Ualloy104A (Ni35Cr20)

Common Name: Chromel D, Nikrothal 40, N4, HAI-NiCr 40, Tophet D, Resistohm 40, Cronifer Ⅲ,Chromex,35-20 Ni-Cr,Alloy D,NiCr-DAlloy 600,Nikrothal 4,MWS-610,Stablohm 610.

Ualloy104A is a nickel-chromium alloy (NiCr alloy) characterized by High resistivity, good oxidation resistance,very good form stability,good ductility and excellent weldability. It is suitable for use at temperatures up to 1100°C.

Typical applications for Ualloy104A are used in night-storage heaters,convection heaters,heavy duty rheostats and fan heaters.And also used for heating cables and rope heaters in defrosting and de-icing elements, electric blankets and pads,car seats,baseboard heaters and floor heaters,resistors.

Normal composition(%)

C	P	S	Mn	Si	Cr	Ni	Al	Fe	Other
Max									
0.08	0.02	0.015	1.00	1.0~3.0	18.0~21.0	34.0~37.0	-	Bal.	-

Typical Mechanical properties（1.0mm）

Yield strength	Tensile Strength	Elongation
Mpa	Mpa	%
340	675	35

Typical Physical properties

Density (g/cm^3)	7.9
Electrical resistivity at 20℃(Ωmm^2/m)	1.04
Conductivity coefficient at 20℃ (WmK)	13

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Coefficient of thermal expansion	
Temperature	Coefficient of Thermal Expansion x10^{-6}/℃
20 ℃- 1000℃	19

Specific heat capacity	
Temperature	J/gK
20℃	0.50

Melting point (℃)	1390
Max continuous operating temperature in air (℃)	1100
Magnetic properties	non-magnetic

Temperature Factors Of Electrical Resistivity

20℃	100℃	200℃	300℃	400℃	500℃	600℃
1	1.029	1.061	1.09	1.115	1.139	1.157
700℃	800℃	900℃	1000℃	1100℃	1200℃	1300℃
1.173	1.188	1.208	1.219	1.228	-	-

Style of supply

Alloys Name	Type	Dimension	
Ualloy104AW	Wire	D= 0.03~8mm	
Ualloy104AR	Ribbon	W= 0.4~40mm	T= 0.03~2.9mm
Ualloy104AS	Strip	W= 8~250mm	T= 0.1~3.0
Ualloy104AF	Foil	W= 6~120mm	T= 0.003~0.1
Ualloy104AB	Bar	Dia= 8~100mm	L= 50~1000

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