Kovar Strip Nilo K 29HK Nico2918 Kovar Alloy 4j29 Strip

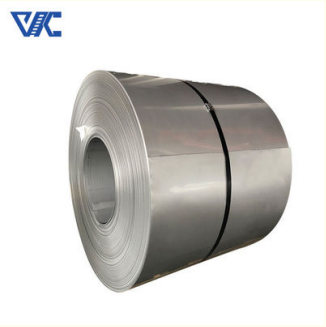
Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: CE,ROHS,ISO 9001
- Model Number: Kovar 4J29
- Minimum Order Quantity: 5 Kg
- Price: 3 - 499 kilograms $45.20
- Packaging Details: Plastic film or waterproof woven bag inside, wire packed in spool put into carton,coil wire or strip wire put into wooden case
- Delivery Time: 7-21 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 300 tons per month

Product Specification

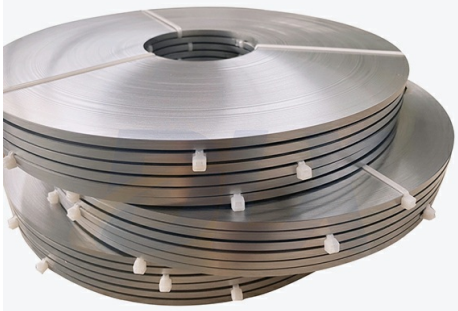
- Product Name: Kovar Strip
- Material: Nickel Base Alloy
- Ni (Min): 35%
- Resistance (μΩ.m): Stable
- Powder Or Not: Not Powder
- Ultimate Strength (≥ MPa): 690
- Elongation (≥ %): 35%
- Application: Aerospace Industry,Chemical Industry,Marine Industry
- Chemical Composition: Fe ,Ni ,Co ,Al, Si ,Mn Etc.
- Size: Customized Size
- Highlight: **4J29 Kovar Alloy**, **Precision Kovar Alloy**, **K94610 Nickel Cobalt Iron Alloy**



More Images

Our Product Introduc

Product Description



Contact Person : Steven
WhatsApp : +8618961220953
E-mail：victory@dlx-alloy.com

KOVAR STRIP

ASTM F15, Nilo-K, UNS K94610 , 4J29

Customized service available

Glass sealed and controlled expansion Kovar alloys

* kovar alloy, ASTM F15, Nilo-K, UNS K94610 (FeNi29Co17), Chinese 4J29
*Specifications:ASTM F15; DIN 17745; S.E.W. 385; Werkstoff Nr. 1.3981; AFNOR NF A54-301

Kovar Alloy, also know as ASTM F-15, NILO K, Pernifer 2918, Rodar, and Dilvar P1 is Nickel-Iron-Cobalt, controlled expansion alloy containing 29% Nickel.
It's coefficient of expansion (which decreases with rising temperature to the inflection point), matches the expansion rate of borosilicate glasses and aluminia ceramics.
Applications include glass to metal seals in applications requiring high reliability or resistance to thermal shock, ie.high~power transmitting valves, transistor leads and heaters and photography flash bulbs.

Alloy Type	Trade Name	UNS No.	Specifications	Forms Of Supply		
				Rod	Strip	Wire
Ni29Co17	Kovar	K94610	ASTM F15	√	√	√
FeNi36	Invar 36	K93603	ASTM 1684	√	√	
FeNi32Co5	Super Invar 32-5	KI93500	ASTMF1684	√	√	
FeNi27Co25	Ceramvar	F1466	ASTMF1466	√	√	√
FeNi42	Alloy 42	K94100	ASTM F30	√	√	
FeNi46	Alloy 46	K94600	ASTM F30	√	√	
FeNi48	Alloy 48	K94800	ASTMF30	√	√	
FeNi50	Alloy 52	K95050	ASTM F30	√	√	√

Item	1J33	3J01	3J9	4J29	4J32	4J33	4J45	FeNi50
C	≤0.05	≤0.05	0.22-0.26	≤0.03	≤0.05	≤0.03	≤0.05	≤0.05
Mn	≤0.05	≤1.00	1.80-2.20	≤0.5	0.2-0.6	≤0.5	≤0.8	≤0.8
Fe	Rest							
P	≤0.020	≤0.020	≤0.03	≤0.02	≤0.02	≤0.02	≤0.02	≤0.02
S	≤0.020	≤0.020	≤0.020	≤0.02	≤0.02	≤0.02	≤0.02	≤0.02
Si	0.30-0.6	≤0.80	1.30-1.70	≤0.3	≤0.2	≤0.3	≤0.3	≤0.3
Ni	32.8-33.8	34.5-36.5	9.0-10.5	28.5-29.5	31.5-33	28.5-29.5	44.5-45.5	49.5-50.5
Al	1.0-2.0	1.00-1.80	--	--	--	--	≤0.1	≤0.1
Co	--	--	--	16.8-17.8	3.2-4.2	16.8-17.8	-	-
Ti	-	2.70-3.20	-	-	-	-	-	-
Cu	-	--	--	--	≤0.2	0.4-0.8	≤0.2	--
Cr	--	11.5-13.0	19.0-20.5	≤0.2	--	≤0.2	--	--
Mo	--	--	1.60-1.85	≤0.2	--	≤0.2	--	--

