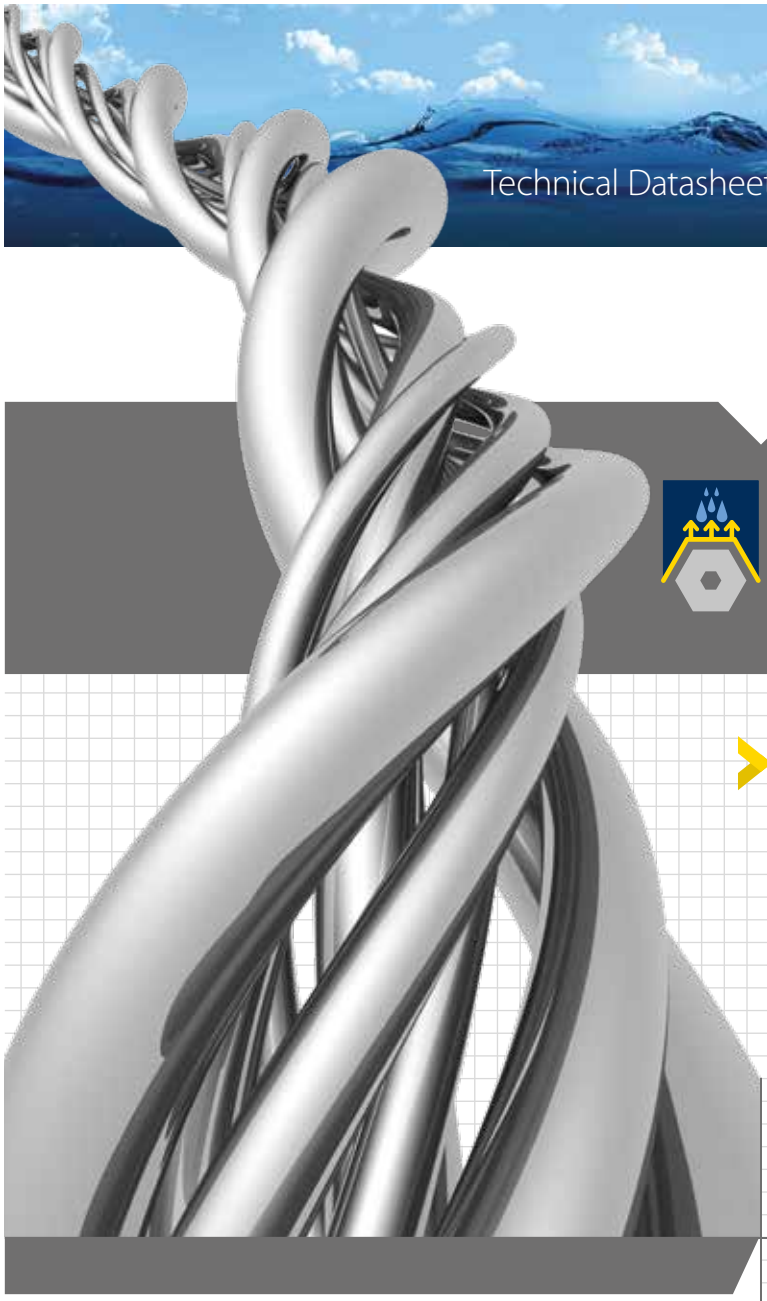
alloy wire® international



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*

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

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

DELIVERY 3 WEEKS
Delivery:
within 3 weeks

Wire to your spec

E.M.S available

HOW CAN I HELP?
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.

Technical Datasheet **AWS 041 Rev.2**

MONEL® K-500

alloy wire international

Chemical Composition		
Element	Min %	Max %
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

Specifications

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

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Typical Applications

Pump Shafts
Fasteners
Marine Propeller Shafts
Oil Well Tools
Instruments
Springs

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 $^\Delta$	580 – 590	1075 – 1095	8 – 10	Air
Spring Temper	Age Harden $^\Delta$	530 – 540	985 – 1005	4 – 6	Air

$^\Delta$ *Heat 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	<850	<123	-100 to +260	-150 to +500
Annealed + Aged	>950	>138	-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.

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