

Alloy K500 (NA18)

Smiths Advanced Metals

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Aged-Hardened Nickel-Copper Bars

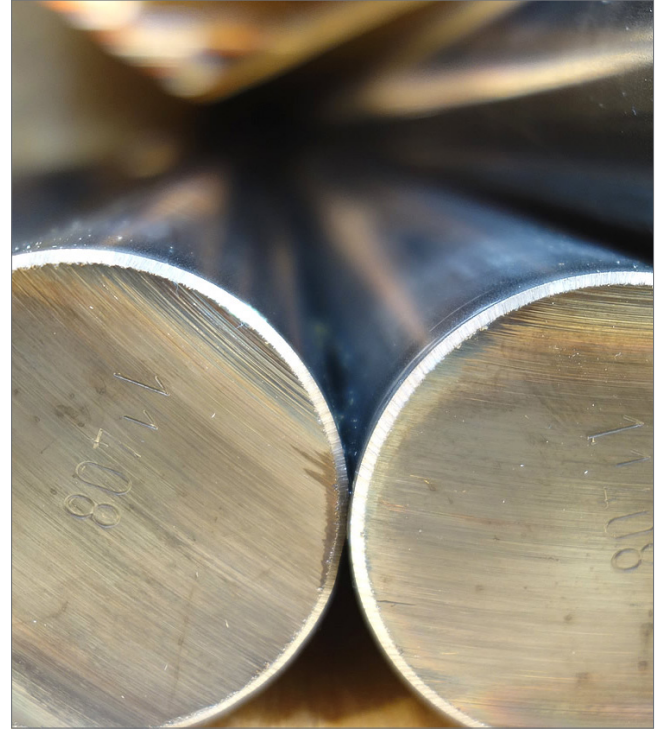
Increased hardness and strength with excellent corrosion resistance.

Alloy K500 (NA18) is an age-hardened nickel-copper alloy with excellent corrosion resistance.

The product benefits from increased hardness and strength but is more susceptible to stress corrosion cracking (SCC) due to being age-hardened. With exceptionally high dimensional stability, the material is highly suitable for cryogenic applications.

Alloy K500 (NA18) displays excellent corrosion resistance in fast-flowing and stagnant or slow-moving saltwater and finds extensive use in offshore and marine applications. Alloy K500 retains its mechanical properties at sub-zero and elevated temperatures. The material is very similar in performance characteristics compared to Alloy 400 but with greater strength and hardness.

Smiths Advanced Metals stocks Alloy K500 bars in cold drawn and hot worked condition and are available in various sizes to suit your engineering requirements.



Grades / Specifications

- ASTM B865
- AMS4676
- NACE MR 0103
- NACE MR 0175
- BS 3076
- 2.4375
- NA18
- NiCu30Al
- UNS N05500

Benefits

- Resistant to non-oxidising mineral acids, salts and alkalis
- Exceptionally high dimensional stability
- Increased hardness and strength
- Excellent corrosion resistance

*Chemical Composition (weight %)

	Ni	Ti	Cu	C	Mn	Si	S	Fe	Al
min.	63.00	0.35	27.00						2.30
max.		0.85	33.00	0.25	1.50	0.50	0.010	2.00	3.20

* As per BS 3076

Sour Gas Applications

Alloy K500 is resistant to hydrogen sulphide, making the alloy highly suitable for sour gas applications.

Low corrosion rates in seawater also make K500 suitable for use in marine environments, including sub-sea and above-sea applications. The alloy may be susceptible to pitting in stagnant water, although this is only significant at the initial attack phase and subsequently slows.



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