



MONEL® K-500

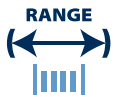
Key Features

- Corrosion resistance similar to Monel 400 but with higher strength and hardness
- Low permeability and is non-magnetic to temperatures as low as -101 °C (-150 °F)
- Age hardenable
- Good for sea water applications

IMPORTANT

We will manufacture to your required mechanical properties.

key advantages to you, *our customer*



0.025mm to 21mm
(.001" to .827")



Order 3m to 3t
(10 ft to 6000 Lbs)



Delivery:
within 3 weeks



Wire to your spec



E.M.S available



Technical support

MONEL® K-500 available in:-

- Round wire
- Bars or lengths
- Flat wire
- Shaped wire
- Rope/Strand

Packaging

- Coils
- Spools
- Bars or lengths



*Trade name of Special Metals Group of Companies.

Chemical Composition			Specifications	Key Features	Typical Applications
Element	Min %	Max %	ASTM B865 BS 3075 NA 18 BS 3076 NA 18 ISO 15156-3 (NACE MR 0175) QQ-N-286 Designations W.Nr. 2.4375 UNS N05500 AWS 041	Corrosion resistance similar to Monel 400 but with higher strength and hardness Low permeability and is non-magnetic to temperatures as low as -101 °C (-150 °F) Age hardenable Good for sea water applications	Pump Shafts Fasteners Marine Propeller Shafts Oil Well Tools Instruments Springs
Ni	63.00	70.00			
Co	-	2.00			
Cu	27.00	33.00			
Fe	-	2.00			
Al	2.30	3.20			
C	-	0.25			
Si	-	1.00			
Mn	-	1.50			
Ti	0.35	0.85			
S	-	0.01			

Density	8.44 g/cm ³	0.305 lb/in ³
Melting Point	1350 °C	2460 °F
Coefficient of Expansion	13.7 μm/m °C (20 – 100 °C)	7.6 x 10 ⁻⁶ in/in °F (70 – 212 °F)
Modulus of Rigidity	66 kN/mm ²	9573 ksi
Modulus of Elasticity	179 kN/mm ²	25962 ksi

Heat Treatment of Finished Parts					
Condition as supplied by Alloy Wire	Type	Temperature		Time (Hr)	Cooling
		°C	°F		
Annealed	Age Harden ^Δ	580 – 590	1075 – 1095	8 – 10	Air
Spring Temper	Age Harden ^Δ	530 – 540	985 – 1005	4 – 6	Air

^ΔHeat treating Monel K-500 in free air can have a detrimental effect on its corrosion resistant properties.

Properties				
Condition	Approx. tensile strength		Approx. operating temperature	
	N/mm ²	ksi	°C	°F
Annealed	650 – 850	94 – 123	-100 to +260	-150 to +500
Annealed + Aged	950 – 1050	138 – 167	-100 to +260	-150 to +500
Spring Temper	1000 – 1300	145 – 189	-100 to +260	-150 to +500
Spring Temper + Aged	1200 – 1500	174 – 218	-100 to +260	-150 to +500

The above tensile strength ranges are typical. If you require different please ask.