



Monel Alloy K500

Monel Alloy K500 ® is a nickel-copper alloy which can be hardened through cold drawing and precipitation. With the elements of aluminium and titanium, Monel Alloy K500 offers the excellent resistance to corrosion of Alloy 400; with elevated strength, hardness, erosion resistance and oxidation fatigue resistance. When compared to Alloy 400, K500 has shown to have a much higher tensile and yield strength.

Monel Alloy K500 is used in a number of applications, including the oil & gas industry in pump shafts, valve parts and drill collars. Chemical process industry in production of chlorinated plastics, processes involving organic acids and applications that include Scrapers, Doctors Blades and Pulp Processing in paper production. Monel Alloy K500 is also used for components in the marine and shipbuilding industry for valve parts, propellers, fasteners and gyroscopes.

Monel Alloy K500 Grades & Equivalents:

- UNS N05500
- ASTM B865 QQ-N-286
- DIN 17754
- AMS4676
- AWS041
- Werkstoff 2.4375
- BS3076 NA18

Typical Chemical Analysis

C	Si	Mn	P	S	Cr	Ni	Mo
0.25	0.50	1.50		0.01		63.0 min	
W	N	Cb/Nb	Ti	Co	Cu	Al	B
			0.35-0.85		27.0-33.0	2.30-3.20	
V	Fe	Mg	Ta	Ca	O	Bi	Se
	2.00						
Sn	Zn	Pb	Y	Cb/Nb + Ta	Ni + Co	H	PREN

Typical Mechanical Properties

Tensile Strength	900 N/mm ² min
0.2% Proof Stress	620 N/mm ² min
Elongation	20%
Reduction of Area	
Hardness	250 HBw
Impacts	
Stress Rupture	
Other Remarks	Mechanicals based on section strength up to and including 25mm in the hot worked, solution treated and precipitation treated condition.

Product Forms Available:

- Hexagon Head Bolts
- Hexagon Nuts
- Studbolts
- Socket Capscrews
- Socket Countersunk Screws
- Socket Setscrews
- & Many other special fasteners and bespoke machined parts

Products can be produced to customer drawings or relevant British (BS), American (ASME, ANSI), European (DIN, UNI) or International Standards (ISO).

The size ranges M3 to M120 Metric and 3/16" to 4.75" Imperial can be supplied. Thread forms include UNC, UNS, UNF, BSW, BSF, Whitworth, Metric, Metric Fine.



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