



OHMALLOY MATERIAL CO.,LTD
SHANGHAI,CHINA

Ohmalloy4J33(CommonName 33HK,4J33,KV-4,Ni33Co17)

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Ohmalloy4J33 also has a close linear expansion coefficient with 95% Al2O3 ceramic in the range of -60 to 600 degrees Celsius. It is an important sealing structural material in the electric vacuum industry; Mainly used for matching and ceramic sealing.

Normal Composition%

Ni	32.0~33.6	Fe	Bal.	Co	14.0~15.2	Si	≤0.3
Mo	-	Cu	-	Cr	-	Mn	≤0.5
C	≤0.05	P	≤0.02	S	≤0.02		

Typical Strength,Mpa

Tensile Strength	Elongation
Mpa	%
539	32

Co-efficient of expansion

20~400	5.1	20~800	10.2
20~450	5.3	20~900	11.4

Thermal Conductivity

θ /°C	100	200	300	400	500
λ / W/(m*°C)	20.6	21.5	22.7	23.7	25.4

The Heat Treatment Process

Annealing for stress relief	Heated to 470~540 °C keep 1~2 h. Cooling in the air
Annealing	Heating to 750~900 In the Medium Vacuum
Holding time	15min~1h
Cooling	In the air

Style of Supply

Alloys Name	Type	Dimension
Ohmalloy-4J33	Wire	D=0.1~8mm

Typical Physical Properties

Density	8.27
Electrical resistivity at 20	0.46
Temperature factor of resistivity (20 °C ~100 °C) X10 ⁻⁵ /°C	17.6
Curei Point	440
Elastic Modulus	139

Co-efficient of expansion

θ /°C	α ₁ /10 ⁻⁶ °C ⁻¹	θ /°C	α ₁ /10 ⁻⁶ °C ⁻¹
20~60	-	20~400	6.1
20~100	-	20~500	6.9
20~200	-	20~600	8.3
20~300	6.3	20~700	-

Style of Supply

Ohmalloy-4J33	Strip	W=5~250mm T=0.1
Ohmalloy-4J33	Foil	W=10~100mm T=0.01~0.1
Ohmalloy-4J33	Bar	Dia=8~100mm L=50~1000



Pay attention to Ohmalloy

