Ualloy118 (Ni70Cr30)

Common Name: Nikrothal 70, N7, HAI-NiCr 70, Chromel 70/30, Resistohm 70, Balco,Tophet 30,Cronix 70,Alloy 710,Stablohm 710.

Ualloy118 is a nickel-chromium alloy (NiCr alloy) characterized byHigh resistivity, good oxidation resistance,very good form stability,good ductility and excellent weldability. It is suitable for use at temperatures up to 1250°C.

Typical applications for Ualloy118 are used in electrical heating elements in industrial furnace,and well suited for reducing atmospheres.

Normal composition(%)

C	P	S	Mn	Si	Cr	Ni	Al	Fe	Other
Max									
0.05	0.02	0.015	0.60	0.75~1.60	28.0~31.0	Bal.	Max 0.50	Max 1.0	-

Typical Mechanical properties（1.0mm）

Yield strength	Tensile Strength	Elongation
Mpa	Mpa	%
430	820	30

Typical Physical properties

Density (g/cm^3)	8.2
Electrical resistivity at 20℃($\Omega mm^2/m$)	1.18
Conductivity coefficient at 20℃ (WmK)	14

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Coefficient of thermal expansion	
Temperature	Coefficient of Thermal Expansion x10^{-6}/℃
20 ℃- 1000℃	17

Specific heat capacity	
Temperature	J/gK
20℃	0.46

Melting point (℃)	1380
Max continuous operating temperature in air (℃)	1250
Magnetic properties	non-magnetic

Temperature Factors Of Electrical Resistivity

20℃	100℃	200℃	300℃	400℃	500℃	600℃
1	1.007	1.016	1.028	1.038	1.044	1.036
700℃	800℃	900℃	1000℃	1100℃	1200℃	1300℃
1.03	1.028	1.029	1.033	1.037	1.043	-

Style of supply

Alloys Name	Type	Dimension	
Ualloy118W	Wire	D= 0.03~8mm	
Ualloy118R	Ribbon	W= 0.4~40mm	T= 0.03~2.9mm
Ualloy118S	Strip	W= 8~250mm	T= 0.1~3.0
Ualloy118F	Foil	W= 6~120mm	T= 0.003~0.1
Ualloy118B	Bar	Dia= 8~100mm	L= 50~1000

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