



Ni80Cr20

1. Brief introduction:

Nickel-chromium and nickel-chromium-iron electrothermal alloy wires have good high-temperature oxidation resistance, high strength, not softening easily, and easy welding. It is not easy to be deformed and has a long permanent elongation when used for a long time. Among these materials Cr20Ni80 alloy has excellent comprehensive characteristics and is the first choice for making high quality electric heating elements. These materials are widely used in industrial electric furnaces, metallurgy, machinery, household appliances and other industries to produce heating elements and resistance elements.

2. Parameter values:

Properties		Grade				
		Cr20Ni80	Cr30Ni70	Cr15Ni60	Cr20Ni35	Cr20Ni30
Chemical composition %	Ni	Remainder	Remainder	55~61	34~37	30~34
	Cr	20~23	28~31	15~18	18~21	18~21
	Fe	≤1.0	≤1.0	Remainder	Remainder	Remainder
Maximum service temperature °C		1200	1250	1150	1100	1100
Melting point °C		1400	1380	1390	1390	1390
Density g/cm ³		8.4	8.1	8.2	7.9	7.9
Resistivity μΩ·m, 20°C		1.09±0.05	1.18±0.05	1.11±0.05	1.04±0.05	1.04±0.05
Elongation %		≥20	≥20	≥20	≥20	≥20
Specific heat J/g·°C		0.44	0.461	0.494	0.5	0.5
Coefficient of thermal conductivity KJ/m.h°C		60.3	45.2	45.2	43.8	43.8
linear expansion coefficient $\alpha \times 10^{-6}/^{\circ}\text{C}$ (20-100°C)		18	17	17	19	19
Microstructure		Austenite				
Magnetic property		Nonmagnetic				



Shanghai Hite Special Alloy Co., Ltd.
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3. Main product types:

Wire, strip, rod, bar.

4. Main specifications:

Cr20Ni80, 2.4869, NiCr8020, Nikrothal80, Resistohm80

5. Ni80Cr20 source URL:

<https://www.hitealloy.com/product/nicr20.html>