



Alloy 48

1. Brief introduction:

it's nickel-iron controlled-expansion alloy containing 48% nickel.

Its coefficient of thermal expansion matches that of soft lead and soda lime glasses therefore its main use is for glass to metal seals in soft lead or soda lime type glasses.

It is also used for thermostats in industrial applications up to 450°C (840°F).

2. Main specifications:

UNS	DIN	Werkstoff Nr.	Tradename
K94800	17745	1.3922	Nilo Alloy 48

3. Chemical composition under ASTM F30-96 standard:

Grade	chemical composition,%										Fe
	C	P	S	Mn	Si	Al	Cr	Co	Ni		
	MAX							nominal			
alloy 48	0.05	0.025	0.025	0.8	0.3	0.1	0.25	^B	48	Remainder	

Cobalt is present as an incidental element and shall be reported separately.

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



4. Typical average linear expansion coefficient value α , 10⁻⁶/°C:

Grade	30°C~300°C	30°C~400°C	30°C~500°C	30°C~600°C	30°C~700°C	30°C~800°C	30°C~900°C	30°C~1000°C
alloy 48	8.8	8.7	9.4	10.4	11.3	12.1	13	13.9

5. Main product types:

wire, rod, strip.

6. Alloy48 source URL:

<https://www.hitealloy.com/product/alloy-48.html>