

ALLOYS WITH SPECIFIC PHYSICAL PROPERTIES

Application Segments

Engineering

Available Product Variants

Long Products

Product Description

BÖHLER P804 is an iron-42% nickel alloy with low thermal expansion for applications in the electronics industry, for measuring devices (e.g. measuring rulers, scales), temperature measuring devices and temperature-dependent controls, thermostats, thermobimetals and expansion controllers. Other applications include core material for copper sheath wires, automotive and industrial lamps, transformer/capacitor bushings, electronic tubes, glass/ceramic to metal applications. The minimum coefficient of thermal expansion of BÖHLER P804 is in the range of -30 to 275°C. Above the break point at just over 300°C, the coefficient of expansion increases sharply and at higher temperatures reaches the values usual for austenitic materials. Good low temperature properties.

Process Melting

Airmelted

Applications

- > Electronic industry
- > Mechanical Engineering

Technical data

Material designation		Standards	
Ni 42	Market grade	F30	ASTM
K94100	UNS		

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Ni	Co	Al	Fe
max. 0.05	max. 0.30	max. 0.80	max. 0.025	max. 0.025	max. 0.25	41.0 to 43.0	max. INF	max. 0.10	REM

Refers to ASTM F30 - UNS K94100

Delivery condition

Annealed

Tensile Strength (MPa)	440 to 640
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Round Bars and Wire Rod (if any)

Diameter*	
mm	
ROLLED	
5.00	- 13.50
15.00	- 125.00
FORGED	
125.10	- 500.00

* Diameter 5.00 - 13.50 mm available as Wire Rod.

Diameter 15.00 - 125 mm available as round bars.

More information regarding MOQ, lengths and tolerances upon request.

If other available product variants are listed in addition to long products, please note that these may differ in terms of melting process, technical data, delivery and surface condition as well as available product dimensions. For mandatory technical specifications, other requirements and dimensions, please contact our regional voestalpine BÖHLER sales companies. The data contained in this brochure is merely for general information and therefore shall not be binding on the company. We may be bound only through a contract explicitly stipulating such data as binding. Measurement data are laboratory values and can deviate from practical analyses. The manufacture of our products does not involve the use of substances detrimental to health or to the ozone layer.