Ualloy153 (0Cr27Al7Mo2)

Ualloy153 is a iron-chromium-aluminium alloy (FeCrAl alloy) characterized by high resistance, low coefficient of electric resistance, higher operating temperature, good corrosion resistance under high temperature.It is suitable for use at temperatures up to 1400°C.

Typical applications for Ualloy153 are used in heating element of the single crystal furnace, sintering furnace, ceramic calcining furnace and heat treatment furnace and diffusion furnace when the temperature is more than 1200°C.

Normal composition(%)

C	P	S	Mn	Si	Cr	Ni	Al	Fe	Mo
Max									
0.05	0.025	0.025	0.20	Max 0.40	26.5~27.8	Max 0.60	5.0~7.0	Bal.	1.8~2.2

Typical Mechanical properties（1.0mm）

Yield strength	Tensile Strength	Elongation
Mpa	Mpa	%
460	700	20

Typical Physical properties

Density (g/cm^3)	7.10
Electrical resistivity at 20℃(Ωmm^2/m)	1.53
Conductivity coefficient at 20℃ (WmK)	13

Coefficient of thermal expansion	
Temperature	Coefficient of Thermal Expansion x10^{-6}/℃
20 ℃- 1000℃	16

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Specific heat capacity	
Temperature	J/gK
20℃	0.49

Melting point (℃)	1520
Max continuous operating temperature in air (℃)	1400
Magnetic properties	non-magnetic

Temperature Factors Of Electrical Resistivity

20℃	100℃	200℃	300℃	400℃	500℃	600℃
1	0.997	0.996	0.994	0.991	0.990	0.990
700℃	800℃	900℃	1000℃	1100℃	1200℃	1300℃
0.990	0.990	0.990	0.990	0.990	0.990	-

Style of supply

Alloys Name	Type	Dimension	
Ualloy153W	Wire	D= 0.03~8mm	
Ualloy153R	Ribbon	W= 0.4~40mm	T= 0.03~2.9mm
Ualloy153S	Strip	W= 8~250mm	T= 0.1~3.0
Ualloy153F	Foil	W= 6~120mm	T= 0.003~0.1
Ualloy153B	Bar	Dia= 8~100mm	L= 50~1000

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