

# ALLOY K-500



## WHAT IS IT?

**Alloy K-500 is a nickel-copper alloy, which combines the excellent corrosion resistance of Alloy 400 with increased strength and hardness using a thermal process known as age conditioning. K -500 provides approximately 3 times the yield strength of Alloy 400.** .....

By adding Aluminum and Titanium to this nickel/copper alloy, followed by an age hardening process, this enhances the physical properties, giving the material greater strength and hardness.

Marine applications for K-500 include centrifugal pumps, valve & shaft components, pump shafts & impellers, chains, cables, fasteners, and springs.

## ADVANTAGES & SPECIFICATIONS OF K500

- **QQN 286 FORM 2 REV F & G**
- **Naval Nuclear Applications**

**STRENGTH**

**TOUGHNESS**

**DEPENDABLE**

.....  
Stocked to the QQN 286 Form 2 Rev F & G spec for marine applications.

Available for the Oil & Gas Industries to the QQN 286 Form 1 Rev E spec + NACE MR0175

800.545.5000  
sales@twmetals.com

**TW** METALS  
AN ONI COMPANY

# K-500. STRENGTH. TOUGHNESS. CORROSION RESISTANCE.



## WHAT WE STOCK

TW METALS STOCKS A DIVERSE RANGE OF DIAMETERS IN K-500. IF YOU WANT TO LEARN MORE ABOUT OUR PRODUCT OFFERINGS OR GET A QUOTE ON K-500, PLEASE CONTACT US VIA EMAIL, PHONE NUMBER OR VISIT OUR WEBSITE! .....

K-500 SIZE LISTING BY DIAMETER		
.500 DIA	1.625 DIA	4.00 DIA
.625 DIA	1.75 DIA	4.50 DIA
.750 DIA	2.00 DIA	6.00 DIA
.875 DIA	2.25 DIA	8.00 DIA
1.00 DIA	2.50 DIA	
1.25 DIA	3.00 DIA	
1.50 DIA	3.50 DIA	

Nickel (plus Cobalt).....	63.0 min.
Carbon.....	0.25 max.
Manganese.....	1.5 max.
Iron.....	2.0 max.
Sulfur.....	0.01 max.
Silicon.....	0.5 max.
Copper.....	27.0 • 33.0
Aluminum.....	2.30 • 3.15
Titanium.....	0.35 • 0.85
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Density, g/cm <sup>3</sup> .....	8.44
lb/in <sup>3</sup> .....	0.305
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Melting Range, °F.....	2400 • 2460
°C.....	1315 • 1350
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Modulus of Elasticity, 10 <sup>3</sup> ksi	
Tension.....	26.0
Torsion.....	9.5
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Poisson's Ratio (aged material at room temperature).....	0.32

Figures provided by Special Metals Corporation: Special [www.specialmetals.com](http://www.specialmetals.com)

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