Table 1 Grade & Chemical Composition of kovar alloy 4J29

Kovar alloy is a vacuum melted, Iron-nickel-cobalt, low expansion alloy whose chemical composition is controlled within narrow limits to assure precise uniform thermal expansion properties.

Grade	Chemical Composition (%)										
	C	P	S	Mn	Si	Cu	Cr	Mo	Ni	Co	Fe
4J29 Kovar	≤										
	0.03	0.020	0.020	0.5	0.30	0.20	0.20	0.20	28.5~29.5	16.8~17.8	Bal.

4J29 Kovar alloy Similar Grades just for customers' reference

Russia	U.S.A.	U.K.	France	Germany
29HK	Kovar	Nilo K	Dilver P0	Vacon 12

4J29 Kovar alloy Physical Property (see Table 2 & Table 3)

Table 2 Coefficient of Linear Expansion

Note: Kovar alloy is a Glass and Ceramic sealing alloy (Glass to metal sealing and Ceramic to metal sealing).

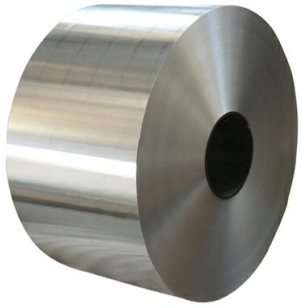
Grade	Heat Treatment of the Samples	Average Coefficient of Linear Expansion		
		20~300℃	20~400℃	20~450℃
4J29 Kovar	Heat to temperature of 900±20℃ in the hydrogen, hold for 1h; re-heat to 1100±20℃, hold for 15 min.; cooled to 200℃ at a rate less than 5℃/min		4.6~5.2	5.1~5.5

Table 3: 4J29 Kovar alloy Typical Coefficient of Linear Expansion

Grade	Average Coefficient of Linear Expansion							
	20~200℃	20~300℃	20~400℃	20~450℃	20~500℃	20~600℃	20~700℃	20~800℃
4J29 Kovar	5.9	5.3	5.1	5.3	6.2	7.8	9.2	10.2

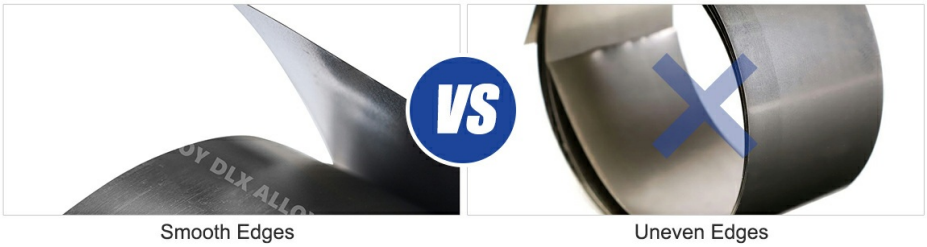
Product Details

High-quality materials and surface treatment technology



Product Comparison

The quality of our products has been strictly tested and guaranteed

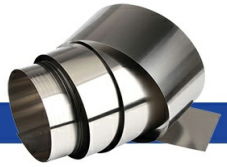


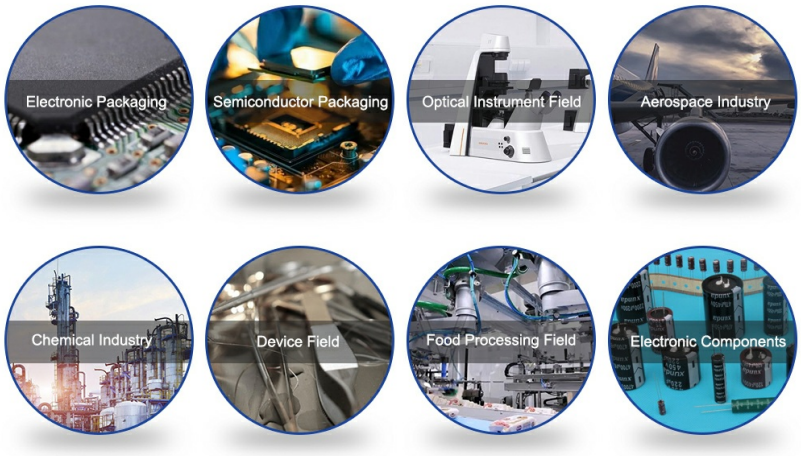
Smooth Edges | Uneven Edges

Metallic Luster | Rough Surface

Application Field

Kovar strips are widely used in many fields





Kovar strip is a type of nickel-iron-cobalt alloy with a coefficient of thermal expansion similar to that of hard borosilicate glass. It has excellent thermal and mechanical properties, making it widely used in various fields, including:

