



OHMALLOY MATERIAL CO.,LTD
SHANGHAI, CHINA

OhmAlloy-4J50 (Expansion alloy)

(Common Name: 50H, N50, Vacovit 500, FeNi50)

4J50 alloy is mainly composed of iron, nickel elements. It is characterized with a fixed coefficient of expansion. Increase the thermal expansion coefficient and the Curie point with increase of nickel content.

4J50 alloy is widely used the structure of the sealing material in the electric vacuum industry.

Normal composition%

C max	P max	S max	Mn max	Si max	Cr	Ni max	Al	Fe
0.05	0.02 5	0.02 5	0.20	0.40	26.5 ~27. 8	0.60	5.0~ 7.0	Bal

20 °C- 1000 °C | 16

Temperature	20 °C
J/gK	0.49
Melting Point (°C)	1520
Max continuous operating temperature in air (°C)	1400
Magnetic properties	non-magnetic

Temperature Factor of Electrical Resistivity

20	100	200	300	400	500	600	700	800
1	0.997	0.996	0.994	0.991	0.990	0.990	0.990	0.990

Style of Supply

Alloys Name	Type	Dimension
OhmAlloy153W	Wire	D=0.03mm~8mm
OhmAlloy153R	Ribbon	W=0.4~40mm T=0.03~2.9m

Typical Mechanical properties (1.0mm)

Yield Strength	Tensile Strength	Elongation
Mpa	Mpa	%
460	700	20

Typical Physical properties

Density(g/cm)	7.10
Electrical resistivity at20 (Ωmm ² /m)	1.53
Conductivity coefficient at 20°C (WmK)	13

Coefficient of thermal expansion

Temperature	Thermal Expansion x10 ⁻⁶ /K	
OhmAlloy153S	Strip	W=8~250mm T=0.1~3.0
OhmAlloy153F	Foil	W=6~120mm
OhmAlloy153B	Bar	Dia=8~100mm L=50~1000



Pay attention to Ohmalloy

