

## Fe-Cr-Al- high resistances and electric heating alloys



### Main Applications

Our high resistance electric heating alloy has a wide range of temperatures. The highest temperature can reach 1,400°C. Besides, we have eleven different kinds of alloys, each type has its own temperature range and resistivity. So our products have various applications.

Over a long period of time, our products (Fe-Cr-Al/Ni-Cr) high resistance and heating alloy materials are salable and widely used in various industries, such as metallurgical, chemical, glass, ceramic, and electrics for instance, they can be used for industrial and civil heating-furnace, infrared equipment, liquefied gas infrared heat-resisting net, different kinds of igniting and radiating electrodes and voltage-regulating resistors for motors and so on.

Meanwhile our products are ideal materials for heating elements of electric stove, electric teapot, electric iron, electric blower, soldering-iron, electric water heater and indoor air-conditioner and etc

**Specifications** Standard: (GB/T 1234、Q/IYRO 01)

		1Cr13Al4	0Cr25Al5	0Cr21Al6	0Cr23Al5	0Cr21Al4	0Cr21Al6Nb	0Cr27Al7Mo2
Main chemical composition %	Cr	12.0-15.0	23.0-26.0	19.0-22.0	22.5-24.5	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	4.2-5.0	3.0-4.2	5.0-7.0	6.0-7.0
	RE	opportune amount	opportune amount	opportune amount	opportune amount	opportune amount	opportune amount	opportune amount
	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 $\mu\Omega.m,20^{\circ}C$		1.25	1.42	1.42	1.35	1.23	1.45	1.53
Density (g/cm <sup>3</sup> )		7.4	7.10	7.16	7.25	7.35	7.10	7.10
Thermal conductivity KJ/m.h.°C		52.7	46.1	63.2	60.2	46.9	46.1	45.2
Coefficient of lines expansion $\alpha \times 10^{-6}/^{\circ}C$		15.4	16.0	14.7	15.0	13.5	16.0	16.0
Melting point°C		1450	1500	1500	1500	1500	1510	1520
Tensile strength Mpa		580-680	630-780	630-780	630-780	600-700	650-800	680-830
Elongation atrupture %		>16	>12	>12	>12	>12	>12	>10
Variation of area %		65-75	60-75	65-75	65-75	65-75	65-75	65-75
Hardness(H.B.)		>5	>5	>5	>5	>5	>5	>5
Micrographic structure		200-260	200-260	200-260	200-260	200-260	200-260	200-260
Magnetic properties		Ferrite	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite
		Magnetic	Magnetic	Magnetic	Magnetic	Magnetic	Magnetic	Magnetic