1. Electronics industry: Kovar strips are commonly used in the electronics industry for the manufacture of vacuum tubes, cathode ray tubes (CRTs), microwave tubes, and other electronic components. The low coefficient of thermal expansion of Kovar ensures that the electronic components maintain their shape and size under varying thermal conditions.

2. Aerospace industry: Kovar strips are used in the aerospace industry for the manufacture of aircraft and spacecraft components, especially those that require high thermal stability and dimensional stability. The low coefficient of thermal expansion of Kovar makes it an ideal material for use in critical aerospace applications.

3. Optical industry: Kovar strips are used in the optical industry for the manufacture of optical filters, mirrors, and lenses as they have excellent thermal stability and low thermal expansion.

4. Automotive industry: Kovar strips are used in the automotive industry for the manufacture of sensors, switches, and other electronic components that require high dimensional stability and thermal stability.

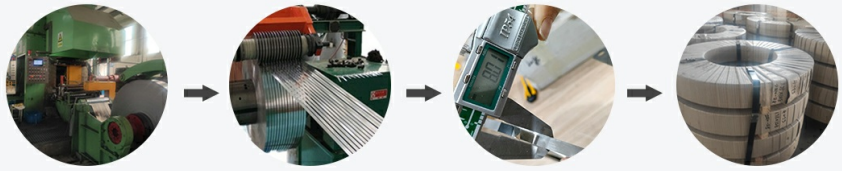
In summary, Kovar strip is a versatile material with a wide range of applications in various industries that require high thermal stability, low thermal expansion, and good mechanical properties.

Product Process

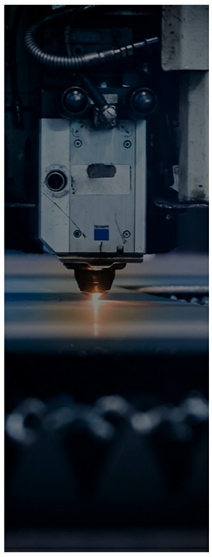
The production process and technology used in the product

1 Ingredients → 2 Smelting → 3 Milling/Planing → 4 Hot-rolling

5 Bell Annealing → 6 Cleaning → 7 Cold-rolling → 8 Bright Annealing



9 Finish-rolling → 10 Slitting → 11 Final Test → 12 Packaging



Product Comparison

The quality of our products has been strictly tested and guaranteed

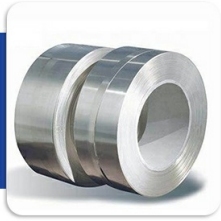
OEM Services

We can provide customized services for customers

Product Customization

Thickness:0.5-2.5mm Width:5-180mm

We can customize kovar strips of different thickness and width for customers.



Label Customization

We can provide label customization service for customers' products.

Recommended Products

Click to learn more about related products

Nickel Strip

Hastelloy Alloy Strip

Nickel Bar

Nickel Tube

Nickel Wire

Inconel Strip

20+	50+	1000+	2000+
Industry Experience	Certifications	Metal Products	Cooperative Business

Company Profile

We are a leading alloy metal manufacturer founded in 2002, providing high-quality and high-performance alloy products and services to our customers. Our company is dedicated to becoming the industry leader in the alloy field, and we have received multiple industry certifications and awards, including the ISO9001 International Quality Management System Certificate and the SGS Certificate.

Over the past 18 years, we have focused on the resistance alloy business and continuously innovated and explored, ultimately developing new nickel-based alloy products such as chromium-nickel-iron alloy, Monel alloy, Hastelloy alloy, high-temperature alloy, and more.

Our Advantages

Our advantages can provide customers with better service

- HIGH QUALITY
- SUPER ELASTICITY
- HIGH STRENGTH
- BRAND EFFECT
- PROFESSIONAL FACTORY
- TECHNICAL SUPPORT
- R&D INNOVATION SERVICES
- AFTER-SALES SERVICE
- ISO CERTIFICATION
- EFFICIENT LOGISTICS SERVICE

Our Certifications

Our products have obtained national standard certification

Our Partners

We have established long-term cooperative relationships with many partners

Changzhou Victory Technology Co., Ltd

+8619906119641 victory@dlx-alloy.com victory-alloy.com

NO.32 West Taihu Road, Xinbei District, Changzhou, Jiangsu