Ualloy123 (0Cr21Al4)

Ualloy123 is a iron-chromium-aluminium alloy (FeCrAl alloy) characterized by moderate resistivity and good oxidation resistance.It is suitable for use at temperatures up to 1100°C.

Typical applications for Ualloy123 are used as elements in home appliances,melting and industrial furnace.

Normal composition(%)

C	P	S	Mn	Si	Cr	Ni	Al	Fe	Other
Max									
0.12	0.025	0.025	0.70	Max 1.0	18.0~21.0	Max 0.60	3.0~4.2	Bal.	-

Typical Mechanical properties（1.0mm）

Yield strength	Tensile Strength	Elongation
Mpa	Mpa	%
550	750	16

Typical Physical properties

Density (g/cm^3)	7.35
Electrical resistivity at 20℃($\Omega mm^2/m$)	1.23
Conductivity coefficient at 20℃ (WmK)	13

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Coefficient of thermal expansion	
Temperature	Coefficient of Thermal Expansion x10^{-6}/℃
20 ℃- 1000℃	13.5

Specific heat capacity	
Temperature	J/gK
20℃	0.49

Melting point (℃)	1500
Max continuous operating temperature in air (℃)	1100
Magnetic properties	non-magnetic

Temperature Factors Of Electrical Resistivity

20℃	100℃	200℃	300℃	400℃	500℃	600℃
1	1.005	1.014	1.028	1.044	1.064	1.090
700℃	800℃	900℃	1000℃	1100℃	1200℃	1300℃
1.120	1.132	1.142	1.150	-	-	-

Style of supply

Alloys Name	Type	Dimension	
Ualloy125W	Wire	D= 0.03~8mm	
Ualloy125R	Ribbon	W= 0.4~40mm	T= 0.03~2.9mm
Ualloy125S	Strip	W= 8~250mm	T= 0.1~3.0
Ualloy125F	Foil	W= 6~120mm	T= 0.003~0.1
Ualloy125B	Bar	Dia= 8~100mm	L= 50~1000

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