



## 4J33

### 1. Brief introduction:

Ceramic sealing alloy.

It has a linear expansion coefficient similar to that of 95% Al<sub>2</sub>O<sub>3</sub> ceramic in -60°C to 600°C temperature range.

It is mainly used for matching sealing with ceramics and is an important sealing structure material in the electric vacuum industry.

### 2. Main specifications:

Chinese grade	Russia	Japan
4J33	33HK(Ni <sub>33</sub> Co <sub>17</sub> )	KV-4(Ni <sub>33</sub> Co <sub>17</sub> )

### 3. Chemical composition under YB/T5231-2005 standard:

Grade	chemical composition,%										
	C	P	S	Mn	Si	Cu	Cr	Mo	Ni	Co	Fe
4J33	0.05	0.02	0.02	0.5	0.3	-	-	-	32.1~33.6	14~15.2	Remainder

Remarks: If require adjustments for some chemical compositions, pls consult with us.



**4. Tensile strength under YB/T5231-2005 standard:**

delivery condition	Tensile strength of strip ,N/mm2	Tensile strength of wire ,N/mm2
Soft	<570	<585
Hard	>700	>860

**5. Typical average linear expansion coefficient value  $\alpha_{10-6}/^{\circ}\text{C}$ :**

Grade	20°C~100°C	20°C~200°C	20°C~300°C	20°C~400°C	20°C~450°C	20°C~500°C	20°C~600°C	20°C~700°C	20°C~800°C
4J33	-	7.1	6.5	6.3	-	7.1	8.5	-	-

**6. Main product types:**

wire,rod, bar,strip, plate/sheet,tube,ring,forging.

**7. 4J33 Source URL:**

<https://www.hitealloy.com/product/4j33.html>