

Technical datasheet

Alloy 36 | 1.3912

Major specifications

UNS K93600	ASTM F1684	SEW 385	DIN 17745
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Available product forms

Round bars | Plates

The current stock range can be found on www.sd-metals.com.

Further dimensions available upon request.

Use our Service Centre to have the available sizes cut to your desired dimensions.

Key features

Alloy 36 is a binary nickel-iron Alloy with 36% nickel that is known for its low coefficient of expansion. It has a very low thermal expansion coefficient at room temperature and minimal variation at cryogenic temperatures, making it ideal for use in precision components. It is also used in applications where dimensional stability is critical such as in tools for the production of composite materials used in aerospace and automotive applications.

Applications

- tools for composite materials used in aerospace applications
- length and measurement gauges
- thermostat rods
- laser components

Chemical properties

Composition - limits in %

Ni	Co	Mn	Cr	Mo	Si	C	P	S	Fe
35.0 - 38.0	max. 1,00	max. 0,60	max. 0,50	max. 0,50	max. 0,35	max. 0,10	max. 0,025	max. 0,025	Rest

Physical and thermal properties

Density	8,11 g/cm ³
Melting temperature	1430°C
Thermal conductivity	10,0 W/m • °C

Typical mechanical properties (annealed)

Yield strength	min. 240 MPa
Tensile strength	min. 490 MPa
Elongation	min. 42 %

Thermal expansion properties

Temperature range (°C)	-200 - 20	-100 - 20	20 - 100	20 - 200	20 - 300	20 - 400	20 - 500
mid-linear coefficient (µm/m • °C)	1,5	1,3	1,5	2,6	5,5	8,4	10,1

All information is subject to change without notice.

The properties correspond to the material in the heading. They may vary for other specifications.

Please contact us for more details.