

Kovar® (Pernifer® 2918, Dilver® P1, Nilo® K)

Kovar is a vacuum-melted controlled expansion alloy with a nominal composition of 29% nickel, 17% cobalt, and balance Iron. Designed to match the thermal expansion characteristics of borosilicate glass and alumina ceramics, it is widely used in hermetic sealing applications. The product journey described here is for Dilver supplied by our partner, Aperam Alloys Imphy in France, part of Aperam Group, a global player in stainless, electrical, alloys and specialty steel, as well as recycling and renewables.



Raw materials

Nickel and cobalt are sourced responsibly from a diversified global supply chain by specialist procurement teams. Regional impacts and are closely monitored backed by a strong commitment to supporting supply chain traceability, environmental protection, ethical labour practices and tangible benefits for local communities.



Processing

With all controlled expansion grades residual levels within the material must be tightly controlled and there are specially developed melting routines in place to ensure that stability and expansion properties conform to deliver products suitable for the most demanding applications. Raw material mix, melting methodologies and production control are subject to strict rules to ensure the consistency and repeatability of every batch.



Transparency and resilience

All processes and procedures adhere to best practice and are backed by internationally recognised certifications including ISO 9001, ISO 9100 and IATF 16949. Regular internal and external audits of process controls mean that product repeatability, traceability and consistency is maintained.





Performance

Production scalability together with decades of experience in working with controlled expansion alloys and the resulting accumulated expertise produce materials of the highest standards in terms of cleanliness and metallurgical control. These products meet the expansion and stability criteria required by the precision instruments that are created using this alloy.



Sustainability

Sustainability and helping customers excel in the circular economy is a priority. With very low levels of energy consumption, a low-carbon energy mix is used in melting shops. While all the product supplied to Nicofe originates from premium grade raw material, the Aperam Recycling business is a global leader in collecting, trading, processing and recycling of scrap metals and supports and industry-leading carbon footprint:

- European electric arc furnaces use as much scrap metal as possible instead of extractive raw materials when economically viable
- Aperam uses 89% of scrap in its stainless operations in Europe

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Kovar® is a registered trademark of CRS Holdings LTD., Delaware, USA.
NILO® is a registered trademark of Huntington Alloys Corp., West Virginia, USA.
Pernifer® is a registered trademark of VDM Metals GmbH, Germany.

FORMS AVAILABLE:



Coil



Sheet



Plate



Rod



Bar



Wire

For more information on any of our products and services please get in touch.

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