeltiing point °C		1400		1400	1380	1390	1390	1:
Density g/cm3		8.7		8.4	8.1	8.2	7.9	7.
Resistivity at 20°C	C((μΩ·m)			1.09±0.05	1.18±0.05	1.12±0.05	1.00±0.05	1.
Elongation at rupt	ture	≥20		≥20	≥20	≥20	≥20	Þ;
Specific heat				0 44	0.461	0 494	0.5	
/g.°C				0.11				0.
hermal conducti	vity			60.3	45.2	45.2	13.8	
(J/m.h°C				00.0	7 0.2	+J.2	10.0	ſ
Coefficient of line	s expansion							T
×10-6/				18	17	17	19	19
20~1000°C)								
licrographic stru	cture			Austenite	Austenite	Austenite	Austenite	A
lagnetic properti	es			Non-magnetic	Non-magnetic	Non-magnetic	Weak magnetic	M
licrographic stru	cture	Ferrite		Ferrite	Ferrite	Ferrite	Ferrite	F
lagnetic properti	es	Magnet	tic	Magnetic	Magnetic	Magnetic	Magnetic	м
Form			Specific	ation				
Wire Diameter		Diamete	er=0.025mm~8mm					
Flat wire			Width=0	0.40~6.0mm		Thick=0.03~0).50mm	
Strip		width=8 [,]	width=8~250mm			Thick=0.05~3.0mm		

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

Long=50~1000

Diameter=8~100mm

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

Application

Electric heating elements:

Cr15Ni60 alloy is widely used in the manufacture of electric heating elements, such as industrial furnaces, heat treatment furnaces, oven heating tubes, etc., due to its excellent high-temperature oxidation resistance and stable resistance characteristics. It is especially suitable for periodic heat treatment furnaces with working temperatures below 900°C.

The alloy is also used for high-grade electric heating tubes and heating wires for household electric heaters. Aerospace:

Cr15Ni60 alloy can be used to manufacture high-temperature components, such as combustion chambers, nozzles and turbine blades of gas turbine engines, because it can maintain strength and oxidation resistance at high temperatures.

Petrochemical:

In petrochemical equipment, Cr15Ni60 alloy is used to manufacture heating furnaces, heat exchangers and other components, which can operate stably for a long time in high temperature and corrosive environments. Power industry:

Key components used for power generation equipment, such as boiler pipes and turbine rotors, which require materials with good strength and oxidation resistance at high temperatures.

Q&A

Q1: What are the main components of Cr15Ni60 alloy wire?

A1: Cr15Ni60 alloy wire is mainly composed of nickel (Ni) and chromium (Cr), with a nickel content of 55.0%~61.0%, a chromium content of 15.0%~18.0%, and the rest is iron and other trace elements.

Q2: What is the maximum operating temperature of Cr15Ni60 alloy wire?

Q3: What is the resistivity of Cr15Ni60 alloy wire?

A3: The resistivity of Cr15Ni60 alloy wire at 20°C is 1.12±0.05 $\mu\Omega{\cdot}m.$

A2: The maximum operating temperature of Cr15Ni60 alloy wire can reach 1150°C.



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